# International Marine Science, Funding Guide

JUDITH FENWICK
DAVID A. ROSS
CYNTHIA SCHRAMM

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INTERNATIONAL MARINE SCIENCE COOPERATION PROGRAM

WHOI SEA GRANT PROGRAM WOODS HOLE OCEANOGRAPHIC INSTITUTION WOODS HOLE, MASSACHUSETTS 02543 USA

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# International Marine Science Funding Guide

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#### INTERNATIONAL MARINE SCIENCE FUNDING GUIDE

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#### **PREFACE**

Interest in the world's oceans reaches beyond national boundaries and maritime zones as scientists and policymakers confront such global issues as resource development, pollution, and climatic change. The International Marine Science Cooperation Program, a Sea Grant initiative at the Woods Hole Oceanographic Institution, was established to enhance international cooperation and information exchange between the marine science communities of the U.S. and other nations.

The International Program currently maintains databases on:

1) research clearance histories [1972-89] of U.S. research in the foreign waters of >100 coastal countries; 2) national jurisdictions and regulations over the conduct of marine scientific research in 145 coastal countries; and 3) sources of funding (>200) for international marine scientific research, from which this publication has been drawn. Among other projects under its aegis are a Portugal Prototype Clearinghouse--establishing a Portuguese-U.S. Sea Grant cooperative marine science program; revision and reissue of a worldwide map showing maritime boundaries and marine scientific research jurisdiction; and an International Red Tide Information and Assistance Service database and upcoming directory.

To assist new researchers in the marine sciences and to help more established scientists who wish to pursue or develop international aspects of their work, the International Marine Science Cooperation Program presents this guide to potential funding sources from the private and public sectors. This guide will, hopefully, spur the development of new cooperative international marine efforts. It represents one cornerstone in the International Program's plan to encourage information and academic exchanges, outreach programs, and the support of international research that will strengthen the necessarily global approach to oceanographic studies.

#### INTRODUCTION

The International Marine Science Cooperation Program presents the International Marine Science Funding Guide to provide information of potential funding sources for both marine scientists and social scientists. The IMS Funding Guide is an introduction to a variety of sources: private foundations, educational institutions, corporations, government agencies, national, multinational, and international organizations. The majority of sources in this guide are U.S. based, but, as the Geographic Index shows, the places for using the funding are worldwide. We have also focused on those funding sources which do not have citizenship restrictions that would preclude foreign scientists from program participation. We have also begun the task of discovering a variety of funding sources from other countries and international organizations.

Support is offered in a wide range of marine study areas including the natural sciences of biology, chemistry, geology, and physics, and the social sciences of marine policy, marine law, and resource economics and management. Types of work supported by the various sources include research, academic exchange, collaborative research, post-doctoral fellowships, doctoral support, field work, seminars, workshops and symposia, training, travel, publications, and equipment. The IMS Funding Guide is geared primarily toward scholars who have recently obtained the doctoral degree and established scholars who wish to expand their research in an international direction, although some information is contained about funding for pre-doctoral work as well. Funding is available for a variety of applicants including individuals, for-profit and non-profit organizations, universities and colleges, and industry.

The guide is organized by funding organization (in alphabetical order). An alphabetical list of organizations and their specific programs is shown in the table of contents. The Program Descriptions (beginning on page 1) include the sponsoring organization's name and address, a brief description of applicable programs including the funding organization's interests in marine science and/or social science, specific topics of study and priorities established for support, types of potential funding available, and requirements for the applicant. Also provided are a contact and address for further information (phone numbers included when available), deadlines, and any geographical and citizenship restrictions. Since much of the information presented here is subject to frequent change, particularly specific topics of interest and deadlines, the reader is encouraged to obtain current information from the individual funding organization.

The indices should speed the efforts of the marine scientist/social scientist in identifying those organizations which may be best suited to his or her funding needs. The Geographical Index lists by country or region those funding organizations that have an interest in supporting work in

specific geographic areas. Please note that many of the funding organizations have listed no preference and are, therefore, not contained in this index, although they may be willing to support work in any of these countries or regions.

The Support Type Index lists funding organizations by the type of funding offered, such as support for academic exchange or postdoctoral fellowships. The support types included are those that were specifically mentioned by the funding organization, and may be subject to change. Again, some organizations have not listed specific areas for support and are, therefore, not included in this index. A reading of all the program descriptions may reveal some previously unknown but applicable funding sources.

The IMS Funding Guide offers the international marine community a starting point from which the search for support of international marine science work may begin. It is the goal of this publication to enhance the exchange of ideas and information regarding the marine realm across geographic and academic boundaries. All of the information in this published guide is contained in an active database maintained by the International Marine Science Cooperation Program. New or updated funding information from any reader would be most appreciated, along with comments you may have on the usefulness or organization of this guide.

## AGENCY FOR INTERNATIONAL DEVELOPMENT Office of the Science Advisor

Room 720, SA-18 Washington, DC 20523

#### Grants for Program in Science and Technology Cooperation (PSTC)

The PSTC Program seeks to stimulate new and innovative research on problems that confront developing countries. It gives highest priority to submissions from scientists in those developing countries which receive USAID development assistance (as of 1988, approx. 85 countries); innovative findings that can be readily applied to serious developing country problems are accorded highest priority. Cooperation with U.S. scientists is encouraged, but not required. PSTC seeks new research ideas in the natural sciences and supports the initial, innovative phase of an investigation, most often three years.

Six "research modules" have been defined of which the following two might be of interest to marine scientists:

- Chemistry for world food needs, particularly biochemical growth regulation in plants and animals, soil chemistry, soil-plant-animal relationships (biochemistry), innovative agricultural and food chemistry, studies of natural pesticides from plants, and the chemistry of integrated aquaculture systems.
- 2) Diversity of biological resources, emphasizing innovative research on terrestrial and aquatic plant/animal/microbial species of economic promise for development. This includes new methods for identifying economically useful species and products, restoration and optimization of habitat for species and ecosystem maintenance and productivity, and development of new molecular-genetic methods for the above. Conventional breeding, taxonomic studies, and distribution surveys are normally excluded.

In addition, AID's Office of the Science Advisor occasionally supports selected innovative research proposals in other broader areas, including Atmospheric, Marine and Earth Sciences (meteorology, hydrology, geology, seismology, remote sensing for natural resource analysis), and the better utilization and preservation of coastal zones.

Contact	Office of the Science Advisor, address above, (202) 235-3669
Deadlines	1 February
Geographical Restrictions	Countries which receive USAID development assistance
Citizenship Restrictions	Some restrictions; see AID information sheet on PSTC program.

#### ALCOA FOUNDATION 1501 Alcoa Building Pittsburgh PA 15219

Restrictions

#### Foundation Educational Grants

The foundation offers educational grants to colleges and universities for research, seminars, curriculum development and special programs in areas including the environment and alternative energy research. Support is primarily given in areas of company operations (19 U.S. states and overseas in Europe, Asia and Latin America).

The foundation does not list a specific interest in the marine sciences, but has funded marine scientific research in past years. Funding may be requested to cover equipment and materials, fellowships (to institutions), program support, research, and conferences and seminars.

Contact President, address above

Deadlines none

Geographical areas of company operations

Citizenship none listed

## AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

1333 H Street NW Washington DC 20005

#### Congressional Science and Engineering Fellowships

These Congressional fellowships are offered for scientists, engineers and science-related professionals to provide a unique public policy learning experience, to demonstrate the value of science-government interaction, and to make practical contributions to the more effective use of scientific and technical knowledge in government.

Fellows spend one year working as special legislative assistants on the staff of members of Congress or Congressional committees. Appointments begin 1 September. The program includes a year-long seminar program on issues involving science and public policy.

A prospective Fellow must demonstrate exceptional competence in some area of science or engineering; have a good scientific and technical background; be cognizant of many matters in nonscientific areas; demonstrate sensitivity toward political and social issues; and have a strong interest and some experience in applying personal knowledge toward the solution of societal problems.

AAAS annually selects two or more Congressional Fellows with yearly stipend, plus relocation and travel expenses. Complete applications for the Fellowship must include a letter of intent, three letters of reference, a candidate statement and a full curriculum vitae. Minority and handicapped candidates are encouraged to apply.

Contact Program Coordinator for Congressional Science and Engineering

Fellows Program, AAAS, address above.

Deadlines 15 January; notification 1 May

Geographical U.S.

Restrictions

Citizenship U.S.

Restrictions

## AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

1333 H Street NW Washington DC 20005

#### Science, Engineering and Diplomacy Fellowship Program

These fellowships on the federal level are offered for scientists, engineers and science-related professionals to make practical contributions to the more effective use of scientific and technical knowledge in the foreign affairs and development programs of the U.S. government, to demonstrate the value of science and technology in working on important societal problems, and more generally, to provide a unique, internationally oriented, public policy learning experience.

Fellows spend one year (beginning early September) working either in the Department of State's (STATE) Bureau of Oceans and International Environmental and Scientific Affairs or in one of several Bureaus of the Agency for International Development (AID). Selected individuals will work on scientific and technical subjects in international affairs (these will be in foreign policy for STATE and in international development for AID). Some sample assignments might include: for AID, working on problems of coastal pollution in the developing world or other areas suggested by the applicant's background; for STATE, assisting in developing and negotiating procedures with coastal nations for the conduct of marine scientific research or examining U.S. national ocean pollution programs and similar international activities.

A prospective Fellow must demonstrate exceptional competence in some area of science or engineering; be cognizant of the ways in which science and technology affect a broad range of international development and foreign policy issues; exhibit willingness and flexibility to tackle problems in a number of nonscientific areas; demonstrate sensitivity toward political, economic and social issues; and have some experience or a strong interest in applying knowledge toward the solution of problems in the areas of foreign affairs/international development.

AAAS selects two or more Fellows in cooperation with STATE and AID to serve a one year appointment at a salary consistent with education level and experience. Fellowship award is contingent upon the selectee obtaining a security clearance.

Contact Science, Engineering, and Diplomacy Fellows Program, address above.

Deadlines 15 January; notification 15 April

Geographical U.S.

Restrictions

Citizenship U.S.

Restrictions

#### AMERICAN ASSOCIATION OF UNIVERSITY WOMEN **Educational Foundation Programs Office** 2401 Virginia Avenue NW Washington DC 20037

#### American and International Fellowships

The AAUW Educational Foundation seeks to advance education, research, and self-development for women and to foster equity and positive societal change. The Foundation supports these goals through fellowships, grants, special awards, conferences, and research programs.

American Fellowships are awarded to women who are citizens or permanent residents of the U.S. to conduct research or study at doctoral and postdoctoral levels. Dissertation Fellowships support the final year of writing the dissertation. Applicants are expected to receive the doctoral degree at the end of the fellowship year. Applicants must have completed all coursework, passed all preliminary exams, and had the dissertation research proposal approved by the November 15 deadline. The Dissertation Fellowship is open to all fields of study except engineering. The applicable Postdoctoral Fellowships offered by the AAUW are: The Founders--for a distinguished senior scholar in any field; the Berliner--for research in the physical or biological sciences; the Cuneo and Palmer--for research in any field; the Curie--for research in chemistry, physics or radiology; the Harris--for research in any field by a woman from an underrepresented minority group; and the Siebert--for research in biological or medical science. Application forms and announcement flyer available from July through October; application deadline is November 15.

Selected Professions Fellowships are awarded to women who are citizens or permanent residents of the U.S. to conduct full-time studies in the last year of graduate school in fields where female participation has traditionally been low. In Science and Technology, these fellowships support the final year in a Master's degree program in the fields of computer/information science, engineering, and mathematics/statistics. The Selected Professions Fellowships also offer dissertation fellowships for doctoral candidates in engineering. Deadlines for application are November 15 for the dissertation fellowship and December 15 for the master's degree fellowship.

International Fellowships are awarded to women who are not citizens or permanent residents of the U.S. for full-time study in the U.S. at all graduate levels and at the postdoctoral level. Applicants must have the equivalent of a bachelor's degree and express their intention of returning to their home countries after the fellowship to pursue their professional careers. Applicants who have positions to return to will be given preference. Application forms and announcement flyer available from July through October, application deadline is December 1.

AALIW Educational Foundation, address above or (202) 728-7603. Contact

American Fellowships November 15; International Fellowships Deadlines

December 1

Geographical Restrictions

U.S.

American Fellowships: U.S. Citizenship

International Fellowships: unrestricted (non-U.S.) Restrictions

#### AMERICAN CHEMICAL SOCIETY (ACS) 1155 16th Street NW, Rm. 402 Washington DC 20036

#### Congressional Fellowships

The ACS Congressional Fellowship program supports a Fellow for a one-year appointment (beginning in September) working as a special legislative assistant on the staff of a Congressional committee or an individual Congressman. Actual legislative assignments will depend on the Fellow's background and interests, and on the available positions.

The objectives of the ACS program are to provide an opportunity for scientists to gain firsthand knowledge of the operations of the legislative branch of the federal government; to make available an increasing amount of scientific and technical expertise to the government; and, to broaden the perspective of both the scientific and governmental communities regarding the value of such scientific-governmental interaction. It is hoped that this program will lead to significant contributions in the formulation of public policy, and to new and improved links between the scientific and technical communities and the federal government.

A prospective Fellow must demonstrate exceptional competence in some area of science; have a rather broad scientific and technical background; be cognizant of many matters in nonscientific areas; be articulate, literate, and able to work effectively with a wide range of people; and, have a strong interest and some experience in applying his or her knowledge toward the solution of societal problems.

A fellowship stipend is given by the ACS with the provision that Fellows obtain additional support from other sources, such as their place of business (i.e., sabbatical or grant). The Society invites members to apply for the Fellowship.

Contact ACS Congressional Fellowship Program Coordinator, address

above (202) 872-4467.

Deadlines 1 December

Geographical Tenable in Washington D.C. Restrictions

Citizenship U.S. Restrictions

#### AMERICAN CHEMICAL SOCIETY (ACS) 1155 16th Street NW Washington DC 20036

#### Science Policy Sabbatical

This program provides an opportunity for ACS members to work with the Society's Department of Government Relations and Science Policy in a professional capacity for one year. The candidate will: 1) work on one or more selected science policy projects to match the individual's particular capabilities and interests with the needs of the Department; 2) interact with decisionmakers in the science policy community in Washington to gain an understanding of the activities and processes of the Congress and the Executive Branch as well as the ACS; 3) become knowledgeable about the federal R&D process through hands-on experience and seminars; and 4) report to appropriate ACS units on sabbatical activities.

Candidates must be an ACS member, with a demonstrated interest in public-oriented programs; with competence in some areas of science or science policy; with knowledge of many matters in nonscientific areas; and be articulate, literate, and able to work effectively with a wide range of people. A Ph.D. is not a requirement.

Contact Office of Science Policy Analysis, ACS, address above, (202)

872-4383

Deadlines 1 March; notification by May

Geographical Tenable at ACS headquarters in Washington D.C.

Restrictions

Citizenship U.S.

Restrictions

#### AMERICAN GEOPHYSICAL UNION 2000 Florida Avenue NW Washington DC 20009

#### Congressional Science Fellowship

The American Geophysical Union Congressional Science Fellowship Program aims to broaden the perspective of both scientific and government communities in regard to the value of science-government interaction, to make more effective use in government of scientific knowledge and to contribute to the training of persons for careers involving the public use of technical information. Fellows generally perform as regular staff members involved with projects including speech writing, press releases, oversight investigations into major national problems (hazardous waste, ground water, etc.), and legislative and oversight work in such issues as innovation and productivity, water policy and energy policy. Past Fellows have been directly involved in water policy, climate research, and energy conservation. The Fellowship is for one year, beginning in September.

The program is highly competitive and aimed at early to mid-career geophysicists who possess a Ph.D. (but there are no absolute restrictions in this regard). Experience and/or a demonstratable interest in science and public policy is desirable. Applicants must be a member of the American Geophysical Union. Interested candidates should submit a letter of intent, a curriculum vitae, and three letters of recommendation.

Contact

Member Programs Division, Congressional Fellowship Program,

address above

Deadlines

February 15

Geographical Restrictions Tenable in Washington D.C.

Citizenship Restrictions

U.S.

#### AMERICAN MUSEUM OF NATURAL HISTORY Central Park West at 79th Street New York NY 10024

# Frank M. Chapman Memorial Grants and Lerner Gray Grants for Marine Research

The Frank M. Chapman Memorial Grants support research in ornithology, including marine studies, from a broad international point of view. A primary objective of this fund is to encourage developing scientists at early stages in their careers, particularly graduate students and individuals with recent graduate degrees.

The Lemer-Gray Grants for Marine Research provide modest financial assistance to highly qualified persons, graduate and postdoctoral, starting careers in marine zoology. Support is limited to projects dealing with systematics, evolution, ecology and field-oriented behavioral studies of marine animals. Awards are not made to support research in botany and biochemistry.

Application forms for either program can be obtained from the American Museum of Natural History, address above.

Contact Frank M. Chapman Memorial Fund or Lerner-Gray Fund at address

above.

Deadlines Chapman Fund: 15 January

Lerner-Gray Fund: March 15

Geographical

None

Restrictions

Citizenship None

Restrictions

# AMERICAN SOCIETY FOR MICROBIOLOGY 1913 I Street NW Washington DC 20006

#### Congressional Science Fellowship

The ASM Congressional Science Fellowship program supports a postdoctoral to mid-career microbiologist for a one-year appointment on the staff of an individual Congressman, Congressional committee, or with some other appropriate organizational unit of the Congress.

The purpose of the program is to allow the Fellow to make practical contributions to more effective use of sceintific knowledge in government, to educate the scientific communities regarding the public policy process, and to broaden the perspective of both the scientific and governmental communities regarding the value of such science-government interaction. The ASM Fellow will function as a special legislative assistant within the Congressional staff system. Guided by the American Association for the Advancement of Science, he/she will select a position to work on major legislative issues. The AAAS arranges a carefully structured orientation program, guides the placement process, and coordinates weekly seminars throughout the year.

Prospective Fellows must be citizens of the U.S. and be members of ASM for at least one year. Candidates are expected to show competence in some aspect of microbiology; have a broad background in science and technology; be cognizant of many matters in nonscientific areas; and have a strong interest and some experience in applying scientific knowledge toward the solution of social problems. Candidates are also expected to be articulate, literate, adaptable, interested in work on a range of public policy problems, and able to work with a variety of people from diverse professional backgrounds,

The period of appointment is from 1 September for one year. The award carries an annual stipend and some travel expenses.

Contact

Director, Public Affairs, ASM, address above

Deadlines

30 April; notification by 1 June

Geographical Restrictions

Tenable in Washington DC

Citizenship

U.S.

Restrictions

#### AMERICAN-SCANDINAVIAN FOUNDATION

#### 127 East 73rd Street New York NY 10021

#### Awards for Scandinavians to study in the United States

The ASF offers a limited number of awards (usually at the graduate level) for Scandinavians to undertake study or research programs in the United States. Candidates for awards are recommended to ASF by the organizations in Scandinavia with which ASF cooperates:

- 1) Danmark-Amerika Fondet, Nytorv 9, DK-1450 Copenhagen K. Denmark
- 2) Suomi-Amerikka Yhdistysten Liitto, Mechelininkatu 10 A 10, SF-001 00 Helsinki, Finland
- 3) Islenzk-Ameriska Felagid, P.O. Box 7051, Reykjavik, Iceland
- 4) Norge-Amerika Foreningen, Drammensveien 20C, 0255 Oslo 2, Norway
- 5) Sverige-Amerika Stiftelsen, Box 5280, S-102 46 Stockholm, Sweden.

Questions regarding eligibility for awards should be sent to the appropriate organization, but the ASF Exchange Division will assist with information whenever possible.

Contact Exchange Division, American-Scandinavian Foundation, address above

Deadlines Vary

Geographical Study in U.S.

Restrictions

Citizenship Citizens of Denmark, Finland, Iceland, Norway and Sweden

Restrictions

#### AMERICAN-SCANDINAVIAN FOUNDATION 127 East 73rd Street New York NY 10021

#### Awards for Study in Scandinavia

Through its grants and fellowships programs, ASF encourages advanced study and research in the Scandinavian countries. Awards are open to U.S. citizens and permanent residents who will have completed their undergraduate education at the time their overseas program begins. Outstanding proposals from all sources are invited; priority for FELLOWSHIPS is given to candidates at the dissertation level.

Awards for 1988-89 were available in Denmark, Finland, Iceland, Norway and Sweden.

Awards are offered in the form of either a Grant or a Fellowship, not both. Grants (1988-89, \$2,000) are especially suited for scholars and professionals, senior or junior, who plan a program in Scandinavia of a few weeks or months. It is possible to apply for a grant in connection with a longer program for which other, but insufficient, funds are assured. Pellowships (1988-89, \$8,000) are designed to meet the overseas research or study costs, typically, of a graduate student for an academic year. Language competence (as necessary) and evidence of a confirmed invitation or affiliation are important factors in award consideration. Applicants are therefore urged to arrange their academic or professional affiliations in Scandinavia as far in advance of project dates as possible, for some institutions have a strict policy on application deadlines.

Contact Exchange Division, American-Scandinavian Foundation, address above

Deadlines 1 August to 2 November; awards announced mid-April

Geographical Restrictions

Citizenship U.S. citizens and permanent residents

# AMOCO FOUNDATION, INC. 200 East Randolph Drive Chicago IL 60601

#### PhD Fellowship Program

This program is aimed at encouraging more students to pursue advanced degrees in engineering and science at selected universities,

Doctoral Fellowships are offered in the following disciplines:

Biochemistry, Biology, Chemical Engineering, Chemistry, Computer Science, Electrical Engineering, Geology, Geophysics, Geoscience, Mechanical Engineering, Petroleum Engineering and Toxicology.

Masters Fellowships are offered in disciplines including: Chemical Engineering, Civil Engineering, Computer Science, Geology/Earth Science, Geophysics, Mechanical Engineering, and Petroleum Engineering.

A list of the participating institutions for both fellowships may be obtained from the Foundation. Graduate students interested in Amoco Foundation Fellowships should contact the schools directly for further fellowship information. Doctoral fellowships in the engineering fields provide an annual stipend, normal university tuition and fees for three years. All other Foundation doctoral fellowships provide a stipend, normal university tuition and fees for one year.

Contact	For list of participating institutions write to PhD Fellowship Program at address above.
Deadlines	Vary
Geographical Restrictions	Participating institutions (list available from Foundation)
Citizenship Restrictions	U.S.

#### BERMUDA BIOLOGICAL STATION

#### Ferry Reach 1-15 Bermuda

#### Grants-in-Aid and Visiting Internship Awards

The Grants-in-Aid program helps defray on-site research costs at the Bermuda Biological Station (BBS) for faculty and graduate students with well defined short-term projects.

Applicants are expected to provide part of their funding from sources other than the Station. These grants are intended to help defray the costs of BBS in-house charges such as housing, lab fees and boat rental; grants cannot cover salary, research supplies or travel. Many of the awards are endowed, insuring the availability of a significant amount of funding each year.

M.S. and Ph.D. candidates in marine biology, marine chemistry, carbonate geology and oceanography are invited to apply for Visiting Internship Awards. In exchange for quarter-time service (10 hours per week), as teaching associates in the Station's educational programs, interns will be granted free housing and use of laboratory facilities for thesis research. Thesis topics must be approved by the applicant's major advisor and department, and be relevant to the oligotrophic open ocean, coral reefs or inshore marine environments.

Research supplies, specialized equipment and travel costs must be covered by the appointee or the appointee's home institution. Appointments are for 6-12 months with renewal possible for a second year.

Contact	Director, BBS, address above
Deadlines	Grants-in-Aid: 1 March and 1 October for summer or winter projects, respectively; Visiting Internship Awards: 1 January
Geographical Restrictions	Tenable at Bermuda Biological Station
Citizenship Restrictions	None

#### BICENTENNIAL SWEDISH-AMERICAN EXCHANGE FUND Swedish Information Service 825 Third Avenue New York NY 10022

#### **Exchange Grants**

The grants offered by the Swedish Bicentennial Fund may be of interest to marine/social scientists. Grants are made to Americans and Swedes working within fields to which the Fund gives priority including the relevant areas of human environment, education, and research. The purpose of the Fund for U.S. citizens is to provide opportunity for persons who are in a position to influence public opinion and contribute to the development of their society to spend three-to-six week intensive study visits in Sweden. Approximately ten grants are awarded annually to U.S. citizens, partially to cover transportation and living expenses for the three-to-six week visit. These grants may be used in conjunction with other grants. Application forms may be obtained from the Swedish Information Service. The deadline for applications is the end of the first week of February.

Details of grants available to Swedish citizens for study in the United States may be obtained from the Swedish Institute, Stockholm.

Contact	For U.S. citizens: Information Officer, Swedish Information Service, address above. For Swedish citizens: Swedish Institute, Stockholm, Sweden
Deadlines	The end of the first week in February, notification late May; consult application for exact dates
Geographical Restrictions	Tenable in Sweden (for U.S. citizens) and United States (for Swedish citizens)
Citizenship Restrictions	U.S. and Swedish citizens

#### THE BUNTING INSTITUTE OF RADCLIFFE COLLEGE

#### 34 Concord Avenue Cambridge MA 02138

#### Science Scholars Fellowship and Bunting Fellowship Programs

The Science Scholars Fellowship Program is designed for postdoctoral women scientists at any level in their careers in the following fields: physical and mathematical, environmental, engineering, biological and psychological sciences, with receipt of doctorate at least two years prior to appointment. Each scientist will receive a one- or two-year appointment with annual stipend plus research expenses.

Of interest to marine social scientists, the Bunting Fellowship Program allows women to pursue independent study in academic or professional fields. Its purpose is to provide the opportunity and support for a professional woman to complete a substantial project in her field, and thereby to advance her career. The principal selection criteria are that the year at the Institute will make a significant difference in the professional life of the Fellow and that the project is likely to make an important contribution to her field. Fellows may be at various levels of career development ranging from early postdoctoral to senior professional status. Applicants should have their doctorates at least two years by the date of the fellowship appointment. Academic applicants without doctorates with equivalent professional experience will be considered.

COBIRCI	Fellowship Program at address above
Deadlines	annual deadline (October); consult application for exact date
Geographical Restrictions	Residence in Boston area required during term of appointment at Institute
Citizenship Restrictions	None

#### CARNEGIE INSTITUTION OF WASHINGTON Department of Plant Biology 290 Panama Street Stanford CA 94305

#### Postdoctoral and Predoctoral Fellowships

Restrictions

The Department of Plant Biology, located on the campus of Stanford University, engages in basic research in modern plant science. Four major areas of plant study are emphasized.

One group of researchers and students investigates the molecular mechanisms of photosynthesis and the characterization of the photosynthetic pigments. A second group studies the genetic, biochemical, and physiological mechanisms underlying the evolution and adaptation of plants to different environments.

Another research group studies physiological, biochemical, and molecular aspects of plant development, which involve investigations into the influence of light on plant development. The fourth group focuses on the techniques of modern molecular biology not only on problems of plant development but also on problems of evolution and on organetle biochemistry and function.

The fellowship program provides training under the guidance of the departmental faculty for investigators at the postdoctoral level. In addition, selected predoctoral students receive training and guidance toward the Ph.D. in collaboration with Stanford University and occasionally with other universities in the U.S. and abroad. Postdoctoral fellowships are normally awarded for one year, but may be extended for additional periods. Appointments for various lengths of time as visiting investigators or senior fellows are also made to independent scientists who hold permanent positions elsewhere. In a typical year, there are from 10-12 postdoctoral fellows and visiting investigators and a similar number of predoctoral fellows.

Contact	Application to Director of the Department
Deadlines	1 January; notification by late February for academic year beginning 1 July
Geographical Restrictions	Tenable at Department of Plant Biology, Stanford, California
Citizenship	None

# CARNEGIE INSTITUTION OF WASHINGTON Department of Terrestrial Magnetism 5241 Broad Branch Road, NW Washington DC 20015

## Postdoctoral and Predoctoral Fellowships

The Department of Terrestrial Magnetism (DTM) applies the methods of physics and chemistry to the study of the Earth and the Universe. Investigations are principally selected in areas of astrophysics, geophysics, and geochemistry and include extensive field work and advanced laboratory experiments. Current foci (within a framework of advanced instrumentation development) lie in seismology, astronomy, theoretical astrophysics, planetary geology, and radioisotope geochronology.

The Department's objectives are primarily in basic research and postdoctoral education. Projects are shaped to preserve maximum flexibility and to fit the scientific interests of both staff members and fellows. Fellows have opportunity for a wide range of experiences, from conceiving and constructing specialized experimental devices to participating in seminars and symposia; from experimentation, data-gathering, and analysis, to interpreting the work of the scientist to society at large.

DTM conducts cooperative activities including geophysical and geochemical investigations in several South American countries (Argentina, Bolivia, Brazil, Chile, Colombia, and Peru) and southern Africa, and it collaborates with the Japan Meteorological Agency, Tohoku University and Hokkaido University in Japan, the Iceland Meteorological Office, and the Port Moresby Geophysical Observatory, New Guinea.

Appointments are for one year and usually are reappointed for a second year, beginning in September or October.

A predoctoral student may be accepted for training in an area of research leading to preparation of a thesis and the award of an advanced degree at a cooperating university. Arrangements for such training and guidance are made on an individual basis.

Contact	Director of the Department, address above
Deadlines	1 February
Geographical Restrictions	Tenable at Department of Terrestrial Magnetism, Washington DC
Citizenship Restrictions	None

#### CARNEGIE INSTITUTION OF WASHINGTON Geophysical Laboratory 2801 Upton Street NW Washington DC 20008

#### Postdoctoral and Predoctoral Fellowships

The Geophysical Laboratory is especially well equipped and staffed to conduct fundamental investigations in experimental petrology, very high pressure phenomena, systematic petrology, element concentration (ore deposits), geochemical transport and kinetics, mineral physics, spectral mineralogy and crystallography, stable and radioactive isotope geology, and organic geochemistry including biomineralogy. Most of the work focuses on experimental and theoretical investigations of geologic field problems for understanding the composition, temperature, pressure, and dynamics of the Earth's interior. Several staff members are currently engaged in special projects related to ore petrology, lunar petrology, deep-sea cores, deep drilling, geothermal resources, and planetary atmospheres. Opportunities for similarly varied scientific inquiry and instruction are available to fellows.

Postdoctoral Training: Each year, about 8 men and women hold predoctoral and postdoctoral fellowships at the Laboratory. About 60 percent of these scholars are from the United States, about 40 percent from abroad. Each postdoctoral fellow shares his or her individual program of research to suit personal interests, capabilities, and goals. Fellows may work individually or may collaborate in projects with other fellows, visitors, and staff members.

Predoctoral Training: Graduate training is conducted in cooperation with major universities. Students usually complete their classroom course work before coming to the Laboratory. There they receive instruction in special areas of research and attend weekly seminars. Primary concentration is on the Ph.D. thesis. The student, maintaining continual consultation with his or her professors, returns to the degree-granting university to defend the completed research.

Fellowships are for one year, usually beginning in September; they may be renewed for a second year upon satisfactory progress.

Contact Preliminary inquiry to faculty member with whom candidate wishes to study; application to Director of the Laboratory

Deadlines 1 December, notification by February

Geographical Tenable at Geophysical Laboratory, Washington DC Restrictions

Citizenship None Restrictions

#### CARNEGIE INSTITUTION OF WASHINGTON 1530 P Street NW Washington DC 20005

#### Postdoctoral Fellowships in Science Policy

Studies in science policy offer a social science complement to Carnegie Institution's basic research in the physical and biological sciences. In 1979 the Institution began a series of inquiries into various science policy questions. Among these were broad reviews of the nation's educational and industrial policies in recent historical context, and of the evolution of independent research institutions, along with narrower examinations on policy aspects of such topics as earthquake prediction and minerals-resource estimates. The minerals-resource study was expanded into an examination of the role of the earth sciences in the making of minerals policies in Canada and the United States.

The institution is prepared to offer opportunities to enable a few exceptionally qualified investigators—a senior fellow or one or two junior fellows—to undertake policy related studies. Scholars may, as in the past, serve in residence at the Institution's Washington, DC headquarters, or if a fellow is interested in a policy topic related to the work of one or more Carnegie research departments, he or she may conduct part of the study program in residence at that department or departments. These departments include the Geophysical Laboratory, the Department of Terrestrial Magnetism (both in Washington, DC), the Department of Embryology (Baltimore, Maryland), the Mount Wilson and Las Campanas Observatories (Pasadena, California), and the Department of Plant Biology (Stanford, California).

Contact	President of the Institution, address above
Deadlines	Six months in advance of the start of intended research
Geographical Restrictions	Residence at Carnegie Institution in Washington, DC or at one of the Institution's research centers.
Citizenship Restrictions	None

#### CENTER FOR FIELD RESEARCH

680 Mount Auburn St. P.O. Box 403 Watertown MA 02172

#### Research Support/EARTHWATCH

The Center for Field Research is a private, nonprofit organization that develops and selects the projects supported each year by Earthwatch. The Center assists scholars in need of funding and volunteers to help underwrite and staff their field expeditions. The Center reviews and recommends field research projects for support. All proposals are submitted for peer review and those recommended for support are referred to Earthwatch, the funding organization. Earthwatch coordinates a private volunteer research corps which enables members of the public to join research expeditions as coworkers and to help underwrite expedition costs. To qualify for support, projects must integrate nonspecialist volunteers into the field research agenda.

Investigators should submit a 2-page outline of the research subject and design, dates, budget, and plans for use of volunteers to the Center. Grants, administered by Earthwatch, cover all expenses for maintaining research staff and volunteers in the field as well as travel expenses for PIs to and from the field, leased or rented field equipment, support of logistical staff and visiting scientists, support on foreign projects for teachers or students from the host country. Support is primarily given to advanced postdoctoral scholarship, though portions are reserved for exceptional initiatives by younger scholars. Special preference is given to research projects of a multidisciplinary nature or those involving transnational collaboration. Earthwatch does not normally provide funds for capital equipment, staff salaries, university overhead or indirect costs, data analysis or publications.

Contact Center at address above, or (617) 926-8200

Deadlines Preliminary proposals any time; full proposals 10-12 months

before departure for the field.

Geographical

Restrictions

trictions

Citizenship Restrictions None

None

#### CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE Quai Anatole France, 15 Paris, 7e, FRANCE

#### Exchange Research Fellowships in the Netherlands

Exchange Research Fellowships are offered in conjunction with the Netherlands Organisation for the Advancement of Pure Research.

Exchange Research Fellowships for research in any science are available to French nationals who are research workers of proven ability, in exchange for similar facilities offered to Dutch research workers by the Centre National de la Recherche Scientifique in Paris. The fellowships cover research in any science, are tenable in the Netherlands, cover transportation, living costs and research facilities; duration of the award varies according to individual case.

Contact

Centre National de la Recherche Scientifique, address above or Netherlands Organisation for the Advancement of Pure Research,

P.O. Box 93138, 2509 AC The Hague.

Deadlines

Geographical Restrictions

Tenable in the Netherlands

Citizenship

French citizens

Restrictions

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# CONSIGLIO NAZIONALE DELLA RICHERCHE Piazzale Aldo Moro 7

Rome ITALY

## Exchange Research Fellowships in the Netherlands

Exchange Research Fellowships are offered in conjunction with the Netherlands Organisation for the Advancement of Pure Research.

Exchange Research Fellowships for research in any science are available to Italian nationals who are research workers of proven ability, in exchange for similar facilities offered to Dutch research workers by the Consiglio Nazionale della Richerche in Rome. The fellowships are tenable in the Netherlands, cover transportation, living costs and research facilities; duration of the award varies according to individual case.

Contact Consiglio Nazionale della Richerche, address above or Netherlands

Organisation for the Advancement of Pure Research, P.O. Box

93138, 2509 AC The Hague.

Deadlines

Geographical Restrictions Tenable in the Netherlands

Citizenship Restrictions

Italian citizens

#### COUNCIL FOR INTERNATIONAL EXCHANGE OF SCHOLARS (CIES)

11 Dupont Circle, Suite 300 Washington DC 20036

#### The Fulbright Scholar Program

The listings that follow comprise the offerings of the Fulbright Scholar Program for 1988-89 for Regional Awards and Individual Country Awards. The Program varies each year based on requests of the host countries involved, the availability of funds, the number of grants, the fields, and the award benefits. These listings will serve only as an indication of the possibilities within the Program. Full information on future academic year programs may be obtained from

The Fulbright Scholar program enables Americans to learn first hand about other countries and cultures, and it promotes academic and professional development. Grants are available in the categories of: 1) Research (some 300 awards are offered in most disciplines); 2) Lecturing (over 700 of the awards are for university professorships; many offering some opportunity for research); 3) Lecturing/Research (some of the awards are designed to combine both these activities); 4) Junior Lecturing and Junior Research (designed for young scholars who are recent Ph.D.'s or advanced Ph.D. candidates); and 5) Travel (providing only round-trip transportation to the country where the scholar will lecture or conduct research).

Grant benefits usually include round-trip travel for the grantee (and in many instances for a principal dependent), maintenance allowance, incidental allowances (e.g., books, travel within host country), housing or housing allowance, and tuition allowance in certain countries for accompanying dependents (on elementary or secondary levels).

Eligibility is based on U.S. citizenship at time of application; for lecturing awards, a doctorate at time of application and postdoctoral college or university teaching experience; for research awards, a doctorate at time of application or comparable professional qualifications; and in some programs, proficiency in a foreign language. Only one application may be filed in an annual competition, but applicants may name up to three alternate countries.

Summaries of Fulbright Scholarships awarded for work in specific geographic regions follow.

Contact For general information or applications, CIES, address above, or (202) 939-5401

Deadlines vary by program and/or country

Geographical see restrictions in individual listings Restrictions

Citizenship U.S.

Restrictions

# COUNCIL FOR INTERNATIONAL EXCHANGE OF SCHOLARS (CIES)

#### Fulbright Awards--African Regional Research Program

About ten awards are available in all academic fields of research in one to four sub-Saharan African countries over periods of three to nine months. African specialists are encouraged to apply, but applications are also welcome from scholars who may have had limited or no previous experience in Africa. Host country support of intended research must accompany proposals for these awards. Grantees will be asked to give occasional lectures. Applicants are encouraged to discuss their proposals with CIES Africa area staff well in advance of the application. See individual country listings for information regarding lecturing/research openings.

Contact

African Regional Research Program staff, address above or (202)

939-5426

Deadlines

15 September (subject to change)

#### Fulbright Awards--American Republics Research Program

Up to twenty awards for six months to conduct research in one or more countries of the Caribbean and South America as well as Mexico, with special consideration for research projects in Mexico. Research areas include the arts, communications, education, humanities, and social sciences. Nonacademic professionals in business, journalism, law and government are also encouraged to apply. Applications are encouraged from scholars whose projects involve collaboration with host country colleagues and who are willing to give occasional lectures, seminars, or possibly teach a course. Applicants for Spanish-speaking countries should have sufficient language ability to conduct the proposed research.

Contact

American Republics Research Program, (202) 939-5462

Deadlines

15 June (subject to change)

#### Fulbright Awards--Central American Republics Research Program

Up to twenty awards for three to twelve months for research in Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. Applicants will be considered in any area of the arts, communications, education, humanities, and social sciences for research in one or more countries. Nonacademic professionals in business, journalism, law and government are also encouraged to apply. Applications are encouraged from scholars whose projects involve collaboration with host country colleagues and who are willing to give occasional lectures, seminars, or possibly teach a course. Applicants for Spanish-speaking countries should have sufficient language ability to conduct the proposed research.

Contact

Central American Republics Research Program, (202) 939-5464

**Deadlines** 

15 June (subject to change)

# COUNCIL FOR INTERNATIONAL EXCHANGE OF SCHOLARS (CIES)

# Indo-American Fellowship Program: Indo-U.S. Subcommission Research Awards

This program seeks to draw into the education exchange U.S. citizens who are not India specialists and who have had limited or no prior experience in India. Of particular interest are proposals that may stimulate communication and collaboration between groups in the two countries in the humanities, the natural, applied, and social sciences, and professional areas. For 1988-89, twelve long-term (six to ten months) and nine short-term (two to three months) advanced research fellowships were offered.

Contact

CIES program staff, address above, or (202) 939-5469 for special

application forms

Deadlines

15 June (subject to change)

#### Fulbright Awards--Islamic Civilization Research Program

Six to ten awards for three to nine months are offered in any field for research on some aspect of civilization, society, or science in one or more Muslim countries or among communities of Africa, Asia, and the Middle East with substantial Muslim populations. Collaborative research with foreign scholars is encouraged. Applications are welcome in established fields of Islamic studies, as well as in fields in which there is a growing interest in comparative and Islamic studies, such as law, planning, environmental studies, and science and technology in society. Appropriate language facility is required

Contact

Islamic Civilization Research Program, (202) 939-5467 or 939-5470

Deadlines

15 September (subject to change)

# Fulbright Awards--Middle East, North African, and South Asian Regional Research Program

A limited number of nine-month awards are offered within the social sciences and the humanities for research on how the United States is perceived in the Middle East, North Africa, and South Asia, and how present images have been formed. The research is expected to be comparative, preferably undertaken in more than one of the following countries: Algeria, Bahrain, Bangladesh, Egypt, India, Iraq, Israel, Jordan, Kuwait, Mauritania, Morocco, Nepal, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Sudan, Syria, Tunisia, United Arab Emirates, West Bank, or Yemen. Collaborative research with a foreign scholar/professional abroad is encouraged. Appropriate language facility required. Academic fields of interest to marine policy/social scientists include anthropology/sociology, economics, and political science.

Contact

Middle East, North African, and South Asian Regional Research Program staff, address above or (202) 939-5467 or 939-5470

Deadlines

15 September (subject to change)

# COUNCIL FOR INTERNATIONAL EXCHANGE OF SCHOLARS (CIES)

#### Fulbright Awards--Southeast Asian Regional Research Program

Up to ten awards for three to ten months to conduct research on Southeast Asian society and culture. Fields include humanities, social sciences, communications, education, law, and business. Countries of study include Indonesia, Malaysia, Philippines, Singapore, and Thailand. Proposals with intercountry travel and collaborative research will be considered. Degree of language facility will be considered.

Contact

Southeast Asian Regional Research Program staff, address above, or

(202) 939-5475

Deadlines

15 September (subject to change)

#### Fulbright Awards--Western European Regional Research Program

Approximately fifteen awards for research on European politics, society, and culture. Applicants accepted in any discipline within the social sciences and humanities. Preference given to scholars with professional interest in European area studies. Projects should be regional or comparative in scope and must involve significant time in each of two or more of the following countries: Austria, Belgium, Cyprus, Denmark, Finland, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey and the UK. Awards range in duration from three to nine months.

Contact

Western European Regional Research Program staff, address above,

or (202) 939-5416 or 939-5411.

Deadlines

15 September (subject to change)

# COUNCIL FOR INTERNATIONAL EXCHANGE OF SCHOLARS (CIES)

#### Fulbright Awards in Individual Countries

Individual countries that have in the past participated in the Fulbright Scholar Program, awarding various types of grants (research, lecturing, travel, etc.) are listed below. Current research and study interests of these countries are variable. Information can be obtained by contacting the Fulbright program staff at the phone extension listed alongside each country's name.

Phone numbers begin with (202) 939-xxxx except where noted

Argentina -5457 Australia -5476 Bahrain -5473 Belgium -5410 or -5413 Belize -5464 Bulgaria -5419 Burundi -(202)686-4028 Czechoslovakia -5422 Denmark -5413 or -5410 Egypt -5473 Finland -5413 or -5410 France -5413 or -5410 German Democratic Republic -5418 Federal Republic of Germany -5415 or -5411 Greece -5415 or -5411 Hungary -5422 Iceland -5413 or -5410 India -5469 Indonesia -5417 Ireland -5416 or -5410 Israel -5471 Ivory Coast -5427 Jordan -5467 or -5470 Kuwait -5473 Liberia -5427 Malaysia -5478 or -5476 Mauritius -5427 Morocco -5470 Netherlands -5413 or -5410 Norway -5413 or -5410 Pakistan -5468 Papau New Guinea -5476 Poland -5418 Portugal -5414 or -5412 Qatar -5473 Republic of the Marshall Islands -(202)686-4025 Romania -5418 Soviet Union -5419 Sri Lanka -5468 Syria -5467 or 5470 Taiwan -5475 Thailand -5473 United Arab Emirates -5473 United Kingdom -5410 Yemen -5473 Yugoslavia -5420

Contact

shove

Deadlines

vary per program

#### DALHOUSIE UNIVERSITY OFFICE OF THE DEAN, FACULTY OF GRADUATE STUDIES Halifax, Nova Scotia Canada B3H 4H6

#### Isaak Walton Killam Postdoctoral Fellowships

These scholarships provide recently graduated scholars of superior research ability with the opportunity to establish themselves at Dalhousie University as productive members of the academic community. The scholarships may be used in any department of Dalhousie University, including the Oceanography Department. Ten new fellowships are awarded annually. Support includes a stipend and a transportation allowance for the award recipient and spouse. Teaching or other similar duties in the University will not exceed three hours per week of the Fellow's time. Fellowships are initially awarded for one year; a six month extension is possible.

Contact Office of the Dean, address above.

FAX (902) 424-8797

Deadlines December 15

Geographical Tenable at Dalhousie University

Restrictions

Citizenship None

#### WILLIAM H. DONNER FOUNDATION, INC.

500 Fifth Avenue. Suite 1230 New York NY 10110

#### Foundation Grants

The foundation awards monies for research in fields determined by the board of trustees. The present established area of research interest is U.S.-Canadian relations. Exploratory grants in other areas including education, public affairs and wild-life conservation will be considered. Requests for new enterprises and expansion are preferred. Proposed research projects may be of any duration, but funding is most likely for less than three years.

Initial contact should consist of a letter with a brief statement of the proposed project, the project objectives, and how the applicant will meet them. The foundation will then work with applicants to develop a formal proposal which will be submitted to an independent peer review. Applicants must be charitable, tax-exempt organizations. No grants are given to individuals.

Co	n	ta	ct	

The William H. Donner Foundation, Inc., address above.

(212) 719 -9290

Deadlines

Applications received all year; considered on the following

Completed Application Received

at Foundation by

August 1 December 1

April 1

Considered at Board Meeting

October February June

Geographical Restrictions

Citizenship Restrictions U.S.-Canadian

# EAST-WEST CENTER Center for Cultural and Technical Interchange between East and West

1777 East-West Road Honolulu HI 96848

## Fellowships, Research/Professional Internships and Associateships, Graduate Programs, Doctoral Internships

The East-West Center is an educational non-profit public institution funded by an annual appropriation from the U.S. Congress and 25 Asian and Pacific Governments as well as private foundations, public agencies, corporations and individuals. Research in two of the Center's Institutes, Resource Systems and Environment and Policy, is relevant to marine scientists. The Resource Systems Institute emphasizes studies on the relationships between resources and the international economy in programs on development policy and international relations, energy, and minerals policy. The Environment and Policy Institute focuses on the management of natural systems and renewable resources and how human activities affect the environment. Projects are conducted in cooperation with institutions, universities, and agencies from throughout Asia, the Pacific, and the U.S.

The Center provides awards in five categories:

- 1. Fellows: Scholars and authorities engaged in research and development activities are invited from research organizations, universities, government agencies, and private enterprise to participate in specific Center projects (90-120 annual awards);
- 2. Research and Professional Interns: Awards provided to researchers in various career stages for supervised practical experience in specific Center projects (60-90 awards annually);
- 3. Professional Associates: Participants include policy makers, public officials, scholars, and managers from business, government, and education. Projects are designed to apply research results to practical problems and explore policy applications of new knowledge (800-1,000 awards annually);
- 4. Graduate Degree Students: Participate in Center R&D projects while studying at Univ. of Hawaii (100-120 new awards annually);
- 5. Joint Doctoral Research Interns: Students who have completed course requirements elsewhere gain supervised research experience in Center projects toward dissertation completion (20-25 annual awards).

Contact Award services at East-West Center, address above.

Deadlines Vary in each country. December 1 in the U.S.

Geographical Research at East-West Center, Hawaii

Citizenship U.S., Asian and Pacific-area countries

Restrictions

**ENVIRONMENTAL PROTECTION AGENCY** Office of Exploratory Research Environmental Air/Water Chemistry and Physics 401 M Street SW Washington DC 20460

#### Research Grants in Environmental Air/Water Chemistry and Physics

The Environmental Air/Water Chemistry and Physics Research Program supports projects in analytical chemistry, chemical reactions and their rates, and the physics of movement of pollutants in air, water and soil to enable the estimation of total exposures needed for risk assessments. Research projects on pollution of freshwater marine/estuarine waters, soils, groundwaters, and sediments include transport and fate studies of pollutants in the surface and subsurface environments, in lakes, rivers and estuarine waters, and the development of predictive water quality models. Research focused on monitoring systems and analytical methods includes development of new techniques for increasing sample through-put, sensitivity and selectivity and for field use; new methods for screening a variety of samples for toxic substances and some organics and for monitoring waste streams; new geophysical monitoring techniques for flow and migration rates of groundwater and leachate,

The EPA Grants Application/Information Kit is available from The Research Grants Staff, address above. Nonprofit institutions and state or local governments are eligible for these grants. Profit-making firms are eligible only under certain laws outlined in the Research Grants Application Kit. Federal agencies and employees are not eligible. Investigators at minority institutions or those who have not previously received support are encouraged to apply. Applications are initially reviewed by the EPA aand then by a peer review panel composed primarily of non-EPA scientists and engineers. A federal grant regulation requires that all recipients provide a minimum of 5% of the total project cost, which may not be taken from

Contact

Science Review Administrator (RD-675), address above, (202)

382-7445

Deadlines

March 15, August 15

ENVIRONMENTAL PROTECTION AGENCY Office of Exploratory Research Environmental Biology Research Program 401 M Street SW Washington DC 20460

#### Exploratory Research Grants in Environmental Biology

This program supports a broad range of research in the areas of Risk Assessment, Ecosystem Structure and Function, Toxicology, Biotechnology and Degradation Processes. Information obtained through this research, in combination with exposure data, will allow the prediction of the environmental risks of pollutants on individual organisms, populations, communities and ecosystems. Areas of interest include but are not limited to: Risk Assessment--environmental risks of single-chemical or complex mixture, risks associated with hazardous waste sites, testing and validation of lab findings and model verification under field conditions, determining pathways, interactions, and impact of genetically engineered microorganisms which enter environmental systems; Ecosystem Structure and Function--the cycling of pollutants and biodegradation products with long time constants, the impact of pollutants on ecological genetics and natural selection, vulnerability and resilience of ecosystem components, modeling to develop new methods that predict pollutant effects; Toxicology-delineating the effects of gaseous and particulate air pollution, the biochemical, physiological and ecological mechanisms by which major pollutants combine, sublethal effects of toxic chemicals, models for aquatic and terrestrial organisms exposure, the role of microorganisms in movement of pollutants, effects of the chemicals on wildlife. The Environmental Protection Agency will consider other research topics that are relevant to the EPA's mission.

Nonprofit institutions and state or local governments are eligible for these grants. Profit-making firms are eligible only under certain laws outlined in the Research Grants Application Kit which is available from Research Grants Staff, address above. Federal agencies and employees are not eligible. Investigators at minority institutions or those who have not previously received support are encouraged to apply. Applications are initially reviewed by the EPA and then by a peer review panel composed primarily of non-EPA scientists and engineers. A federal grant regulation requires that all recipients provide a minimum of 5% of the total project cost, which may not be taken from federal sources.

Contact Science Review Administrator (RD-675), address above, (202)

382-7445.

Deadlines February 15

ENVIRONMENTAL PROTECTION AGENCY Office of Exploratory Research Environmental Engineering Research Program 401 M Street SW Washington DC 20460

### Exploratory Research Grants In Environmental Engineering

This program supports fundamental research needed to provide solutions to pollution control problems outside the scope of the Environmental Protection Agency's response-directed research program. New, innovative toxic substances control and waste management techniques are sought to provide cost-effective advanced multi-media (solid, liquid, and gaseous) pollution control. Areas of interest include, but are not limited to: 1) Proof of concept research in high-risk, high potential technical areas such as biodegradation of toxic substances, biotechnology advances for the degradation of toxic wastes in contaminated water, groundwater and sediment, improved techniques to prevent groundwater contamination, and prevention technology to minimize adverse health and ecological effects of accidental releases of toxic material. 2) Pilot-scale evaluation and cost performance testing of innovative technologies that include handling and disposal of hazardous wastes, reduction of indoor air-pollution, low-cost capture of particles less than 10 micrometers, control and removal of toxic air emissions from industrial combustion sources, simultaneous control of particulates in combustion and post combustion processes, the disposal and treatment of waste water sludge, and clean up techniques for contaminated soils, groundwater, and asbestos. 3) Fundamental thermal destruction/combustion research that would lead to less pollutant production and better incineration of hazardous waste such as investigation of flame reactions, propagation and quenching mechanisms, catalysts for control of NOx and organic particulate matter in high temperature combustion processes, and investigation of operating conditions enabling the development of predictive models for incomplete combustion of hazardous wastes.

Nonprofit institutions and state or local governments are eligible for these grants. Profit-making firms are eligible only under certain laws outlined in the Research Grants Application Kit which is available from Research Grants Staff, address above. Federal agencies and employees are not eligible. Investigators at minority institutions or those who have not previously received support are encouraged to apply. Applications are initially reviewed by the EPA and then by a peer review panel composed primarily of non-EPA scientists and engineers. A federal grant regulation requires that all recipients provide a minimum of 5% of the total project cost, which may not be taken from federal sources.

Contact

Science Review Administrator, address above (202) 382-7445.

Deadlines

February 15, August 15

#### ENVIRONMENTAL PROTECTION AGENCY Minority Research Grant and Student Fellowship Programs 401 M Street SW Washington DC 20460

#### Minority Research Grant and Student Fellowship Programs

The Minority Research Grant and Student Fellowship Programs fund exploratory research by faculty and support undergraduate and graduate fellowships for students enrolled at eligible institutions. The principal purpose of this program is to provide federal assistance to historically black colleges and universities as directed by Executive Order. Research Assistance Grants are available only to eligible institutions subject to Executive Order No. 12320. Preapplication assistance is available upon request. A pre-proposal may be submitted for informal scientific review and for determination of its relevance to the EPA's goals. The application form (EPA Form 5700-12) is required and can be obtained from the above address.

Applicants for the Student Fellowship must be a senior or graduate student enrolled full-time and in good standing (with a Grade Point Average of 3.0 or better on a scale of 4.0) in an eligible institution. Fellowship applications will be considered by: 1) the individual's orientation towards and commitment to a career in the physical, biological, environmental or computer sciences; 2) the Grade Point Average verified by college transcript; 3) applicant's statement of personal goals and objectives; 4) sponsor and faculty recommendations; 5) employment experience related to the field of study. Applications include EPA Form 5770-4 which can be obtained from above address,

Contact

Ombudsman, address above, (202) 382-7445

Deadlines

Geographical Restrictions

Citizenship

U.S.

#### EXPLORERS CLUB 46 E. 70th Street New York NY 10021

#### **Exploration Fund Grants**

The Exploration Fund is a fund from which grants are made in support of exploration and field research. In the past such grants have been made in amounts typically not more than \$1,000. Expeditions aided will be for scientific purposes in accordance with the Club's stated objective, "to increase knowledge of the world." Grants may be made to anyone regardless of whether or not the applicant is a member of the Explorers Club. Recipients of grants from the fund are expected to provide a report for the Explorers Journal of the results of their expedition.

Exploration Fund Committee at address above. Contact

January 31 for April notification Deadlines

Geographical None

Restrictions

Citizenship

Restrictions

None

#### FAO--FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme de Caracalla 00100 Rome ITALY

#### Andre Mayer Research Fellowships

The Andre Mayer Research Fellowships are open to nationals of all member countries for carrying out selected research projects within the framework of FAO's current Programme of Work. Available to experienced and highly qualified research workers for independent research. Awarded only through governmental designation.

Contact

FAO representative in home country or FAO National Committee

Deadlines

Geographical

FAO member countries

Restrictions

Citizenship

Nationals of FAO member countries

Restrictions

#### Technical Assistance Fellowships

These fellowships are open to nationals of countries with which agreements have been signed under the UN Development Programme or Trust Fund arrangements with various donor countries. These fellowships are designed to equip qualified personnel to aid technical, economic, and social development of their own countries. Candidates must have basic and technical education and practical experience in field of fellowship (fields include agriculture, fisheries, forestry, agricultural economics, and statistics). Awarded only as part of specific projects of technical assistance.

Contact

FAO representative in home country

**Deadlines** 

Geographical

Countries with which agreements have been signed under UN

Restrictions

Development Programme or Trust Fund

Citizenship

Nationals of countries in "Geographical Restrictions" above

#### FORD FOUNDATION 320 East 43rd Street New York NY 10017

#### Foundation Grants

The Ford Foundation's philanthropic work supports a variety of programs both domestic and international. Three areas of the Foundation's interests are relevant to marine scientists: Rural Poverty and Resources, Education and Culture, and International Affairs. Programs within the Rural Poverty and Resource category include national and international research in land and water management, management of natural resources, groundwater protection and policy, productivity of fisheries and agricultural systems, wetlands management, and water allocation. Under International Affairs, research is conducted in U.S. foreign policy, international economics and development, international relations, and international law. This program has recently funded a Maritime Boundary Project and an educational program to enhance public understanding of ocean law. Education and Culture programs include funding international exchange and visiting scholars, strengthening specific academic departments, and curriculum development. Details of each of the Foundation's programs are presented in The Ford Foundation Letter and Ford Foundation Current Interests.

The Foundation funds charitable, educational or scientific organizations. Applicants should initiate contact with a letter of inquiry so that the Board of Trustees may determine whether the proposed project satisfies the Foundation's present interests. Few grants are given to individuals and are limited to research, training and other activities related to the Foundation's program interests. Grants to individuals are primarily awarded through publicly announced competitions or on the basis of nominations from universities and other nonprofit organizations. The Foundation supports affirmative action goals in its grant-making and internal policies.

Contact

In U.S., contact Secretary, Ford Foundation, address above. In foreign countries, requests should be directed to the nearest

Foundation office.

Deadlines

Applications accepted throughout the year.

Geographical Restrictions Citizenship

# FOUNDATION FOR MICROBIOLOGY c/o National M.S. Society 205 E. 42nd Street New York NY 10017

#### Foundation Grants

Royalties from patents resulting from Dr. S.A. Waksman's microbiology research at Rutgers University established the Foundation for Microbiology. The Foundation chooses to support those areas of microbiology which usually fail to attract support from conventional funding agencies but which necessarily underlie the active development of the whole field. The foundation supports education and training, both here and abroad, publication of scientific results, the maintenance and strengthening of research contacts within the "developed" world and with Latin America and Africa, and partial support of meetings, workshops and symposia. The Foundation does not support conventional lecture or seminar series, standard courses, conventional research, fellowships or travel grants. Specific training opportunities include summer stipends for students to work at the W. Alton Jones Cell Science Center; a Minority Postdoctoral Fellowship in Tropical Disease Research; Microbiology Exchange Fellows from the Peoples Republic of China; training for high school students in Applied Laboratory Experimentation in Microbiology at Mankato State University. The Foundation's continuing interest in the development of microbiology in Latin America has been reflected in the financing of books, microscopes, courses and travel to researchers in Latin American countries. A large portion of funds is donated to the American Society for Microbiology which provides fellowships, lecture programs, Latin American visiting scholars and graduate student travel to scientific meetings. The Foundation also underwrites a biennial \$5,000 Selman Waksman Prize awarded by the National Academy of Sciences.

Applications should take the form of a letter containing a full description of the planned program, its purpose, duration and target audiences, budget, breakdown, etc., and most importantly, what would define such a program as unique.

Contact Byron H. Waksman, M.D., President, address above.

(212) 986-3240

Deadlines None. Applications considered approximately four times per year.

#### GENERAL SERVICE FOUNDATION P.O. Box 4659 Boulder Colorado 80306

#### Foundation Grants

The General Service Foundation is interested in addressing long-term problems in three areas: International Peace, Population, and Resources. It is within the Resources area that funding possibilities exist for marine scientists. The Foundation's international resource interests include developing food, water, fuel, forage, and/or fertilizer on a sustainable basis in developing countries. Within the U.S., the use, management and quality of water, particularly west of the Mississippi, is a concern of the Foundation. Initiatives at any level of the educational system which promise to develop integrative thinking and an international perspective will also be

Funding is awarded to tax-exempt organizations for projects or programs that are new, innovative, demonstrational, and/or research in nature. A letter of inquiry decribing the proposed research project should be sent prior to submitting a formal proposal.

Contact General Service Foundation, address above, with letter of inquiry

describing project prior to full proposal. (303) 447-9541

Deadlines

Geographical None

Restrictions

Citizenship Restrictions

None

#### GEOLOGICAL SOCIETY OF AMERICA P.O. Box 9140 Boulder CO 80301

#### Congressional Science and Engineering Fellowship

The Geological Society of America Congressional Fellowship offers a highly qualified earth scientist in early- or mid-career the opportunity to work for a year as special legislative assistant. The Fellow will perform varied legislative, oversight, and investigative activities in the office of an individual member of Congress, a Congressional committee, or a Congressional support agency. The purpose of this program is to make practical contributions to more effective use of scientific knowledge in government, to obtain firsthand experience and to educate the earth science community about the public policy process, and to broaden the perspective of that community and the governmental community regarding the value of such mutually beneficial interactions.

Candidates are expected to show exceptional competence in some area of the earth sciences; have a broad professional background; be cognizant of matters outside their particular area; and have a strong interest in applying scientific knowledge toward the solving of societal problems. Complete applications include a letter of application, three letters of reference, a candidate statement, and a full curriculum vitae. Candidates are expected to be members of the Geological Society of America or may apply for membership at the time the fellowship application is submitted.

Contact Executive Director, address above (303) 447-2020

Deadlines March 15

Geographical U.S.

Restrictions U.S.

Restrictions

# GERMAN ACADEMIC EXCHANGE SERVICE

950 Third Ave., 19th floor New York, NY 10022

# Graduate Studies and Research Program

This program, offered by the German Academic Exchange Service (DAAD), provides full scholarships, including international travel and a monthly allowance for graduate studies at a German university and research in connection with a doctoral dissertation. Awards are for seven to ten months during the academic year at German institutions of higher learning. Candidates must hold the bachelor's degree at time of award, be younger than 32 years of age, and must have good command of the German language. Applicants may not have a DAAD grant, a grant from any other German organization or a Fulbright grant, concurrently or consecutively. Enrolled students should contact the Fulbright Program Advisor on their campus for application

Contact

General inquiries: German Academic Exchange Service (DAAD), address above, (212) 758-3223. At-large applicants: Institute of Intl. Educ., 809 United Nations Plaza, New York NY 10017;

enrolled students, Fulbright Program advisor on campus

Deadlines

1 October

Geographical

Federal Republic of Germany

Restrictions

Citizenship Restrictions

U.S.

#### GERMAN ACADEMIC EXCHANGE SERVICE

950 Third Ave., 19th floor New York, NY 10022

#### Short Term Research Program and Study Visits

The German Academic Exchange Service (DAAD) offers support to U.S. citizens who wish to conduct research or short-term studies in the Federal Republic of Germany. The Short Term Research Program provides dissertation or postdoctoral research opportunities for two to six months during a calendar year. It is designed for advanced graduate students and recent Ph.D.'s between the ages of 18 and 35. Good knowledge of the German language is required. A monthly maintenance allowance and international travel subsidy are available.

Study Visits provide opportunities for research projects lasting up to three months during the calendar year. At least two years of teaching and/or research experience after the Ph.D. is required. Support for the study visits include a monthly maintenance allowance.

For either Research or Study Visit Programs, applicants may not have a DAAD grant or a grant from any other German organization or a Fulbright grant, concurrently or consecutively.

Contact German Academic Exchange Service, address above

(212) 758-3223

Deadlines November 1; applications must be requested at least 2 weeks before

deadline

Geographical Federal Republic of Germany

Restrictions

Citizenship U.S.

#### GERMAN MARSHALL FUND OF THE UNITED STATES 11 Dupont Circle, NW Washington, D.C. 20036

#### **Foundation Grants**

The German Marshall Fund of the United States (GMF) supports activities that will: 1) promote a more informed understanding of issues that arise between Western Europe and the U.S. and 2) permit policymakers to learn how their counterparts in other countries deal with certain domestic problems common to industrial societies.

The GMF International Program sponsors research to illuminate and analyze problems involved with international policymaking and to disseminate the results of the analyses. This program also supports workshops, exchanges and other projects designed to broaden understanding and sensitivity of the emerging generation of leaders on both sides of the Atlantic. Program segments include U.S.-European Economic Issues, and U.S.-European Relations. The Comparative Domestic Program is focused on areas such as employment, environment, and immigration, where there are innovative social, economic, or institutional policies on one side of the Atlantic and, on the other side, interest and institutional receptivity. The Scholarly Support Program sponsors advanced research by scholars early in their careers on political, social, and economic issues.

Grants are awarded for workshops and conferences, transatlantic travel/study programs, policy-oriented analysis, public education and information, and short-term travel by individuals and groups. Most grant funds are given to organizations. Grants to individuals are mainly awarded through 1) publicly announced competitions, 2) on the basis of nominations from independent selection committees, or 3) for transatlantic travel to attend conferences (the Short-Term Travel Awards). The publicly announced competitions include types of fellowships of interest to marine policy researchers: Research Fellowships that enable recipient to work full-time for one year on advanced research in domestic and international issues; Environmental Fellowships that support the international exchange of environmentalists. The Fellowships awarded on the basis of nomination include: The Marshall Memorial Fellowships for young European professionals in fields including government and politics to observe differences in the U.S. in their areas; and Congressional Fellowships for young scholars from the Federal Republic of Germany and from France to be staff assistants to members of the U.S. Congress.

A brief letter of inquiry outlining the purpose and policy importance of the project, its international dimensions, plans for disseminating project findings, other potential funding sources, and the applicant's qualifications should precede the formal application.

Contact In U.S., address above, (202) 745-3950

In Europe, The German Marshall Fund of the U.S., Ahrstrasse 58,

5300 Bonn 2, Federal Republic of Germany

In France, Mary Fleming, 10, rue Chapu, 75016 Paris, France

Deadlines vary with program

Geographical Tenable in U.S. or Western European country

Restrictions Citizenship Restrictions

# GRASS FOUNDATION 77 Reservoir Road Quincy MA 02170

### Grass Fellowships in Neurophysiology at the Marine Biological Laboratory

These fellowships support one summer of research at the Marine Biological Laboratory in Woods Hole, Massachusetts. The fellowships seek to encourage independent research by young investigators and to increase research opportunities for young persons trained for careers in neurophysiological investigation. Applications to conduct research will be considered for approaches used to elucidate nervous system function including electrophysiology, experimental neuroanatomy, neurochemistry, cellular neurobiology, developmental neurobiology, tissue culture and behavioral analysis.

Eligible individuals are those in the late predoctoral or early postdoctoral category who are academically prepared for independent neurophysiological research. Applicants should be close to the award of a Ph.D. or M.D.

Contact

Grass Foundation at address above, requesting Bulletin FA-287

Deadlines

1 December; notification by 1 March

Geographical

Tenable at Marine Biological Laboratory, Woods Hole,

Restrictions

Massachusetts USA

Citizenship Restrictions None

#### JOHN SIMON GUGGENHEIM MEMORIAL FOUNDATION 90 Park Avenue New York NY 10016

#### Fellowships Program

These fellowships are provided to improve the quality of education and the practice of the arts and professions, to foster research, and to provide for the cause of better international understanding. Awarded to men and women of high intellectual and personal qualifications who have already demonstrated unusual capacity for productive scholarship, the Fellowships are all on an advanced professional level. In the past, scientific research in fields including biochemistry, evolution, microbiology, oceanography, and earth science has been supported.

There are two annual competitions: One open to citizens and permanent residents of the U.S. and Canada; the other, to citizens and permanent residents of all the other American states, of the Caribbean, of the Philippines, and of the French, Dutch, and British possessions in the Western Hemisphere. The Committee of Selection seeks evidence that candidates are persons of unusual capacity for research, demonstrated by publications. Appointments are ordinarily for one year. The Guggenheim Fellowships may not be held concurrently with other fellowships. Applications are due October 1.

Contact President, Guggenheim Memorial Foundation, address above

Deadlines October 1

Geographical Restrictions

Citizenship Restrictions

Some; see text above

None

#### HAGUE ACADEMY OF INTERNATIONAL LAW

Peace Palace Carnegieplein 2, 2517 KJ The Hague

#### The Hague Academy of International Law/Graduate Scholarships

The Hague Academy for International Law offers programs for short-term studies in public and private international law to be carried out at the Peace Palace, The Hague. Individuals who have studied law for at least three years or have international experience acceptable to the Academy are eligible to participate in the Lecture Program. A certificate of attendance is provided upon request to participants. A diploma is available for candidates who succeed in passing the required examinations. No more than two scholarships per country per year are awarded. The limited number of scholarships which are available does not permit the granting of scholarships to attenders from every country. Candidates must be younger than 40 years. Scholarship application is separate from application for admission to this program. There are no printed request forms for these scholarships. Requests should be made to the Secretariat of the Academy and include name, qualities, profession, nationality, place and date of birth, photograph, and a statement of the evidence which the applicant considers to support his candidature.

Doctoral scholarships for two months of study in residence at the Academy are awarded to students from developing countries who are completing their thesis. A daily allowance and some traveling expenses are provided. Fluency in either English or French is required. The application and a recommendation from the student's thesis professor must be received by the Academy by March 1.

The Academy Centre for Studies and Research in International Law and International Relations has a limited number of positions for highly qualified, intellectually mature and experienced individuals to participate in scholarly work at the Centre. An advanced university degree or three years practical experience in international affairs is required. Applications are due April 1 and should include a note of the applicant's particular interest and why he/she wishes to study at the Centre. A daily allowance and some travel expenses will be covered.

The Secretariat, The Hague Academy of International Law, address Contact

above.

The Hague

Lecture Program Scholarship and Doctoral Scholarship Deadlines

applications due March 1.

The Academy Centre Program applications are due April 1.

Geographical Restrictions

Citizenship Restrictions

### INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

1111 19th Street NW, Suite 608 Washington DC 20036

#### Congressional Fellowships

Electrical and electronics engineers and allied scientists are competitively selected to serve one-year terms on the personal staff of individual Senators or Representatives or on the professional staff of Congressional committees. The purpose of this program is to make practical contributions to more effective use of scientific and technical knowledge in government, to educate the scientific communities regarding the public policy process, and to broaden the perspective of both the scientific and governmental communities regarding the value of such science-government interaction.

Fellows will be selected based on technical competence, on ability to serve in a public environment and on evidence of service to the Institute and the profession. A fellow must be a U.S. citizen at the time of selection and must have been in the IEEE at Member grade or higher for at least four years. During the appointment, IEEE Fellows are jointly supported by IEEE and their employers.

Contact	Secretary, Congressional Fellows Committee, IEEE, address above
Deadlines	31 March
Geographical Restrictions	U.S.
Citizenship Restrictions	U.S.

# INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION UNESCO

#### 7 Place de Fontenoy 75700 Paris FRANCE

#### Research Fellowships

Three Research Fellowships are offered on a competitive basis by the Federal Republic of Germany under the IOC Research Fellowship program to senior research scientists from developing countries in the following fields: 1) Polar Marine Biology/Benthos Research (12 months); 2) Polar and Sub-Polar Paleo-oceanography (12 months); and 3) Polar Marine Microbiology (8 months). The fellowships will include a travel grant plus subsistence allowance to undertake research at the Alfred Wegener Institute for Polar and Marine Research, Bremerhaven. Marine scientists having qualifications and research experience in the fields listed above should send their applications through the appropriate government channel in their country to the Secretary of the IOC.

Contact Secretary, IOC, address above

Deadlines 30 April

Geographical Tenable at Alfred Wegener Institute for Polar and Marine Research,

Restrictions Bremerhaven, FR Germany.

Citizenship from developing countries

## INTERNATIONAL RESEARCH AND EXCHANGES BOARD (IREX)

126 Alexander Street Princeton NJ 08540-7102

#### Social Science Exchanges with USSR and Eastern Europe

The International Research and Exchanges Board (IREX) administers research exchange programs with the socialist countries of Eastern Europe and with the USSR. Research fields include Social, Political, Economic and Cultural Studies. Individual Research Exchanges are available to U.S. citizens who have command of the language of the host country and who are either full-time faculty members or advanced doctoral candidates. Scholars not academically employed and master's candidates may also be qualified if they are proposing professional-level, independent research projects. Exchange applicants in modern foreign languages and area studies must apply simultaneously for Fulbright-Hays grants. Soviet and Eastern European citizens must consult with the appropriate agencies in their own country.

Individual Research Exchanges with the USSR are for short and long-term research visits and for exchange of senior scholars. The Long-Term Advanced Research Program provides (IREX and host country combined provisions) transportation, a stipend/allowance, housing, and medical benefits for researchers spending one semester to one academic year in the USSR. The Short-Term Advanced Research Program supports visits of two to five months. Advanced Research for Senior Scholars provides opportunities for a stay of one to ten months' duration. It is virtually impossible to arrange exchange participation in any of these programs with the USSR during the summer months.

Individual Research Exchanges with East European countries support the exchange of investigators with Butgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. A minimum stay of two months is required. Since exchange agreements are subject to negotiation and renewal, actual host country and IREX provisions may vary. Generally, support is given by means of a stipend/allowance, transportation, housing and medical benefits.

Individual Research Exchanges with the Mongolian People's Republic is scheduled to begin in 1990. This new program will be similar to those established ones listed above. Initially preference will be given to established scholars who have demonstrated interest in Inner Asia.

Other grants programs offered by IREX include: Language Training; Developmental Fellowships for preparation to field research in the USSR and East Europe in fields including geography, law, and political science; Special Short-Term Travel Grant Programs for Senior Scholars in the Social Sciences and Humanities for visits of one to two weeks to conduct collaborative projects, hold lectures or seminars and facilitate individual research.

Contact IREX, address above, (609) 683-9500

Deadlines

Geographical see countries listed above

Citizenship

Restrictions

U.S. and nationals of countries listed above

#### JAPAN FOUNDATION 342 Madison Avenue, Suite 1702 New York NY 10173

#### Fellowship, Institutional Project Support and Library Support Programs

The Japan Foundation is a nonprofit organization established by special legislation in the Japan Diet in 1972 and endowed by the Japanese Government and private circles. The Foundation's objective is to promote international cultural exchange and mutual understanding between Japan and other countries. In the U.S., the Japan Foundation offers three types of programs: Fellowship, Library Support, and Institutional Project Support.

Professional Fellowships are intended for scholars in fields including the social sciences and humanities to conduct research that is wholly or substantially related to Japan in that country. A Master's degree, academic position in a research institution and substantial experience is required. Both short-term (two to four months) and long-term (four to twelve months) fellowships are available. Dissertation Fellowships provide doctoral candidates in the social sciences and humanities with the opportunity to conduct dissertation research in Japan. Applicants are sought to work in fields (including political science and law) that are presently understaffed with Japanese specialists. Applicants must be U.S. citizens or permanent residents, proficient in Japanese, and must have fulfilled all degree requirements except the dissertation. Dissertation Fellowships are available for four to fourteen month-long periods.

Institutional Project Support Programs include Visiting Professorships, Research, Conference/Intensive Courses, Visiting Professorship Grants fund scholars from Japan to teach or lecture in Japanese studies for a period of one to ten months. The maximum support by the Foundation for this program is 3/4 the total cost. Research Grants fund Japan-related projects to be researched in the U.S. and occasionally planning meetings and publications. Support on a cost-sharing basis is available for Conference/Intensive Course Programs that include seminars, workshops and summer programs that concentrate on Japanese studies.

The Library Support Program supports college and university libraries in acquiring books, academic journals and Japanese newspapers. The amount of support varies with the publication type.

Contact

The Japan Foundation, address above

Deadlines

#### GOVERNMENT OF JAPAN Embassy of Japan Information Section 2520 Massachusetts Avenue NW Washington DC 20008

### Japanese Government Monbusho Scholarships

Scholarships are offered to foreign students for study at a Japanese University by the Ministry of Education, Science and Culture, Government of Japan (Monbusho). Fields of study are Humanities and Social Sciences (including Law, Politics, Economics, Commerce, etc.), and Natural Sciences (Pure Science, Engineering, Agriculture, Fisheries, etc.). The study area must be the same or related to one the applicant has already worked in. Scholarships are available for 1-1/2 and 2 year intervals and include 6 months for Japanese language study. The Scholarship provides a monthly stipend, transportation to and from Japan, university fees and tuition in Japan, and some housing assistance.

Applicants must be college graduates, nationals of the country to which the scholarships are offered, and they must be younger than 35 years of age. All courses and lectures will be conducted in the Japanese language, so applicants should be familiar with it. An intensive 6 month language course is provided. However, if the scholarship recipient is unable to attain a satisfactory level in Japanese, the scholarship will be revoked.

Applications may be obtained from the address above.

Contact

Educational Attache

Embassy of Japan, (202) 234-2266,

or Japanese Consulates in principal U.S. cities

Deadlines

Geographical

Japan

Restrictions

Citizenship Restrictions

Nationals 1 8 1

#### JAPAN INTERNATIONAL SCIENCE AND TECHNOLOGY **EXCHANGE CENTER (JISTEC)** The Union of Japanese Scientists and Engineers(JUSE)

Port One Building 6F, 1-7-6, Minato-machi Tsuchiuria City, Ibaraki Pref. 300 JAPAN

#### Japanese Government Science and Technology Agency Fellowship

The Science and Technology Agency (STA) of the Government of Japan offers fellowships of six months to two years duration to allow promising young researchers from overseas the chance to engage in research at Japan's national laboratories. The field of research is negotiated by the candidate and the host institute. Host institutes are national laboratories (excluding universities and laboratories affiliated with universities), public corporations, and some nonprofit organizations. Of the many host institutes in the program, several are applicable to marine scientists including the National Institutes of Science and Technology Policy, Environmental Studies, Agro-Environmental Sciences, and Health; several Regional Fisheries Research Laboratories; The National Research Institutes of Fisheries Engineering, Aquaculture, Pollution and Resources; The Geological Survey of Japan; the Port and Harbor, Ship, and Meteorological Research Institutes. Public corporations and nonprofit organizations that serve as host to STA fellows include research laboratories that study chemistry, physics, and biology, the Japan Information Center of Science and Technology, the Japan Weather Association, and the Japan Marine Science and Technology Center.

Applicants must be researchers in a scientific or engineering field and possess doctoral degree or equivalent. Applicants should be under age 35, in principle, and have sufficient language ability to pursue research in Japan. Japanese language is preferable, but in most cases English ability is sufficient. With the host institute's agreement, other languages may also suffice. Candidates should contact the desired host institute to obtain a letter of acceptance before filing an application with the responsible organization in their country (list of responsible organizations may be obtained from JISTEC, address above). The STA Fellowship includes research costs at the host institute and personal costs of air fare, allowances for living, family, housing, relocation, medical insurance, and local travel.

Contact JISTEC, address above. Telephone 0298-24-3355

> Or responsible organization for each country. In U.S., the National Science Foundation, Senior Program Manager, U.S.-Japan, Australia and New Zealand Programs, Division of

International Programs, Washington, D.C. 20550

Tel: (202) 357-9558

Deadlines All inquiries concerning the fellowship program should be made

prior to July 1.

Geographical Restrictions

Tenable in Japan

Citizenship Restrictions

#### W.K. KELLOGG FOUNDATION 400 North Avenue Battle Creek MI 49017-3398

#### Foundation Grants and Fellows Programs

The Kellogg Foundation is committed to improve the use of knowledge for the betterment of mankind. Following W.K. Kellogg's intention to "help people help themselves", the Foundation provides grants to institutions and organizations that have identified and analyzed problems and have designed constructive action programs aimed at practical solutions. Program interests that are relevant to the marine scientist include A Wholesome Food Supply and Broadening Leadership Capacities of Individuals. The Foundation is interested not only in the development of new techniques for increased food production in developing countries, but also in the practical application of these techniques by the local populace. The Foundation's geographic scope of grant programming priority is the U.S., Latin America and the Caribbean and the southern African countries of Botswana, Lesotho, the Republic of South Africa, Swaziland, and Zimbabwe. There is no application form for Foundation Grants. A one to two page pre-proposal letter that outlines the basic problem and planned solution should be submitted to the Executive Assistant-Programming at the Foundation, address above.

In order to foster the development of leaders in society, the Foundation offers National Fellowships to individuals with the desire to learn effective and broad leadership skills and abilities. Seminars, workshops, travel experience and consultations that comprise the three year Leadership Program help the individual develop a global or broadly oriented perspective on human and social issues. This program provides a forum for the exchange of ideas and enables Fellows to develop new skills and competencies, establish networks, and develop broad leadership capabilities. The Kellogg International Fellowship Program is an international leadership effort operated by the University of Michigan. Established leaders from the fields of Food Systems and Health are selected to carry out individual projects and convene at annual symposiums.

Application forms for the Fellowships are available from the Foundation, address above.

Contact

Chief Programming Officer, address above (616) 968-1611

Deadlines

Geographical Restrictions Citizenship

# LAMONT-DOHERTY GEOLOGICAL OBSERVATORY OF COLUMBIA UNIVERSITY

### Palisades, NY 10964

#### Postdoctoral Fellowships

Recent Ph.D. recipients or candidates for their degrees in any field of earth or ocean sciences are invited to apply for Postdoctoral Fellowships between October and early January each year for fellowships awarded for a period of one year (extendable to two years in special cases).

Contact

Office of the Director, address above

Deadlines

15 January; notification 28 February

Geographical

Tenable at Lamont-Doherty

Restrictions

Citizenship

None

# NATIONAL ACADEMY OF SCIENCES/Committee on Scholarly Communication with People's Republic of China (CSCPRC) 2101 Constitution Avenue NW Washington DC 20418

# National Program for Advanced Study and Research in China

The Advanced Study and Research Programs are administered by the Committee and supported by funds from agencies of the U.S. government and private foundations. The Graduate Program offers support to individuals enrolled in a graduate program for long-term studies and research in the social sciences and humanities. Chinese language proficiency acquired through at least three years of college-level study or its equivalent is required.

A Research Program funds individuals who have a Ph.D. or equivalent to undertake in-depth research on China, the Chinese portion of a comparative study, or exploratory research on an aspect of contemporary China in the social sciences and humanities. The Research Program also supports limited research in Hong Kong or elsewhere in East Asia to supplement research within the People's Republic of China. The tenure for overseas study in this program is normally two to twelve months.

The Visiting Scholar Exchange Program provides funds to individuals possessing a Ph.D. or equivalent to make short-term (one to three month) research and lecture visits to the People's explore research opportunities in the social sciences and humanities

Applications from women, minorities, and scholars beginning their careers are encouraged. Application and selection take place in the fall for grant and fellowship tenure beginning the following academic year.

Contact
Committee on Scholarly Communication with the People's Republic of China, address above; Program Coordinator, (202)

Deadlines
Application deadline is October, for following academic year.

Geographical Restrictions
Clizenship
Restrictions
U.S. and permanent residents

#### NATIONAL ACADEMY OF SCIENCES Office of International Affairs 2101 Constitution Ave. NW Washington DC 20418

#### Soviet and East European Exchanges

The National Academy of Sciences sponsors exchange programs for U.S. scientists with the Academies of Sciences of the USSR, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. The programs are intended to facilitate exchanges that will lead to significant scientific publications jointly authored by U.S. and foreign colleagues in areas of high scientific interest. Also, the programs are intended to provide American and foreign scientists access to colleagues, specialized facilities, unique databases, and geographical areas that can significantly enrich research and publications of interest to the scientific community. Visits of a short-term duration are for one to two months; long-term visits may last from three to twelve months.

The scientific disciplines of interest to this program include Physics; Chemistry; Mathematics and Computer Sciences; Earth, Atmospheric, and Oceanographic Sciences; Agricultural, Forestry, Fishery, and Plant Sciences; Biological Sciences; Environmental Sciences; Engineering; Archaeology and Anthropology; Geography; and Psychology. Also included are Science and Technology Policy and those aspects of the Economic and Social Sciences that involve qualitative analysis as a primary consideration. Other disciplines are considered on a case-by-case basis.

The program is open to U.S. citizens who possess the Ph.D. or equivalent by the time of the proposed visit. Transportation costs, monthly stipends, and travel grants for spouses and children are provided. Proposals are considered for applicants technical capabilities, the quality of the proposed project, and the feasibility of carrying out the project. Selection by the National Academy of Sciences does not guarantee the proposed visit can be arranged. Applicants must subsequently be accepted by the receiving academies. Scientists from the USSR and Eastern European nations who are interested in visiting the United States under the inter-academy exchange programs should address inquiries to the appropriate section of the academy of sciences in their respective countries.

Contact	For U.S. scientists: Office of Intl. Affairs, Soviet and East European Affairs, NAS address above, (202) 334-2644. For Soviet and Eastern European scientists, see information above.
Deadlines	In the U.S., applications are available each fall and until mid-February.
Geographical Restrictions	U.S., USSR, and Eastern European countries listed above.
Citizenship Restrictions	U.S., USSR, and Eastern European as listed above.

#### NATIONAL COASTAL RESOURCES RESEARCH AND DEVELOPMENT INSTITUTE

Hatfield Marine Science Center 2030 S. Marine Science Drive Newport, Oregon 97365

#### Grant Programs

The Natural Coastal Resources Research and Development Institute (NCRI) manages a nationwide program that links government, industry, and academic resources in meeting the challenges of environmentally responsible economic development in coastal communities. Grants are available to individuals, educational institutions, state agencies, nonprofit groups, and commercial organizations through two programs.

The NCRI National Program provides support for projects that promote environmentally compatible economic diversification and development in the coastal U.S. NCRI projects should have a measurable effect on the nation's coastal economics, address a contemporary coastal economic problem or opportunity, have established milestones that will produce applied activities within 3 to 5 years, and demonstrate the potential for regional or national application of results. Preferably, the research project should test or demonstrate possible solutions to already identified problems. Areas of research include aquaculture, business, fisheries, policy and planning, ports and harbors, seafood science and technology, ship construction, tourism development, transportation, and waste disposal.

The Interstate Coastal Zone Management Program for the Northeast Pacific Ocean Region provides support to coastal states for cooperative interstate and regional efforts in the following areas: Coordination of state coastal zone planning, policies, and programs; study, planning and implementation of unified coastal zone policies; establishment of the means to identify, examine and resolve mutual marine and coastal zone management problems. The ideal project should address issues or problems that require interstate participation. The Interstate Coastal Zone Management Program grants have funded research in interstate estuarine management, coping with offshore mineral development, and using new technology for coastal purposes.

Preproposals should be submitted to NCRI so that applicability to the institute's goals can be determined. Full project proposals are then submitted and undergo peer review. Preproposals for the National Program are accepted June 1-August 31. Preproposals for the Interstate Coastal Zone Management Program are considered May 1-July 31.

Contact

NCRI, address above

(503) 867-3300

Deadlines

National Program preproposals accepted June 1-August 31 Coastal Zone Management Program preproposals accepted May

1-July 31

Geographical Restrictions Citizenship

#### NATIONAL GEOGRAPHIC SOCIETY Committee on Research and Exploration 17th and M Streets NW Washington DC 20036

#### Research Grants

The National Geographic Society offers grants-in-aid for basic research in the sciences pertinent to geography. Research and exploration projects in anthropology, archeology, astronomy, biology, botany, ecology, physical and human geography, geology, oceanography, paleontology and zoology may be supported. Multi-disciplinary projects are encouraged. Grants are awarded on the basis of the project's scientific merit.

Grants are normally made only for field research. The initial grant is for one year, with a possible renewal for up to three years. Laboratory work is supported only to the extent that it is a necessary follow-up to field research. Salaries, fellowships, funds for publication and travel to meetings are not provided. The Society does not permit the payment of overhead to any individual or institution. Investigators who hold the doctorate degree and are associated with institutions of higher learning or other scientific or educational nonprofit organizations are eligible to apply. Occasionally grants are awarded to well qualified individuals who do not have research degrees or university affiliation. Citizens of any country are eligible.

Contact	Secretary, Committee for Research and Exploration, (202) 857-7439
Deadlines	None
Geographical Restrictions	None
Citizenship Restrictions	Nonc

# NATIONAL INSTITUTES OF HEALTH/NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES/Extramural Programs

P.O. Box 12233 Research Triangle Park NC 27709

#### Individual Grants, Research and Training Programs

The focus of the National Institute of Environmental Health's research programs is to understand the ways in which human health is adversely affected by chemical, physical, and other environmental factors. The breadth of the NIEHS mission dictates a multi-disciplinary approach to problem solving which involves all the major biological and physical science disciplines. The Extramural Programs provide funds for research grants, centers, fellowship and training grants.

The Research Grants Program provides support by means of Regular Research Grants, Program Project Grants, Conference Grants, First Independent Research and Transition Awards, Small Business Innovation Research Grants and Contracts, Research Career Development Awards, and Minority Biomedical Research Grants and Cooperative Agreements. One of the many career enhancement mechanisms designed to provide research support for individuals in the formative stages of their careers is the New Investigator Research Award (NIRA) which provides support for initial research in environmental health sciences. Program areas include: Characterization of environmental health hazards; biological response to environmental health hazards; applied toxicological research and testing; and biometry and risk estimation. Areas of specific research interest within these programs are: Air pollution, electromagnetism, chemical interactions, and immunotoxicology.

The Research Manpower Development Program supports research training through three mechanisms: 1) Institutional Awards which support pre- and postdoctoral trainees; 2) Individual Awards which support postdoctoral fellows; 3) Senior Fellowship Awards for experienced scientists to make major changes in their research careers to increase their ability to engage in health related research.

Contact

Science Administrator, (919) 541-7724

Deadlines

Geographical Restrictions Citizenship

#### NATIONAL RESEARCH COUNCIL 2101 Constitution Ave. NW Washington DC 20418

# Cooperative Research Associateships: Naval Ocean Research and Development Activity

The National Research Council awards Cooperative Research Associateships to outstanding scientists and engineers who have held the doctorate less than five years at time of application for research to be carried out at The Naval Ocean Research and Development Activity (NORDA). NORDA, a field activity of the Office of Naval Research, has the mission to carry out a broadly based research program with special emphasis on understanding ocean processes through measurement and analysis and the effects of the ocean environment on Navy systems and operations. NORDA is divided into two technical areas: The Ocean Acoustics and Technology Directorate, and the Ocean Science Directorate. Opportunities include research in the Numerical Modeling, Ocean Sensing and Prediction, Ocean Acoustics, Oceanography, and Seafloor Geosciences Divisions.

The initial award is for two years and includes a stipend, some relocation, and limited travel funds. (Post-tenure support is available in the form of a research contract award at academic institutions through the Contract Research Program of the Office of Naval Research.) Applicants must formulate a specific research proposal on a problem related to the current interests of NORDA. The proposal must first be approved by a program advisor at NORDA and then be endorsed by the program committee. An index of research advisors and application materials are available upon request from the National Research Council, Associateship Programs--GF424, address above. Applications are considered twice a year, deadlines below.

This program is only open to citizens of the U.S. Naturalized citizens whose country of origin has been determined to have interests adverse to the U.S. must have been U.S. citizens for 5 years or longer and have resided in the U.S. for the past 10 years in order to be considered for these awards. Associateship awards at NORDA are subject to the issuance of a security clearance.

Contact	Associateships Program GF 424, National Research Council, address above
Deadlines	January 15, August 15
Geographical Restrictions	Research at Naval Ocean Research and Development Activity
Citizenship Restrictions	U.S.

#### NATIONAL RESEARCH COUNCIL 2101 Constitution Ave. NW Washington DC 20418

#### Cooperative Research Associateships: Naval Research Laboratory

The National Research Council awards Cooperative Research Associateships to outstanding scientists and engineers who have held the doctorate less than five years at time of application for research to be carried out at The Naval Research Laboratory (NRL). The Naval Research Laboratory (NRL) is one of the largest scientific institutions within the U.S. government. The research activities of the NRL are highly diversified, embracing a broad range of the physical and engineering sciences, including computer science and artificial intelligence; directed energy technology; enhanced maintainability, reliability, and survivability technology; information management; surveillance and sensor technology; device technology; electronic warfare; environmental effects on naval systems; materials; and undersea technology. In addition to the main laboratory in Washington, D.C., facilities include the Underwater Sound Reference Detachment (Florida), a large support facility on Chesapeake Bay, and field experiment sites in Maryland, Virginia, and West Virginia.

The initial award is for two years and includes a stipend, some relocation, and limited travel funds. (Post-tenure support is available in the form of a research contract award at academic institutions through the Contract Research Program of the Office of Naval Research.)

Applicants must formulate a specific research proposal on a problem related to the current interests of the NRL. The proposal must first be approved by a program advisor at NRL and then be endorsed by the program committee. An index of research advisors and application materials are available upon request from the National Research Council, Associateship Programs. Applications are considered twice a year, deadlines below.

This program is only open to citizens of the U.S. Naturalized citizens whose country of origin has been determined to have interests adverse to the U.S. must have been U.S. citizens for 5 years or longer and have resided in the U.S. for the past 10 years in order to be considered for these awards. Associateship awards at NRL are subject to the issuance of a security clearance.

Contact

Associateships Program GF 424, National Research Council,

address above

Deadlines

January 15, April 15

Geographical Restrictions

Research at NRL

Citizenship Restrictions

U.S.

#### NATIONAL RESEARCH COUNCIL 2101 Constitution Ave. NW Washington DC 20418

#### Graduate Fellowships

Fellowships awarded for study or work leading to master's or doctoral degrees in Mathematical, Physical, Biological, Engineering, and Social Sciences, and in History and Philosophy of Science. Intended for students at or near the beginning of their graduate studies who have not completed more than 20 semester/30 quarter hours, or equivalent, of study in any of the science and engineering fields listed, following completion of their first baccalaureate degree.

Contact	Fellowship Office, National Research Council, address above.
Deadlines	
Geographical Restrictions	U.S.
Citizenship Restrictions	U.S.

### NATIONAL RESEARCH COUNCIL 2101 Constitution Ave. NW Washington DC 20418

Resident Research Associateships: Postdoctoral and Senior Research Awards

The National Research Council offers Associateships to outstanding scientists and engineers at the recent postdoctoral and experienced senior levels for research to be carried out at several different research institutions. Regular Research Associateships are awarded to persons who have held the doctorate less than five years at time of application, (initial award of one year). Senior Research Associateships are awarded to applicants who have held the doctorate five years or more; the Senior Awards usually for one year, although shorter time periods will be considered.

The Associateship award includes a stipend, some relocation and limited travel funds. The basic citizenship requirements are that U.S. citizens may conduct applied science and technology research. Non-U.S. citizens must have command of the English language and may conduct research in basic science areas only. These requirements may vary per program. Different restrictions are noted in specific program descriptions. An Exchange Visitor or Immigrant Visa is required for researchers from countries other than the U.S. The National Research Council will sponsor the applicant for an Exchange Visa but will not be involved in the procedure for an

Applicants must formulate a specific research proposal on a problem related to the current interests of the research institution to which the application is submitted. The proposal must first be approved by a program advisor and then be endorsed by the program committee. An index of research advisors for each program and application materials are available upon request from the National Research Council, Associateship Programs.

The research interests of the individual programs administered by the National Research Council are presented in the following descriptions. Variation of awards, citizenship restrictions, and deadlines for specific programs are noted.

Contact

Associateships Program GF 424, National Research Council,

address above

Deadlines

January 15, April 15, August 15

Geographical Restrictions

Research at one research institution (U.S.)

Citizenship

Restrictions

U.S. citizenship required for applied science and technology research. Non-U.S. citizens may conduct research in basic science

areas only,

# Resident Research Associateships: Environmental Protection Agency

Research opportunities are currently available at 9 of the Environmental Protection Agency's 14 laboratories: Environmental Research Laboratories in Oregon, Georgia, Rhode Island, and Florida; at Health Effects Research Laboratory in North Carolina; at Toxicology and Microbiology Division in Ohio; at Atmospheric Sciences Research Lab in North Carolina; and at Environmental Monitoring Systems Labs in Nevada and North Carolina.

A sampling of current research topics at EPA labs provides a general indication of areas of research interests. These include, but are not limited to: 1) Environmental Research Laboratories--Effects of acid deposition on surface waters, metal transport and transformation in aquatic systems and groundwater, microbial decomposition of toxic substances, impact of pollutants on marine ecosystems, toxic organic compounds in estuarine environments; 2) Health Effects Research Laboratory--Interaction of toxic chemicals with biological membranes, assessment of pollution induced effects in cells, effects of toxic chemicals on thermoregulation, modelling of gaseous and particulate pollutants; 3) Toxicology and Microbiology Division--Drinking water disinfectants and their reactions with naturally occurring organic substances, health effects of parasites in water and wastes; 4) Atmospheric Sciences Research Laboratory--Determining origins of particles in the atmosphere, pure and applied air pollution modelling; 5) Environmental Monitoring System Laboratories--Special applications of mass spectrometry, chemical characterization of hazardous organic pollutants in air.

There are no citizenship restrictions for this program.

Contact Associateships Program GF 424, National Research Council, address

above

Deadlines January 15, April 15, August 15

#### Resident Research Associateships: Goddard Institute for Space Studies (NASA)

The Goddard Institute for Space Studies conducts a broad program of research in space and earth sciences in support of present and future NASA Goddard programs by working cooperatively with New York area universities and research organizations, especially Columbia University, on whose campus the Institute is housed.

Current research is aimed at a broad study of global change, which is an interdisciplinary research initiative addressing natural and man-made changes in our environment that occur on time scales of decades and affect the habitability of our planet. A key objective is prediction of atmospheric and climate changes in the 1990s and early 21st century. The research approach includes study of past changes on Earth, such as paleoclimate changes, and study of other planets as an aid to prediction of future evolution of the Earth on a planetary scale.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

April 15, August 15, December 15

# Resident Research Associateships: Goddard Space Flight Center (NASA)

The Laboratory for Oceans at the Goddard Space Flight Center has current research projects that include Oceans and Ice Research, Tropical Ocean-Atmosphere Interaction, Biological Oceanography, Polar Oceanography and Glaciology, Microwave Remote Sensing, Microwave Radiometry of the Earth, Physical Oceanography, and Laser Remote Sensing Technology. Other research labs at the Flight Center are: The Laboratory for High Energy Astrophysics, The Laboratory for Astronomy and Solar Physics, Laboratory for Extraterrestrial Physics, Laboratory for Atmospheres, Laboratory for Terrestrial Physics, and the Space Data and Computing Division.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

April 15, August 15, December 15

# Resident Research Associateships: Jet Propulsion Laboratory (NASA)

The Jet Propulsion Laboratory (JPL) is a division of the California Institute of Technology, operated by Caltech under contract to NASA; it is within the NASA sponsored research program that these Research Associateships are offered at JPL. The JPL research program reflects a long standing interest in both Earth and Planetary Sciences, along with an involvement in the study of solar irradiance, fields and particles of interplanetary space and observations beyond the solar system. The Earth Sciences program has expanded during the past few years into the areas of physical and biological oceanography, weather, climate, and upper-atmosphere chemistry and research associated with applications to problems of national interest such as earth resources and energy systems. Within the Earth and Atmospheric Sciences Division, current research of interest to marine scientists is being conducted in Imaging-Radar Geology/Planetology, Microwave Remote Sensing of Meteorological and Surface Parameters, Geologic Remote Sensing and Remote Sensing Applied to Geological Problems, Geophysical Research Using Global Positioning System Measurements, Satellite Methods in Oceanography Research, Earth-Rotation and Angular-Momentum Studies, Ocean Circulation Studies Using Satellite Measurements, Earth and Planetary Structural Geology, Dynamics of Sea Surface Temperature Variations, Ocean-Atmosphere Interaction, and Physical Oceanography Remote Sensing Applications.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

April 15, August 15, December 15

# Resident Research Associateships: Langley Research Center (NASA)

The Langley Research Center conducts a vigorous program to apply existing and emerging space technologies and capabilities to the needs and problems of society. This effort focuses on theoretical and experimental atmospheric sciences including stratospheric processes, global geochemical cycles, the earth radiation budget, and the development and demonstration of techniques for the remote monitoring of environmental quantities. Areas of research in the Earth and Atmosphere Program include aerosol formation, climatology, and effects; atmospheric studies of tropospheric and stratospheric dynamics, radiation, chemistry and photochemistry; atmospheric evolution, composition and photochemistry; Earth radiation budget and climate relationships; geochemical cycles; and remote sensing of biospheric components of biogeochemical cycles.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

April 15, August 15, December 15

Resident Research Associateships: Lyndon B. Johnson Space Center (NASA)

In addition to advancing the utilization of space by research, development, and operation of the Space Transportation System, the Lyndon B. Johnson Space Center plans and conducts research programs in the fields of lunar and planetary sciences, including geochemistry, geophysics, and geology. Research that has been supported by the Space Center includes rock and mineral melt crystallization, studies of oxidation-reduction phenomena, trace-element geochemistry, and remote sensing of volcances and their products.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

April 15, August 15, December 15

Resident Research Associateships; National Oceanic and Atmospheric Administration (NOAA)

Within NOAA, the research, exploration, development, conservation, monitoring and education activities related to the oceans are consolidated. Opportunities for research through the Resident Research Associateship Program at the National Oceanic and Atmospheric Administration are in the areas of meteorology, climate and air quality, earth sciences, hydrology, oceanography, space sciences, and fishery sciences. The NOAA divisions participating in this program include: 1) Environmental Research Laboratories (5 locations); National Weather Service (3 locations); National Environmental Satellite, Data, and Information Service (3 locations); National Ocean Service (1 location); and National Marine Fisheries Service (3 locations).

Applications are considered only once a year, deadline below. There are no citizenship restrictions in this program.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

January 15

### Resident Research Associateships: Naval Postgraduate School

The Air-Ocean Science Laboratory at the Naval Postgraduate School maintains an active seagoing research program in oceanography, meteorology, ocean acoustics, optics, mapping, charting, and geodesy. Current areas of research open to guest researchers include Marine Atmospheric Boundary-Layer Studies, Atmospheric Dynamics, Multivariate Time-Series Modeling and Analysis, Acoustic Imaging, and Nearshore Wave Processes. Other facilities available to Resident Research Associates are the Aeronautical Laboratories, Electrical and Computer Engineering Laboratories, Hydrodynamics Laboratories, Physics Laboratories, Computer Science Department and the Dudley Knox Library.

Applications for associateships at the Naval Postgraduate School are reviewed only once a year, deadline below. There are no citizenship restrictions for this program.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

January 15

# Resident Research Associateships: U.S. Geological Survey

Scientists of the U.S. Geological Survey (USGS) are engaged in a wide range of geologic, geophysical, geochemical, hydrologic, and cartographic programs, including the application of computer science to them. Opportunities for guest researchers are available in the Geologic, National Mapping, and Water Resources Divisions in the areas of Areal Geology and Tectonics, Biostratigraphy and Paleontology, Cartography, Computer Applications, Earthquake Studies, Ecology, Engineering Geology, Geochemistry (including Water Chemistry), Geomorphology and Sediment Transport, Geophysics, Hydrology (Surface Water and Ground Water Hydrology), Isotope Studies, Lunar and Planetary Geology, Marine Geology, Mineralogy and Petrology, Mineral and Mineral-Fuel Resources, Sedimentology and Diagenesis, and Volcanology.

The Resident Research Associateships at the U.S. Geological Survey are only offered to scientists who have held the doctorate for less than five years and who are U.S. citizens. Applications for associateships at USGS are considered only in February panel review, deadline below.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

January 15

# Resident Research Associateships: Wallops Flight Facility (NASA)

Some research of the Goddard Space Flight Center's Laboratory for the Oceans is carried out at the Wallops Flight Facility in Virginia. Specifically at this facility, research is conducted in Biological Oceanography, Laser Remote Sensing Applications, Tropospheric Chemistry, and Atmospheric Ozone.

Contact

Associateships Program GF 424, National Research Council, address

above

Deadlines

April 15, August 15, December 15

# NATIONAL SCIENCE FOUNDATION Division of Atmospheric Sciences 1800 G Street NW Washington DC 20550

# Grants in Atmospheric Science

This Division's programs of research include Aeronomy, Atmospheric Chemistry, Climate Dynamics, Experimental Meteorology, Magnetospheric Physics, Meteorology, and Solar-Terrestrial studies. Topics of interest include dynamic behavior of climate and weather on all scales, global chemical cycles of gases and particles in the atmosphere, the composition, energetics and dynamics of the coupled upper atmospheric system, and how the sun relates to the earth's upper atmosphere and space environment. Academic institutions, non-academic and nonprofit research organizations, for-profit and private research organizations, and individuals may apply for research grants from this Division. Proposals may be submitted throughout the year except for the Climate Dynamics Program. The Climate Dynamics Program's target dates for proposal submission are May 1, August 1, and December 1.

The NSF Division of Atmospheric Sciences also supports the National Center for Atmospheric Research (NCAR) and the Upper Atmospheric Facilities (UAF). NCAR scientists conduct research in the atmospheric and ocean sciences and in solar astronomy. NCAR facilities include a computing center equipped with large mainframes, instrumented research aircraft, and ground-based Doppler radars. NCAR facility and visiting scientist support is provided on a competitive basis to qualified scientists according to scientific merit, available facility time, and level of resources. More information about NCAR programs and specific interests can be obtained from the Director, NCAR, P.O.Box 3000, Boulder, CO 80307.

UAF facilities include large incoherent-scatter radar facilities: The Sondrestrom Radar Facility, Sondre Stromford, Greenland; The Millstone Hill Radar, near Boston, Massachussetts; The Arecibo Observatory, at Arecibo, Puerto Rico, The Jicamarca Radio Observatory, at the magnetic equator in Jicamarca, Peru. The UAF also supports the high frequency heating facility near the Arecibo Observatory and The Incoherent-Scatter Database at NCAR. UAF facilities are available to all qualified scientists on a competitive basis. Use is based on scientific merit of the proposed research, capabilities of the radars to carry out the proposed observations, and availability of the requested time. For more information about UAF contact the following: Director, Sondrestrom Radar Facility, Radio Physics Laboratory, SRI International, Menlo Park, CA 94025; Director, Millstone Hill Radar, MIT, Haystack Observatory, Westford, MA 01886; Director, NAIC (for Arecibo Observatory), Comell U., Ithaca, NY 14853; Jicamarca Radio Observatory Project, Dept. of Electrical Engineering, Comell U., Ithaca, NY 14853.

Contact

Director, Division of Atmospheric Sciences, address above

For NCAR and UAF, addresses given above

Deadlines

Vary per program

# NATIONAL SCIENCE FOUNDATION Division of International Programs 1800 G Street NW Washington DC 20550

# Bilateral Cooperative Science Activities Programs

The objectives of the Bilateral Cooperative Science Activities Program of the National Science Foundation are to stimulate international scientific progress, enhance scientific knowledge, assist U.S. and foreign scientists in efforts to share access to important or unique research facilities, and improve scientific ties with other nations and cultures. Four general types of activities may receive support: 1) cooperative research projects designed and conducted jointly by principal investigators from the U.S. and the foreign country; 2) research oriented seminars or meetings to exchange information, review the current status of a field of science or engineering, and plan cooperative research; 3) short-term scientific visits for planning cooperative activities or for research; 4) long and medium research visits for young researchers to foreign centers of excellence. The types of activities supported may vary for each country's specific program. Each country usually pays for the costs of the participation of its scientists and engineers in the program. NSF provides supplemental support in order to introduce an international element or broaden the international character of a research effort. Countries that participate in the bilateral cooperative science activities with the U.S. include: Australia, China, Eastern Europe (Bulgaria, Czechoslovakia, Hungary, Poland, and Romania), India, Japan, Korea, Latin America (Argentina, Brazil, Mexico, and Venezuela), New Zealand, Taiwan, and Western Europe (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Netherlands, Sweden, Switzerland, United Kingdom, and the Pontifical Academy of Science at the Vatican).

U.S. universities and colleges, professional societies, research institutes, and individuals associated with such organizations are eligible for funding in this program. Principal investigators should be U.S. scientists with at least five years of postdoctoral scientific work. U.S. applicants submit a proposal to NSF at the same time foreign scientists submit a funding request to the appropriate agency of their country. In formal bilateral programs, approval by both NSF and its foreign counterpart is normally required before funding is granted in either country. Deadlines for proposals and specific research interests vary per individual bilateral program. As a rule, seminar organizers should submit requests a year in advance; short-term visit proposals should be received at least four months before desired departure date. Preliminary inquiries from scientists who intend to apply for support are encouraged. Information may be obtained from the Division of International Programs, NSF.

Contact

Division of International Programs, address above

Deadlines

Vary per country

Geographical

See text above

Restrictions

Citizenship Restrictions

### NATIONAL SCIENCE FOUNDATION Division of Biological Sciences 1800 G Street NW Washington DC 20550

# Postdoctoral Research Fellowships in Environmental and Plant Biology

The National Science Foundation offers postdoctoral fellowships to scientists beginning a career in either plant or environmental biology. The Fellowship in Environmental Biology provides opportunities to young environmental biologists to develop more fully their skills and research programs through work in a new intellectual environment, prolonged tenure at field sites and/or in foreign countries. Fellowships are fully portable and may be utilized anywhere in the world. The subdisciplines within environmental biology covered by the fellowships include systematics, population biology, physiological ecology, community ecology, and ecosystem studies. Applicants must be U.S. citizens or nationals who have been awarded the doctorate within a five-year period prior to the application submission date. Selection of Fellows will be based primarily on the scientific quality of the research proposed; additional evaluation factors will include the perceived ability of the applicant, past research accomplishments, suitability of the host institution, likely effect of the research on the scientific development of the applicant, and the potential impact of the research on the field as a whole. Preference may be given to those utilizing the portable feature of these fellowships.

Postdoctoral Research Fellowships in Plant Biology are supported by the NSF Divisions of Cellular Biosciences and Molecular Biosciences. Designed to encourage a wide range of biological and physical scientists to pursue research careers in the plant sciences, recipients may choose research environments that will be most beneficial to their future scientific development. Applicants should submit a research plan that contributes to the basic understanding of plant biology at the molecular, cellular, or whole plant level, preferably in a discipline or subfield other than that of their doctoral training.

Postdoctoral Research Fellowships in Environmental Biology, Contact

Division of Biotic Systems and Resources, address above; Postdoctoral Research Fellowships in Plant Biology, Division of

Molecular Biosciences, address above

**Deadlines** 

Geographical

Restrictions

U.S. Citizenship

Restrictions

None

# NATIONAL SCIENCE FOUNDATION Division of Biological, Behavioral and Social Sciences 1800 G Street NW Washington DC 20550

# Grants in Biological, Behavioral and Social Sciences

Of the divisions of research in this directorate of NSF, some are appropriate for those working in marine sciences: 1) Cellular Biosciences, research conducted in cell biology, cell physiology, developmental biology, metabolic biology, and regulatory biology; 2) Molecular Biosciences, research in areas of biochemistry, biophysics, genetics; 3) Biotic Systems and Resources, programs in ecology, ecosystem studies, systematic biology, biological research resources, and population biology and physiological ecology; 4) Behavioral and Neural Sciences, research conducted in neuroscience, language, cognition, and social behavior, biological basis of behavior, and anthropology; 5) Social and Economic Science, areas include economics, geography and regional science, sociology, measurement methods and data improvement, political science, law and social sciences, decision, risk and management science.

Projects for basic and applied research, workshops, symposia, publications, scientific equipment, operation of research facilities and the improvement of research collections are supported. To provide reasonable assurance of long-term support for continuing projects of high scientific merit, funding may be provided up to 60 months, in annual increments. Academic institutions and nonprofit research groups are eligible to apply for these grants. In special circumstances, grants may be awarded to other types of institutions and to individuals.

Contact

Director, Division of Biological, Behavioral and Social Sciences,

NSF, address above

Deadlines

vary per program

# NATIONAL SCIENCE FOUNDATION 1800 G Street NW Washington DC 20550

# Doctoral Dissertation Research Improvement

Doctoral Dissertation Research Improvement Awards are made to expand doctoral candidates opportunities for creativity in the gathering and analysis of data. Grants are intended to cover research related expenses such as field equipment, supplies, and travel to and from research sites. These awards are not fellowships; no stipend is included. The student may receive support from other sources as well. These awards are only available in certain disciplines including the Social and Behavioral Sciences, and certain of the Biological sciences. No awards are made to students in the fields of Mathematical and Physical sciences, Engineering, Cellular and Molecular Biology, Geosciences, or Physiology.

Dissertation proposals are judged on the basis of scientific content, importance, and originality. The doctoral candidate must show how the award will improve the quality of the research. These grants are administered by the appropriate NSF Scientific Division for the specific field of study. Doctoral students who wish to apply for the Doctoral Research Improvement Awards should contact the director of the appropriate division.

Contact

Director, appropriate Science Division, NSF, address above

Deadlines

vary per division

#### NATIONAL SCIENCE FOUNDATION Division of Earth Sciences 1800 G Street NW Washington DC 20550

#### Research Grants in Earth Sciences

The focus of this program is to achieve a greater understanding of the physical structure and chemical composition of the earth and the geological processes that have led to its evolution. Emphasis is on the application of plate tectonics to the study of origin and evolution of continents. Research in geology, geophysics, petrology and related fields contribute to the understanding of how the planet works and provides fundamental knowledge leading to advances in mineral and energy resources development, mitigation of geologic hazards, and better maintenance of the environment. Programs of research include Stratigraphy and Paleontology, Surficial Processes, Crustal Structure and Tectonics, Volcanology and Mantle Geochemistry, Petrogenesis and Mineral Resources, Experimental and Theoretical Geophysics, Continental Lithosphere, and Seismology.

Academic institutions, nonacademic and nonprofit research organizations, for-profit and private research organizations and individuals may submit proposals.

Contact

Director, Division of Earth Sciences, address above

Deadlines

August 15 and January 15

# NATIONAL SCIENCE FOUNDATION Division of Engineering 1800 G Street NW Washington DC 20550

#### Grants in Engineering

The Engineering Directorate of the National Science Foundation is organized into six divisions and one office. Three of the divisions work to strengthen fundamental research in established research fields: Engineering Science in Mechanics, Structures and Materials Engineering Division; Engineering Science in Chemical, Biochemical, and Thermal Engineering Division; and the Engineering Sciences in Electrical, Communications, and Systems Engineering Division. The Science Base Development in Design, Manufacturing, and Computer-Integrated Engineering Division strives to establish scientific foundations for design and manufacturing in such field as mechanical, electrical/electronic, civil and chemical engineering. The Division of Fundamental Research in Emerging and Critical Engineering Systems supports research and related activities in areas where new knowledge can contribute to the industrial competitiveness, manpower, and infrastructure needs of the U.S. The Division of Cross-Disciplinary Research supports research that cuts across the traditional engineering fields and requires a large team effort. The Office for Infrastructure Development provides a focus for activities that affect one or more Engineering Divisions and will optimize the effective use of university, industry and other resources. This Office also focuses on activities that will advance U.S. engineering through international cooperation,

Types of funding available through this directorate include Research Grants, Research Equipment Grants, Presidential Young Investigator Awards (for outstanding young engineering faculty), Support to Undergraduate Institutions, Engineering Initiation Awards (for full-time faculty members without prior Federal research support to initiate academic engineering research), and Supplemental Funding for Support of Female, Minority, and Handicapped Engineering Research Assistants. Academic institutions, profitmaking organizations, individuals, and government agencies are eligible to apply for funding. Research proposals may be submitted any time. The fiscal year ends September 30.

Contact

Director, Division of Engineering, address above

Deadlines

Geographical Restrictions Citizenship

Citizenship Restrictions

#### NATIONAL SCIENCE FOUNDATION Division of Engineering 1800 G Street NW Washington DC 20550

#### Japanese Language Study

The Division of International Programs offers awards to science and engineering researchers to develop Japanese language skills so that they may improve U.S.-Japanese science and technology exchange. Upon completion of language training, awardees may apply for U.S.-Japan collaborative research awards (NSF) or for research positions in Japanese industrial, university, or government laboratories.

The awards support the equivalent of at least three semesters of Japanese language training in the U.S. and are made in the following two forms: Academic Program Awards that provide a stipend, normal tuition and fees for regular university Japanese language courses; Intensive Study Awards that provide tuition and fees for a suitable intensive language course.

Contact

**Deadlines** 

### NATIONAL SCIENCE FOUNDATION Division of Mathematical and Physical Sciences 1800 G Street NW Washington DC 20550

# Grants in Mathematical and Physical Sciences

The Directorate for Mathematical and Physical Sciences includes the following divisions: 1) Astronomical Sciences--research interests in areas of solar system astronomy, stars and stellar evolution, galactic astronomy, extragalactic astronomy, astronomical instrumentation and development, and electromagnetic spectrum management. The National Astronomy and Ionosphere Center (NAIC) telescope, research and observing instrumentation facilities are available on a competitive basis to scientists from all over the world. The National Optical Astronomy Observatories (NOAO) ground-based optical and infrared astronomy research

facilities and observatories and the National Radio Astronomy Observatory (NRAO) facilities that enable scientists to detect, measure, and identify radio waves from astronomical objects are available on a competitive basis to all qualified U.S. scientists and, on occasion, foreign

visitors.

2) Mathematical Sciences--areas of research include classical analysis, modern analysis, geometric analysis, topology and foundations, algebra and number theory, applied mathematics, statistics and probability, and computational mathematics. The Special Projects Program of this division supports working research sessions (conferences, symposia, colloquia, special years) and subprograms for regional conferences and scientific computing research equipment. Mathematical Sciences Postdoctoral Fellowships are available to citizens or nationals of the U.S. who have held the doctorate less than five years or have research training and experience equivalent to the doctorate.

3) Physics--research topics include elementary particle physics, intermediate energy nuclear physics, nuclear physics, atomic, molecular and plasma physics, theoretical physics, and

gravitational physics.

4) Chemistry--fields of study are physical chemistry, organic and macromolecular chemistry, inorganic, bioinorganic and organometallic chemistry, analytical and surface chemistry and chemical instrumentation. The Special Projects Office of this division supports Management of the Chemistry of Life Processes and Materials Chemistry Initiative activities, and collaborative projects in several other areas such as chemistry-chemical engineering, the development of chemical instrumentation, and high risk innovative projects.

5) Materials Research--areas of study are solid-state physics, solid-state chemistry, low temperature physics, condensed matter theory, metallurgy, ceramics and electronic materials, and polymers. Funding is available for research, collaborative research, and instrumentation. This division supports interdisciplinary programs at the Materials Research Laboratories and several national facilities that offer specialized instrumentation and resources.

Contact

Director, specific division, address above, or for facilities:

NAIC, Cornell U., Ithaca, NY 14853

NOAO, P.O. Box 26732, Tuscon, AZ 85726 NRAO, Edgemont Rd., Charlottesville, VA 22901

Deadlines

Vary with programs

#### NATIONAL SCIENCE FOUNDATION Division of Ocean Sciences 1800 G Street NW Washington DC 20550

#### Research Grants in Ocean Sciences

The Ocean Sciences Division of NSF supports research for a broad range of projects dealing with physical, chemical, geological, and biological processes in the ocean through the Ocean Sciences Research Program. Basic research programs support individual scientists, small groups of cooperating scientists, and some large coordinated projects. Proposals are reviewed at three panels a year; target dates for submitting proposals are June 1, October 1, and February 1. Proposals that require shiptime must be submitted by February 1.

This division will also support efforts to develop, acquire, and operate the instrumentation and facilities needed to carry out these research programs through the Oceanographic Centers and Facilities Program. Large and expensive facilities that will aid NSF-funded research and training of oceanographers are considered for funding. Support for major oceanographic facilities is provided at only a few institutions. Before submitting a proposal under this program, applicants should contact the Oceanographic Centers and Facilities Section. Proposal deadlines are: For ship operations, October 1; for shipboard equipment and instrumentation, September 1; for instrumentation development, June 1, October 1, and February 1.

Support for U.S. scientists to conduct drilling related research is provided in the Ocean Drilling Program of NSF. This support focuses on investigations of potential drilling regions, feasibility and development of downhole instruments and techniques, and downhole geophysical and geochemical experiments. Proposed projects should be clearly relevant to the drilling plans of the international drilling community and focus on predrilling or drilling concurrent activities. Posteruise studies should be submitted through the Ocean Sciences Research Program. However, some funds may be available for U.S. scientists who participated on a cruise to do follow-up studies related to the initial publication of drilling results.

Contact Dire

Director, Division of Ocean Sciences, address above

Deadlines

Vary per program

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# NATIONAL SCIENCE FOUNDATION Division of Polar Research 1800 G Street NW Washington DC 20550

#### Polar Research Programs

The NSF Division of Polar Research supports programs in both the Arctic and the Antarctic regions. In order to fulfill the objective to provide an active and influential U.S. presence in Antarctica, NSF manages a national program that supports research in several disciplines including Marine and Terrestrial Biology, Astronomy, Earth Sciences, Marine Geology and Geophysics, Glaciology, Atmospheric Sciences, and Upper Atmosphere Physics. Specific research objectives include understanding the function, evolution, and adaptation of land and sea species and ecosystems; the geology and geologic history of the continent and its surrounding ocean basins; the structure and dynamics of the magnetosphere and the ionosphere; Antarctica's role in past and present global climate; the structure, dynamics and chemistry of the ice sheet; and the physical and chemical oceanography of the Antarctic seas. Research may be conducted at three year-round research stations or aboard various research or Coast Guard ships. U.S. academic institutions, academically related nonprofit organizations, industry, and local, state or federal agencies are eligible for support in this program. Applications are due June 1, the year prior to proposed research. A proposal preparation kit that contains information regarding facilities, logistics, and other support available to investigators must be obtained from the Division of Polar Programs prior to the submission of a proposal.

The Arctic Research Program funds research projects in the Arctic that require special support such as interdisciplinary and international projects. Research in specific disciplines is supported by other appropriate NSF divisions or programs. Areas of interest to the Arctic Research Program include Atmospheric Sciences, Earth Sciences, Engineering, Glaciology, Oceanography, and Biology. U. S. scientists may submit proposals through the institution with which they are affiliated. Graduate students are not encouraged to initiate proposals but may participate as research assistants to a principal investigator. Nonprofit, nonacademic research institutions, local and state governments are also eligible for support. Foreign institutions are rarely eligible for funding. More information about this program may be obtained from the Division of Polar Programs, NSF.

Contact

Director, Division of Polar Programs, address above

Deadlines

Antarctic: June 1 September 1 Arctic:

Geographical Restrictions

U.S. Citizenship

### NATIONAL SCIENCE FOUNDATION

1800 G Street NW Washington DC 20550

Postdoctoral Fellowships and Professional Development Awards in Science, Technology and Society

The Program for Studies in Science, Technology and Society (SSTS) offers Postdoctoral Fellowships and Professional Development Awards to scholars who wish to improve and expand their skills in historical, philosophical, ethical, normative, or social science studies of science, engineering and technology. Fellowship and award recipients must carry out their research in established non-profit host institutions, either U.S. or foreign. Arrangements for affiliations with senior scholars and host institutions are the responsibility of the applicant. Applicants who need assistance in identifying suitable hosts are encouraged to contact the SSTS Program to discuss possibilities.

Postdoctoral Fellowships are available to scholars who have held the Ph.D. for less than five years and who specialize or wish to specialize in an area of science, technology and society studies. The postdoctoral award is generally for one year of full-time research. Preference will be given to applicants who move to new institutions and research environments. Professional Development Awards are available to scholars who have at least five years of advanced teaching and/or research experience in fields including science, social science, and engineering. Preference will be given Professional Development Award applicants who affiliate with a host scholar in a different academic discipline than their own. These awards may be used to support full or half-time activities for up to two years.

Contact Program Directors, Studies in Science, Technology and Society,

NSF

None

(202) 357-9894

Deadlines November 15

Geographical

Restrictions

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Citizenship U.S. nationals

## NATIONAL SCIENCE FOUNDATION Division of International Programs 1800 G Street NW Washington DC 20550

# Long and Medium-Term Research Visits at Foreign Centers of Excellence

The objectives of this program are to promote the progress of science and engineering, to support the establishment of bases for continuing collaborative research between scientists of the U.S. and foreign countries, and to facilitate the access to foreign centers of scientific excellence for U.S. scientists. Any foreign center of scientific excellence, worldwide, is eligible for visit support under this program except those located in the People's Republic of China, the Soviet Union, and the countries of Eastern Europe which are covered under similar programs administered by the National Academy of Sciences. Appropriate foreign centers include institutions of higher education, industrial research institutions/laboratories, government research institutes, and privately sponsored nonprofit institutions. Research may be carried out in any field of science. Medium-term research visits are 3 to 6 months duration; long-term visits are between 6 and 15 months.

U.S. citizens or nationals who have earned the doctoral degree within the last six years prior to application are eligible for these awards. The awards include a stipend, travel expenses to and from the foreign center for the scientist and, for long-term visits only, some travel funds may be provided for spouse and children. A special allowance for language training preceding the tenure abroad may be supported. All arrangements with the host institution abroad and provision for living quarters are the responsibility of the award recipient. Proposals should be submitted through applicant's home institution before January 1. The proposals will be reviewed using the following criteria: 1) Scientific competence of the applicant, 2) the applicant's potential for continued professional growth, 3) the quality of the proposed research and its potential for furthering international collaboration.

Contact Division of International Programs, NSF, address above

Deadlines January 1

Geographical Restrictions

Citizenship U.S. or U.S. national

# NATIONAL SCIENCE FOUNDATION Division of Research Initiation and Improvement 1800 G Street NW Washington DC 20550

#### Programs for Research Initiation and Improvement

Activities in this division increase research opportunities for women, minority, handicapped, and young investigators and for research faculty from predominantly undergraduate colleges. Programs include: 1) Research in Undergraduate Institutions--supports research, field work, and equipment for faculty in non-doctorate granting departments in predominantly undergraduate institutions. Proposals are accepted in all basic research fields of science and engineering and should be submitted to the proper disciplinary division of NSF. Proposals must describe the impact of the proposed research on the research and training environment of the department. Deadlines are determined by the specific discipline's division. 2) Research Opportunity Awards (ROA)--support faculty from institutions with limited research opportunities to participate in research at other institutions. Faculty members must make their own arrangements with the investigators at the research institutions who have been awarded or are applying for a research project grant. 3) Visiting Professorships for Women--gives established women scientists and engineers opportunities to serve as visiting professors at academic institutions in the U.S. or its territories (Ph.D. and research experience required). 4) Research Opportunities for Women (ROW)--supports women who hold the doctorate and have not previously been principal investigators or who are re-entering research careers. Research in this program is fully integrated into the other research programs supported by NSF. The grant application will be evaluated and funded by the relevant NSF scientific division. Deadlines for application are determined by the specific NSF Division. 5) Minority Research Initiation--supports minority full-time faculty members who are nationals of the U.S. to establish quality research efforts on their campuses. The minority faculty member applying for this funding may not have received any previous research support as a faculty member. 6) Research Improvement in Minority Institutions--supports faculty research, equipment acquisition, and cooperative research at minority institutions. Scientists and engineers who have full-time appointment at a school that has either a graduate program in science or graduate or undergraduate programs in engineering may apply. Only one proposal per institution is accepted per year. The deadline for application is December 1. 7) Facilitation Awards for Handicapped Scientists and Engineers (FAH)--supplement regular research grants and provide special equipment or assistance needed by the physically disabled scientist to pursue research. Requests for support may be included in regular research proposal submitted to any NSF division. Funds will be provided only in conjunction with awards resulting from the regular NSF competition.

Contact

Division of Research Initiation and Improvement, NSF, address

above

Deadlines

vary per program

### NATIONAL SCIENCE FOUNDATION Division of International Programs 1800 G Street NW Washington DC 20550

# Science in Developing Countries Program

The goal of this program is to generally enhance the international exchange of scientific knowledge by improving the scientific capabilities of developing countries. Projects that are relevant to the developing country and contribute to its capacity to train and use scientists and engineers are especially sought. Awards are made in the following categories: 1) Research Participation Grants that support both the collaboration of scientists and engineers from the U.S. and a developing country in research or science education projects and the participation of scientists or engineers from an eligible developing country in an appropriate U.S.-based project; 2) Conference Grants for seminars, workshops or colloquia for discussion and planning of national, regional, international activities; 3) Dissertation Improvement Grants to support the dissertation of graduate students who are from developing countries and attending a U.S. university (stipend, tuition and fees not included); and Short-term Visits from five days to four weeks to develop proposals for cooperative activities to be considered for funding under the Science in Developing Countries Program. Countries in the Science in Developing Countries Program are in the regions of North Africa, Sub-Saharan Africa, East Asia, South Asia, West Asia, Latin America, and the Caribbean. A detailed list of specific countries in these regions and more information about this program may be obtained from the NSF Division of International Programs, address above.

Universities and colleges, nonprofit, nonacademic research institutions, and private forprofit organizations may apply for these grants. Principal investigators must be professionally qualified through training and work experience and be employed by a U.S. institution. Proposals must identify a host-country counterpart scientist or engineer and a counterpart institution. Projects may have multiple sites and involve more than one foreign institution. Target dates for the receipt of proposals are below; processing time averages seven months.

Contact

Division of International Programs, NSF, address above.

Deadlines

September 1 and March 1

Geographical Restrictions Developing country

Citizenship Restrictions

#### NATIONAL SEA GRANT COLLEGE PROGRAM/ National Oceanic and Atmospheric Administration

# 6010 Executive Blvd. Rockville MD 20852

Research Grants, Visiting Scholar Program, Sea Grant Fellowship Program, Sea Grant Internships

The National Sea Grant College Program was created to increase the understanding, assessment, development, utilization, and conservation of the Nation's ocean and coastal resources. The program supports research, education, and marine extension services through 30 Sea Grant colleges and institutions. These serve as the core of the program with an additional network of over 300 participating U.S. university and marine research institutions. Projects are supported through Sea Grant's 5 divisions: Living Resources (includes aquaculture, fisheries, and marine biotechnology); Nonliving Resources (includes coastal processes, energy, marine mineral resources); Technology and Commercial Development (includes marine transportation, ocean engineering, marine economics, and marine recreation and tourism); Environmental Studies (includes environmental quality and estuarine studies); and Human Resources (includes marine policy and social sciences, ocean law, marine advisory services, education and training with the Sea Grant Fellowship Program, Sea Grant internships, and Visiting Scholar Program).

All proposals are unsolicited. Prospective applicants are encouraged to make proposals through a Sea Grant core institution. Two-thirds of funds for a proposed project may come from a Sea Grant program while remaining one-third must come from nonfederal sources. Since most proposals are submitted to a participating Sea Grant institution, the initial proposal review is conducted by that institution. Sea Grant staff evaluate proposals using peer reviews and on-site visits. The program awards grants to universities, institutes, laboratories, private or public organizations, state governments, and individuals. Grants are from 1 to 3 years. Individuals selected for Visiting Scholar Program are provided half-time salary for a period of up to 12 months.

Contact

Participating Sea Grant college or institution (list available from

National Sea Grant Program office)

Deadlines

Vary by institution

Geographical Restrictions Unrestricted

Citizenship Restrictions

# NATIONAL UNDERSEA RESEARCH PROGRAM/ National Oceanic and Atmospheric Administration 6010 Executive Blvd. Rockville, MD 20852

#### Research Grants

The National Undersea Research Program (NURP) of the National Oceanic and Atmospheric Administration provides undersea tools and technology needed to aid scientific ocean research. Five Undersea Research Centers, located at the Universities of Connecticut, Hawaii, and North Carolina (Wilmington), Fairleigh Dickinson University, and the Caribbean Research Center (Riviera Beach, FL), offer the research community access to participate in NURP programs. Categories of scientific research of interest to NOAA are Global Oceanic Processes, Pathways and Fate of Materials in the Oceans and Great Lakes, Coastal Oceanic and Estuarine Processes, Ocean Lithosphere and Mineral Resources, Biological Productivity and Living Resources, Ocean Technology, and Diving Safety and Physiology. Major, integrated undersea programs include studies of the processes of sea floor venting, geochemical cycling of pollutants in the Great Lakes, ecology of seamounts, and the factors controlling nutrient cycling in diverse ecosystems.

Support of at-sea operations may include use of manned submersibles, remotely operated vehicles, and saturation habitats. Support provided by this program is generally accompanied by co-funding from other agencies. Detailed information about programs at the five NURP centers may be obtained from:

Dr. Richard Cooper, Director National Undersea Research Center U. of Connecticut - Avery Point Campus Groton, CT 06340

Dr. Alexander Malahoff, Director Hawaii Undersea Research Laboratory National Undersea Research Center University of Hawaii - Manoa 1000 Pope Road, MSB 226 Honolulu, HI 96822

Mr. Robert I. Wicklund, Sr., Director National Undersea Research Center Caribbean Marine Research Center 100 East 17th Street Riviera Beach, FL 33404 Dr. Alan Hulbert, Director National Undersea Research Center U. of North Carolina - Wilmington 7205 Wrightsville Ave. Wilmington, NC 28403

Mr. Richard Touma, Director National Undersea Research Center Fairleigh Dickinson University 1000 River Road Teaneck, NJ 07666

Contact

See above text

Deadlines

Vary

#### NATIONAL WILDLIFE FEDERATION

# 1412 Sixteenth St. NW Washington DC 20036

#### Environmental Conservation Fellowship Program

These fellowships are awarded to citizens of the U.S., Canada, and Mexico who are pursuing degrees in a graduate program. Fellowship topics and request for proposals are made available each spring. Fellowships have been awarded in water resources, fish and wildlife conservation, environmental protection, environmental education, natural resources policy, and energy and the environment.

Contact Director, Institute for Wildlife Research at National Wildlife

Federation, address above.

Deadlines July 15, notification late August

Geographical U.S.

Restrictions

Citizenship U.S., Canada, Mexico Restrictions

### NATO Scientific Affairs Division B-1110 Brussels, BELGIUM

# NATO Advanced Research Workshops

The Advanced Research Workshop Program contributes to the critical assessment of existing knowledge on new, important topics. It serves to identify directions for future research and promotes close working relationships between scientists from different countries and working backgrounds. The workshops should have an objective beyond the mere exchange of current research findings and tutorial presentation of a given area of science. Meetings should be three to five days in duration and involve a limited number of qualified experts (30-50) in an advanced level of extensive discussions. Results are published in the NATO ASI Series.

Awards are available to organizers to cover the cost of travel and living expenses of main speakers, part of travel and living costs of other participants, and part of the organizational expenses. About 50 awards are made per year. Application forms to organize an Advanced Research Workshop are available from the NATO Scientific Affairs Division. Meetings will be held at least nine months after the deadline, see below.

Contact NATO Scientific Affairs Division, address above.

Deadlines January 15, April 15, September 15

Geographical NATO member country

Restrictions

Citizenship nationals of NATO member countries

Restrictions

# NATO Advanced Study Institutes

The NATO Advanced Study Institutes Program is a high level teaching activity that contributes to the dissemination of new knowledge not yet in university curricula and the formation of international scientific contacts. Lecturers of international standing conduct courses on a specific subject for other advanced (post-doctoral) scientists. Course duration is normally two weeks. Participants should be drawn from as many countries within the alliance as possible. Awards are available to organizers to cover travel and living costs of lecturers, part of travel and living costs for students, and part of the organizational expenses. About 60 awards are made each year. Papers arising from the meeting are published in the NATO ASI Series.

Application forms for this program are available from the NATO Scientific Affairs Division. Application deadlines are below, meetings to be held the following year.

Contact NATO Scientific Affairs Division, address above.

Deadlines January 15, April 15, September 15

Geographical NATO member country
Restrictions

Citizenship nationals of NATO member countries

### NATO Scientific Affairs Division B-1110 Brussels, BELGIUM

#### Collaborative Research Grants

The objective of the Collaborative Research Grant Program is to stimulate collaboration between laboratories in different countries and thus enhance the effectiveness of research. The program gives assistance to joint projects being carried out between research teams in research institutions or universities in different NATO countries where costs for international collaboration are not available from other sources. A project must be specific and is judged on scientific merit and the need for international collaboration. Emphasis is given to fundamental scientific aspects rather than to technological development. Preference is given to projects where the expertise, facilities and data sources of the research teams are complementary. Joint research results are published in scientific journals.

Awards are made to a designated project coordinator and cover additional costs incurred by the international collaboration such as international travel and living expenses. Funding is for reciprocal visits abroad of one to four weeks. Awards are for one year extending to two, with the possibility of up to two renewals. Applications are available from the NATO Scientific Affairs Division.

Contact

Assistant Secretary General for Scientific Affairs, address above

Deadlines

March 31, August 15, November 30

Geographical Restrictions NATO member country

Citizenship

nationals of NATO member countries

\*\*\*

#### NATO Science Fellowships

The NATO Fellowships enable scientists to pursue their work or to continue their training at institutions in other countries. Open to nationals of all NATO countries, these fellowships are administered by agencies in member countries that can best determine prevailing national requirements (in the U.S., this program is administered by the National Science Foundation). However, the NATO Scientific Affairs Division retains overall responsibility for the program and guides the program to ensure coordinated general policies and administration. The criteria for selection and the eligibility conditions vary somewhat from country to country, but applications are considered by independent scientific committees and are judged on scientific merit. The amount of fellowship varies from country to country and depends on the length of tenure. Usually NATO Fellowships cover travel costs, living costs and tuition fees.

The four types of Fellowships that are supported are: 1) Basic Fellowships for graduate studies awarded to individuals holding a first university degree. The duration of this Fellowship is normally one year with a possible renewal. 2) Advanced Fellowships enable post-doctoral scientists to conduct independent research at a foreign institution. The minimum duration for this award is usually six months. 3) Senior Fellowships awarded to senior scientists so that they may lecture or carry out research at foreign institutions for a period of approximately three months. 4) Senior Guest Fellowships awarded to senior scientists of high professional standing that are invited to lecture and/or research for a few weeks in a foreign country. Applications for this award are submitted by the scientist or institution that will be the host for the guest scientist.

Names and addresses of the National Administrators of the NATO Science Fellowship Program, a listing of the types of fellowships awarded by each country and deadlines for application can be obtained from the NATO Scientific Affairs Division, address above.

Contact Appropriate agency in candidate's home country or NATO at

address above (which will supply address of national administrator

of the program). In U.S., c/o National Science Foundation,

Washington DC 20550

Deadlines Varies with country and fellowship type

Geographical NATO member country
Restrictions

Citizenship Nationals of NATO member countries
Restrictions

#### Ottawa, Ontario, CANADA K1A 1H5

#### Atmospheric Environment Service: Visiting Fellowships

Among the divisions of the Atmospheric Environment Service offering Visiting Fellowships are:

Central Services Directorate's Ice Centre (Ottawa)--fields of research include iceberg monitoring and prediction (numerical models for movement and deterioration, remote sensing methodologies), sea ice prediction (develop and refine numerical models for formation, movement, deformation and deterioration of sea ice). Contact: Director, Ice Branch, (416) 667-4727.

Atmospheric Research Directorate (Downsview, OnL)—fields of research include remote sensing of weather and oceans; stratospheric ozone. Contact: Head, Office of Director General, (416) 667-4886

Applicants should hold a doctorate prior to taking up the fellowship. They should not have received their doctorate more than five years prior to the date of application. Persons who do not hold a doctorate and who are not enrolled in a doctoral program may be eligible for a fellowship if they hold a master's degree, have at least two years of scientific experience beyond this degree, and have demonstrated their capability to conduct independent research. Appointments are made for one year; renewals for a second year are possible.

Contact Fo

For research inquiries, see text above. For application procedures,

contact NSERC, address above.

Deadlines

December 15, notification by following April.

Geographical Restrictions Research at Atmospheric Environment Service divisions.

Citicanabia

Appearance of the mosphoric controlling in Sci vice divisions

Citizenship Restrictions

None

#### Ottawa, Ontario, CANADA K1A 1H5

Canada Centre for Remote Sensing: Visiting Fellowships Program

Among the divisions of the Canada Centre for Remote Sensing that offer Visiting Fellowships are:

Applications Technology Division (Ottawa)--fields of research include satellite- and aircraft-based remote sensing applications including research in geological mapping, mineral and petroleum exploration, land cover and environmental change assessment, oceanography, hydrology and limnology. Contact: Director, (613) 993-9900.

RADARSAT Project Office (Ottawa)—fields of research include applications of Synthetic Aperture Radar and other satellite remote sensing sensors in oceanography, sea ice, icebergs, geology and hydrology. Contact: (613) 998-6734.

Applicants should hold a doctorate prior to taking up the fellowship. They should not have received their doctorate more than five years prior to the date of application. Persons who do not hold a doctorate and who are not enrolled in a doctoral program may be eligible for a fellowship if they hold a master's degree, have at least two years of scientific experience beyond this degree, and have demonstrated their capability to conduct independent research. Appointments are made for one year; renewals for a second year are possible.

Contact For research inquiries, see text above. For application procedures, contact NSERC, address above.

Deadlines December 15, notification by following April.

Geographical Research at Canada Centre for Remote Sensing divisions.

Restrictions

Citizenship None
Restrictions

### Ottawa, Ontario, CANADA K1A 1H5

Restrictions

Central and Arctic Region, Department of Fisheries and Oceans Canada: Visiting Fellowships

Among the Central and Arctic Region centers of the Dept. of Fisheries and Oceans Canada offering Visiting Fellowships are:

Freshwater Institute Science Laboratory (Winnipeg, Manitoba)—research includes primary productivity of lakes; biology of freshwater fish; biology of marine mammals; acidification of freshwaters; environmental toxicology; aquaculture and fish health; biology of freshwater invertebrates; ecosystem dynamics of contaminants. Contact: Director, (204) 949-5268.

Bayfield Institute-Hydrographic Service (Burlington, Ont.)--research includes investigations of improved radar classification and detection of ice for arctic navigation; investigations of remote ice thickness measurement techniques. Contact: Director, (416) 336-4856.

Great Lakes Laboratory for Fisheries and Aquatic Sciences (Burlington, Ont.)--research includes Great Lakes aquatic biology, aquatic toxicology, fisheries contaminants, eutrophication, water quality. Contact: (416) 336-4568.

Contact
For research inquiries, see text above. For application procedures, contact NSERC, address above.

Deadlines
December 15, notification by following April.

Geographical Research at Dept. of Fisheries and Oceans regional branches.

Citizenship
None

# Ottawa, Ontario, CANADA K1A 1H5

Restrictions

# Gulf and Quebec Regions, Department of Fisheries and Oceans Canada: Visiting Fellowships

Among the Gulf and Quebec Regions of the Dept. of Fisheries and Oceans Canada offering Visiting Fellowships are:

Gulf Fisheries Centre (Gulf Region, Moncton, N.B.)--fields of research include marine fish and invertebrate stock assessments and biology; marine fish parasites studies; stock assessment and biology of salmon, gaspereau and eels, culture of marine molluses and salmonids; impact of man's activities on marine and freshwater ecosystems; protection of habitats critical to the life cycle of important species. Contact: Regional Director, (506) 857-6257.

Arctic Biological Station (Quebec Region, Ste. Anne de Bellevue)--fields of research include biology and ecology of marine mammals, biology and ecology of marine and anadromous fishes in Northern Quebec, Arctic biological oceanography. Contact: Director, (514) 457-3660.

Maurice Lamontagne Institute (Quebec Region, Sainte Flavie)--fields of research include (1) fish, invertebrate and marine mammal stocks assessment; scientific advice for the optimization of stock management; effects of environmental factors and trophic relationships on survival and growth of pre-recruits; migrations; ecology of the estuary and Gulf of St. Lawrence; restoration and conservation of habitats. Contact: (418) 775-6604; (2) Physical oceanography (circulation and mixing, fresh water influx, tidal mixing); chemical oceanography (marine organic and inorganic geochemistry); biological oceanography (marine ecosystems, phytoplankton, zooplankton). Contact: (418) 775-6595.

Contact
For research inquiries, see text above. For application procedures, contact NSERC, address above.

Deadlines
December 15, notification by following April.

Geographical Research at Dept. of Fisheries and Oceans regional branches.

Citizenship
None

#### Ottawa, Ontario, CANADA K1A 1H5

Newfoundland Region, Department of Fisheries and Oceans Canada: Visiting Fellowships

In the Newfoundland Region the Department of Fisheries and Oceans Canada offers Visiting Fellowships at:

Northwest Atlantic Fisheries Centre (St. John's). Fields of research include (1) life history, ecology and population dynamics of groundfish, pelagic, shellfish, marine mammal, freshwater and anadromous species; fisheries resource assessment; fisheries ecosystems; aquaculture and resource development; habitat research and assessment; fish disease; physical oceanography; hydrology; toxicology; parasitology; contact (709) 772-2027; (2) technological research, investigations and advisory services concerned with handling, processing, and preservation of fish and fish products on board, on-shore and at factories, and utilization of underutilized species. Contact: (709) 772-4424.

Contact
For research inquiries, see text above. For application procedures, contact NSERC, address above.

Deadlines
December 15, notification by following April.

Geographical Research at Dept. of Fisheries and Oceans regional branches.

Citizenship None

Restrictions

### Ottawa, Ontario, CANADA K1A 1H5

Pacific Region, Department of Fisheries and Oceans Canada: Visiting Fellowships

Among the Pacific Region centers of the Dept. of Fisheries and Oceans Canada offering Visiting Fellowships are:

Institute of Ocean Sciences (Sidney, B.C.)—research includes (1) Physical oceanography of processes occuring in fjords and over the continental shelf of Northeast Pacific and Western Arctic; large-scale ocean circulation; sea ice-ocean interaction; numerical modelling; remote sensing; chemical oceanography on distribution, flux and fate of chemicals and processes between sediment, biota, atmosphere, coastal waters, and open-ocean; climate research; monitoring and modelling on air-sea flux and upper-deep ocean exchange of CO2, climatic gases, and biogeochemical cycles. Contact (604) 356-6515;

(2) Biological oceanography with major emphasis on phytoplankton, zooplankton, and benthic infauna; mesoscale distribution of organisms and interactions with physical forcing; light adaptation of phytoplankton, zooplankton feeding and swimming behavior; taxonomy and ecology of aquatic oligochaetes. Contact (604) 756-7048;

Pacific Biological Station (Nanaimo, B.C.)—fields of research include stock assessments and population dynamics of salmon, herring, groundfish and marine invertebrates, recruitment mechanisms, enhancement and aquaculture, parasites and fish health, habitat and carrying capacity, fish-forestry interactions, biotechnology and applied endocrinology. Contact: Director, (604) 756-7040.

Contact
For research inquiries, see text above. For application procedures, contact NSERC, address above.

Deadlines
December 15, notification by following April.

Geographical
Research at Dept. of Fisheries and Oceans regional branches.

Citizenship
Restrictions
None

#### Ottawa, Ontario, CANADA K1A 1H5

Scotia-Fundy Region, Department of Fisheries and Oceans Canada: Visiting Fellowships

Among the Scotia-Fundy Region centres of the Dept. of Fisheries and Oceans Canada offering Visiting Fellowships are:

St. Andrews Biological Station (St. Andrews, N.B.)--fields of research include Salmonid physiology, invertebrate and marine fish, population assessment and biology, lobster physiology, impact of acid rain and low pH on Atlantic salmon. Contact (506) 529-8857.

Halifax Fisheries Research Laboratory (Halifax, N.S.)--fields of research include disease and nutrition of marine and freshwater species, fish immunology; histopathology; population biology of commercial invertebrate and marine plant species. Contact (902) 426-6138.

Freshwater and Anadromous Division (Halifax)--field-oriented research programs on population assessments of anadromous species, particularly Atlantic salmon; salmon enhancement programs. Contact (902) 426-3573.

Bedford Institute of Oceanography (Dartmouth, N.S.)--fields of research include 1) biological and environmental mechanisms underlying marine production, contact Biological Oceanography Div. (902) 426-3793; 2) stock assessment of groundfish, pelagics and seals, marine fish population dynamics, biology and ecology, fisheries management studies, contact Marine Fish Div. (902) 426-4890; 3) physical circulation, dynamics, climatology, mixing of continental shelves and deep sea; chemical transport, exchange, disposition of organic, inorganic and radionuclide matter; meteorological applied physics studies toward development of physical, chemical, and biological sensors, contact Physical and Chemical Sciences Branch (902) 426-7456; and 4) acoustic methods of seafloor depth measurement; remote controlled survey vehicles; tidal phenomena; precise offshore positioning, including Global Positioning System; electronic chart design; hydrographic data collection and processing systems design, contact Hydrography Branch (902) 426-3497.

Contact	For research inquiries, see text above. For application procedures, contact NSERC, address above.
Deadlines	December 15, notification by following April.
Geographical Restrictions	Research at Dept. of Fisheries and Oceans regional branches.
Citizenship Restrictions	None

#### Ottawa, Ontario, CANADA K1A 1H5

Geological Survey of Canada: Visiting Fellowships Program

Among the laboratories and research stations of the Geological Survey of Canada offering Visiting Fellowships are:

Atlantic Geoscience Centre (Dartmouth, N.S.)—fields of research include geology and geophysics of continental margins of eastern and Arctic Canada and contiguous ocean basins, coal and petroleum geology, surficial and environmental marine geology, marine geoscience technology, development of sedimentary basins, seabed stability, biostratigraphy. Contact: Director, (902) 426-2367.

Pacific Geoscience Centre (Sidney, B.C.)-fields of research include marine geology and geophysics of the Juan de Fuca Ridge and Plate and of the Pacific continental margin, polymetallic sulphides, earthquakes, crustal deformation, multi-channel seismics, swath mapping and side-scan imagery, paleomagnetism, coastal geology, geology of estuaries, offshore surficial geology. Contact: Director, (604) 656-8438.

Ottawa Laboratories—fields of research include Precambrian and Appalachian geology, mineralogy, geochronology and isotope geology, mineral deposits, geoscience technology development, geochemical and geophysical exploration, seismology, geomagnetism and paleomagnetism. Contact: Chief Program Officer, (613) 995-4122.

Applicants should hold a doctorate prior to taking up the fellowship. They should not have received their doctorate more than five years prior to the date of application. Persons who do not hold a doctorate and who are not enrolled in a doctoral program may be eligible for a fellowship if they hold a master's degree, have at least two years of scientific experience beyond this degree, and have demonstrated their capability to conduct independent research. Appointments are made for one year; renewals for a second year are possible.

Contact For research inquiries, see text above. For application procedures,

contact NSERC, address above.

Deadlines December 15, notification by following April.

Geographical Research at Geological Survey centres.

Restrictions

Citizenship None Restrictions

# NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA

### Ottawa, Ontario, CANADA K1A 1H5

### Inland Waters Lands Directorate: Visiting Fellowships

Among the divisions of the Inland Waters Lands Directorate offering Visiting Fellowships are:

National Hydrology Research Institute (Saskatoon, Saskatchewan)—fields of research include limnology; hydrogeology; glaciology; hydrologic cycle; hydrological and water quality models; eutrophication; nutrient dynamics; river and lake ecology; contaminant transport in surface and ground waters; ground water-permafrost system. Contact T.M. Dick, Dir., (306)975-5718.

National Water Research Institute (Burlington, Ontario)—fields of research include limnology and aquatic ecology; contaminant properties, fate and effects; acid/toxic rain effects; groundwater contamination; lake and river rehabilitation; hydraulics and sedimentology. Contact: Science Liaison Coordinator, (416) 336-4625.

Water Survey of Canada (Hull, Quebec)--fields of research include development and evaluation of methods for sampling suspended sediment and bedload, analysis and interpretation of sediment data; application of sediment transport equations and mathematical models. Contact: Head, Sediment Survey Section, (819) 953-1560.

Applicants should hold a doctorate prior to taking up the fellowship. They should not have received their doctorate more than five years prior to the date of application. Persons who do not hold a doctorate and who are not enrolled in a doctoral program may be eligible for a fellowship if they hold a master's degree, have at least two years of scientific experience beyond this degree, and have demonstrated their capability to conduct independent research. Appointments are made for one year; renewals for a second year are possible.

Contact	For research inquiries, see text above. For application procedures, contact NSERC, address above.
Deadlines	December 15, notification by following April.
Geographical Restrictions	Research at Inland Waters Lands Directorate divisions.
Citizenship Restrictions	None

# NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA

### Ottawa, Ontario, CANADA K1A 1H5

### National Research Council Canada: Visiting Fellowships

Among the divisions of the National Research Council Canada offering Visiting Fellowships are:

Atlantic Research Laboratory (Halifax, N.S.)--fields of research include silicate biomineralization; NMR spectroscopy; physiology and chemistry of fungi; biochemistry, cell biology, floristics, genetics, and molecular biology of marine algae; biologically-active products from marine organisms. Contact: Director, (902) 426-8278.

Institute for Marine Dynamics (St. John's, Newfoundland)—fields of research include fluid mechanics; hydrodynamics; physical system dynamics; stability, response and control; mathematical and physical modelling of advanced marine vehicles, offshore structures and ships, self-propelled or unpowered, in open and ice affected waters; ice physics and fracture mechanics; ice formation; ice resistance, stability and safety of marine structures and vehicles; wave, wind, current and boundary effects on piloted or remotely operated surface and sub-surface systems; systems analysis; CAD/CAM techniques for marine applications. Contact: Director, (709) 772-2469

Applicants should hold a doctorate prior to taking up the fellowship. They should not have received their doctorate more than five years prior to the date of application. Persons who do not hold a doctorate and who are not enrolled in a doctoral program may be eligible for a fellowship if they hold a master's degree, have at least two years of scientific experience beyond this degree, and have demonstrated their capability to conduct independent research. Appointments are made for one year; renewals for a second year are possible.

Contact For research inquiries, see text above. For application procedures,

contact NSERC, address above.

Deadlines December 15, notification by following April.

Geographical Research at National Research Council divisions

Restrictions

Citizenship None Restrictions

# NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA

# Ottawa, Ontario, CANADA K1A 1H5

Royal Roads Military College: Visiting Fellowships

Among the Canadian military colleges offering Visiting Fellowships is the Royal Roads Military College (Victoria, B.C.) —with fields of research in physical, chemical and biological oceanography; rock magnetism, marine robotics and applied computer research. Contact: Principal, (604) 380-4517. As part of Canada's Dept. of National Defense, Royal Roads Military College has restrictions on the citizenship of applicants (see below).

Applicants should hold a doctorate prior to taking up the fellowship. They should not have received their doctorate more than five years prior to the date of application. Persons who do not hold a doctorate and who are not enrolled in a doctoral program may be eligible for a fellowship if they hold a master's degree, have at least two years of scientific experience beyond this degree, and have demonstrated their capability to conduct independent research. Appointments are made for one year, renewals for a second year are possible.

Contact

For research inquiries, see text above. For application procedures,

contact NSERC, address above.

Deadlines

December 15, notification by following April.

Geographical Restrictions Research at Royal Roads Military College

Citizenship Restrictions Citizens of NATO countries, Australia, New Zealand, as well as

citizens from Canada.

### NETHERLANDS UNIVERSITIES FOUNDATION FOR INTERNATIONAL COOPERATION (NUFFIC)

P.O. Box 90734

2509 LS The Hague, NETHERLANDS

Netherlands Fellowship Program of Development Cooperation, Ministry of Education Scholarships

The Netherlands Universities Foundation for International Cooperation (NUFFIC) supports fellowship and graduate scholarship programs:

- 1) Netherlands Fellowship Program of Development Cooperation: The Netherlands Government offers a number of fellowships to nationals from developing countries nominated by their employer with the formal support of their governments. Among the institutions at which these fellowships are tenable are the International Institute for Aerospace Survey and Earth Sciences and the International Institute for Hydraulic and Environmental Engineering. On completion of studies, recipients must return to their home country and work in their professions. Fields include pure and applied sciences, social sciences, and agricultural sciences. Candidates must have had adequate training and experience in their fields. Knowledge of the Dutch language is not necessary, but candidates should speak either English, Spanish, or French depending on the medium of instruction in the selected course of study. Information and application procedures should be obtained from The Netherlands diplomatic representative or embassy in candidate's own country. The Fellowship covers normal living expenses, fees, and health insurance. Travel expenses are covered only when the course lasts three months or longer.
- 2) Ministry of Education and Science Scholarships: The Dutch government grants a number of graduate scholarships to foreign students through this ministry. These scholarships have no restrictions regarding the field of study; they must be used for study in the Netherlands; the applicant should have a university degree; applications should be submitted to relevant authorities in applicant's home country by 15 December. Foreign students must be nominated officially by their own governments. No financial support can be given to students applying directly to the Dutch ministry. Scholarships are available to nationals of 28 countries within the framework of cultural conventions between The Netherlands and other countries: Belgium, Brazil, Bulgaria, China, Colombia, Czechoslovakia, Egypt, Federal Republic of Germany, France, German Democratic Republic, Great Britain, Greece, Hungary, India, Indonesia, Irish Republic, Israel, Italy, Luxembourg, Mexico, Norway, Poland, Portugal, Romania, Spain, Turkey, U.S.S.R., Yugoslavia. Additional scholarships are also available within the framework of scholarship exchange programs between the Netherlands and ten other countries: Argentina, Australia, Austria, Canada, Denmark, Finland, Iceland, Japan, New Zealand, Switzerland.

Contact

Netherlands Embassy in applicant's country; information on participating institutions and courses available from NUFFIC.

address above.

Deadlines

Varies

Geographical

Study in Netherlands

Restrictions

Restricted; see text above

Citizenship Restrictions

## OFFICE OF NAVAL RESEARCH 800 North Quincy Street Arlington VA 22217-5000

#### Overview

The objectives of the Office of Naval Research (ONR) are to support basic research in a broad spectrum of areas to enhance the quality of life on earth as well as benefit naval operations. ONR funds basic research, conducted under contract by universities (60%), nonprofit institutions and industrial establishments (4%), and by Navy laboratories (36%). These entries provide simplified listings and contact information for the myriad programs sponsored by ONR. Further descriptions and information regarding research programs can be found in "Guide to Programs" available from ONR Headquarters.

Proposals from qualified organizations are accepted at any time; letters of interest or telephone inquiries to listed contacts are strongly encouraged before a formal proposal is submitted. ONR contracts are awarded to both nonprofit and commercial organizations. ONR grants are made only to nonprofit scientific research organizations or nonprofit institutes of higher education. Grants may provide partial support for conferences or symposia and are not awarded to individuals.

Contact

Contacts listed for specific areas in the following descriptions

Deadlines

Vary per program

Geographical Restrictions

U.S. locations

Citizenship

Restrictions

### Life Sciences Programs/Biological Sciences Division

The Biological Sciences Division supports basic and applied research programs to address fundamental questions in molecular marine biology, and/or basic studies related to the effects of the marine environment on equipment and humans. The Division's core programs and contacts [all phone numbers are (202) 696-xxxx unless otherwise noted] are:

Systems Bilogy--J.A. Majde -4055; F.G. Hempel -4054 Molecular Biology--M.T. Marron -4038; T. Melton -4044; K.B. Ward -4039; E.D. Schmell-4039 Microbiology--T. Melton -4044 Biochemistry--M.T. Marron -4038; K.B. Ward -4039

Accelerated Research Initiatives in this division include:

Bioengineering--M.T. Marron-4038; K.B. Ward -4039

Archaebacteria -- T. Melton -4044

Biosurfaces--T. Melton -4044

Molecular Recognition--K.B. Ward -4039; H.E. Guard-4409

Contact

For research inquiries, see text above; for application procedures,

ONR, address above

Deadlines

### Mathematical and Physical Sciences Programs/Chemistry Division

The Chemistry Division is responsible for a large portion of the chemical research on which future Navy and Marine Corps systems will be based. The Division's core programs and contacts [all phone numbers are (202) 696-xxxx unless otherwise noted] are:

Polymeric materials--K.J. Wynne, Head, -4409

Chemical synthesis and mechanisms--H.E. Guard -4409

Solid state and surface chemistry--D.L. Nelson -4409

Electrochemistry--R. Nowak -4409

Other areas of chemical research are supported in the Mechanics, Biological Sciences, and Ocean Sciences Divisions.

Contact

For research inquiries, see text above; for application procedures,

ONR, address above

### Cognitive and Neural Science Division

This ONR division has an Accelerated Research Initiative Program of interest to marine scientists. This ARI in marine mammals investigates a variety of seal and porpoise capabilities such as detection, localization, recognition, spatial orientation, and communication. The general purpose of this program is to discover the underlying principles governing these skill expressions for potential exploitation in artificial systems. Contact D. Woodward (202) 696-4057.

Contact

For research inquiries, see text above; for application procedures, ONR, address above

Deadlines

### Computer Science Division

The Computer Science Division includes research in computer architecture, parallel processing, algorithms, software engineering, robotics, distributed systems, artificial intelligence, precision engineering, and manufacturing science. The program is interdisciplinary and includes both theoretical and experimental work. The research addresses areas of potential value to Navy and Marine Corps tactical and strategic programs. The Division's core programs and contacts [all phone numbers are (202) 696-xxxx unless otherwise noted] are:

Artificial Intelligence, Robotics -- A.L. Meyrowitz -4303

Computer Architecture (Accelerated Research Initiative in parallel processing), Distributed Computing-- A. van Tilborg -4302

Software Research, Manufacturing Science-- C.J. Holland -4302

Contact

For research inquiries, see text above; for application procedures, ONR, address above

### Environmental Sciences Programs/Geophysical Sciences Division

Focus in the Geophysical Sciences Division is on marine geology and geophysics, underwater acoustics, ocean optics, Arctic science, and remote sensing of environmental parameters. Emphasis within the division is on sea-floor acoustics, tomography, seismic propagation (especially at very and ultra low frequencies), physical properties of marine sediments and sediment dynamics. The importance of polar regions cannot be overstated and interest there is in physical oceanography, meteorology, geophysics, underwater acoustics, and remote sensing. The Division's core programs and contacts (all phone numbers are (202) 696-xxxx unless otherwise noted) are:

Ocean Optics--M.A. Blizard -4123

Underwater Acoustics, Shallow Water Acoustics, Acoustic Transients--R.M. Fitzgerald -4732 Seismic Acoustic Propagation, Sediment and Crustal Patterns--R.S. Jacobson -4122 Sediment Dynamics--J. Kravitz -4070

Arctic Sciences, MIZEX (Marginal Ice Zone Experiment), Arctic Oceanography—T. Curtin—4118

Arctic Acoustics -- R.F. Obrochta -4118

Contact

For research inquiries, see text above; for application procedures,

ONR, address above

### Deadlines

#### Graduate Fellowship Program

The ONR Graduate Fellowship Program is designed to increase the supply of U.S. citizens trained in disciplines of science and engineering critical to the U.S. Navy. ONR awards approximately 50 fellowships per year to recent outstanding graduates to support their study and research leading to doctoral degrees in specified disciplines. The disciplines include: Electrical Engineering, Computer Sciences, Mathematics, Naval Architecture and Ocean Engineering, Materials Science, Applied Physics, Aerospace/Mechanical Engineering, Cognitive and Neural Sciences, Biological/Biomedical Sciences.

The Fellowship Program is administered for ONR by the American Society for Engineering Education. Fellowships are tenable at U.S. institutions of higher education offering doctoral degrees in the designated science and engineering disciplines. Normal tenure is twelve months of each fellowship year for three consecutive years, usually beginning in August/September. Fellowships are limited to citizens of the U.S. and to those individuals who will receive their baccalaureate degree in the year of application. Naval officers meeting specific requirements are eligible for this program.

Contact

American Society for Engineering Education (ASEE)
11 Dupont Circle, Suite 200, Washington DC 20036

(202) 745-3616 or 293-7080

Deadlines

31 January for applications; notification by 15 April

#### Mechanics Division

Particular emphasis in the Mechanics Division is placed on phenomena associated with vehicles operating above, at, or below the sea surface, their propulsion systems, and high energy density propellants and explosives. The program is subdivided into 3 major areas: Fluid mechanics (fluid physics, ship hydrodynamics and aerodynamics), solid mechanics (mechanics of materials and structural dynamics), and energy conversion (energetic materials and propulsion processes). Interdisciplinary research will be emphasized wherever justified by unique opportunities and critical naval relevance. The Division's core programs and contacts [all phone numbers are (202) 696-xxxx unless otherwise noted] are:

Fluid Physics--M.M. Reischman -4404, S.G. Lekoudis -4305 with related core program in fluid physics of geophysical phenomena; research initiative in theoretical turbulence and turbulence modification
Ship Hydrodynamics-- J.A. Fein -4305
Aeromechanics--S.G. Lekoudis -4406
Mechanics of Materials--A.Kushner -4305
Structural Dynamics--A.J. Tucker -4305
Energetic Materials--R.S. Miller, (202) 696-4405
Propulsion Processes--R.S. Miller, (202) 696-4405
Flow/Structure Interactions-- A.J. Tucker -4305, M.M. Reischman -4404

Contact

For research inquiries, see text above; for application procedures,

ONR, address above

Deadlines

### Environmental Sciences Programs/Ocean Engineering Division

The Ocean Engineering Division supports research directed toward providing fundamental knowledge required for the solution of Navy and Marine Corps ocean engineering problems. The division also manages and maintains the Navy-owned ships in the academic research fleet. The Ocean Engineering Division (E.A. Silva, Head, (202) 696-4358) has core programs in:

Ocean Technology areas of research-E.A. Silva, (202) 696-4358

deep underwater arcs and flumes, undersea search, harbor flow and sedimentation processes, wave and current forces in cylinders, support of ocean sciences (improved oceanographic sensing);

Oceanographic Research Facilities--K.W. Kaulum, (202) 696-4531 management of research ships

Contact

For research inquiries, see text above; for application procedures, ONR, address above

### Ocean Sciences Division

The Ocean Sciences Division supports research in the full range of oceanographic disciplines in both the open ocean and coastal zones to understand the basic process in, on and over the world's oceans. The approach incorporates a combination of specialized observational instrumentation, detailed field studies, and theoretical investigations all leading to the development, verification, and improvement of hypotheses to explain the evolution of the world's oceans and the atmosphere above them. These hypotheses, in time, will be turned into predictive models for use by operational Navy forecasters on land and at sea. The Division's core programs and contacts [all phone numbers are (202) 696-xxxx unless otherwise noted] are:

Marine Meteorology, Heavy Weather at Sea, Tropical Cyclone Motion--R.F. Abbey -4124 Air-Sea Interaction--W.F. Cross -4112

Coastal Sciences, Coastal Transition Zone Oceanography, Strategic Sea Straits--A. Brandt -4025

Synthetic Aperture Radar (SAR)--T.S. Nelson -4395

Physical Oceanography, Fine Scale Variability--D. Evans -4112

Southern Ocean Studies--D. Evans -4112, G.B. Morris -4168

Oceanic Chemistry--E.J. Green -4590

Marine Photochemistry, Marine Microlayers--F.L. Herr -4590

Oceanic Biology, Bioluminescence and Optical Variability, Marine Biosurfaces, Extreme Environmental Habitats--B.J. Zahuranec -4590

Sea Surface Wave Processes--N. Huang -4112

Real-Time Environmental Arctic Monitoring and Modeling (R-Team), Real Time Synoptic Ocean Prediction--T.B., Curtin -4112

Contact

For research inquiries, see text above; for application procedures, ONR, address above

# Mathematical and Physical Sciences Programs/Physics Division

The Physics Division core programs and contacts [phone numbers are (202) 696-xxxx unless otherwise noted] are:

Lasers and Electro-optics--H.S. Pilloff, -4223, R.E. Behringer, (818) 795-5971

Plasma Physics--C.W. Roberson, -4222;

Nonlinear Phenomena, Atomic and Molecular Physics, Cluster Properties and Dynamics--M.F. Shlesinger, -4206;

Surface and Interface Physics--J.S. Murday, -4220, R.G. Brandt, (818)795-5971 x49; Physical Acoustics--L.E. Hargrove, -4221.

In addition, Accelerated Research Initiatives are supported in: Novel advanced optical concepts, fundamental processes on surfaces, chaos, mid- and infrared lasers, and cluster properties and dynamics.

Contact -

For research inquiries, see text above; for application procedures,

ONR, address above

### Summer Faculty Research Program

The American Society for Engineering Education (ASEE) administers this program of summer research for ONR. Science and engineering faculty members from universities and colleges spend ten weeks during the summer conducting research at Navy Research and Development centers. Participants work with professional peers in the Navy centers on research tasks of mutual interest. The summer research is defined in advance through correspondence and a pre-program visit to the research site by the faculty member.

The objectives of this program are to engage university faculty members in the research programs of the naval centers and to develop the basis for continuing research of interest to the Navy at the faculty members' institutions. Laboratory, computational, and specialized library facilities are available on a scale generally unmatched at universities and colleges. This program is open only to U.S. citizens either holding or eligible for a Department of Defense clearance of SECRET. The three levels of appointments are: Summer Faculty Fellow- two years teaching experience required; Senior Summer Faculty Fellow- Ph.D. plus 5 years research experience and publications required; Distinguished Summer Faculty Fellow- must have a major appointment at a leading research lab and enjoy long established stature as a scholar in science or engineering. Appointments are made to current teaching and/or research faculty of colleges and universities. Selection is based on faculty members' research qualifications and a match of research interests with the host center.

Contact

Navy/ASEE Summer Faculty Research Program

11 Dupont Circle, Suite 200 Washington DC 20036

Deadlines

Offers of appointment made on or about I March each year

#### Young Investigator Program

The objectives of this program are to attract to naval research outstanding young university faculty members, to support their research, and to encourage their teaching and research careers. An individual wishing to apply for an award under this program must submit a research proposal and a supporting letter. Proposals falling within the broad scope of naval research interests as described in the ONR Guide to Programs will be considered. Applicants must be U.S. citizens holding tenure-track positions at U.S. universities and colleges who received their graduate degrees (PhD or equivalent) less than 5 years before the time of application.

Applicants will be selected for funding based on a creative proposal, demonstrating the potential for making progress in an important scientific area of interest to the Navy; past performance, supported by published work, awards and other recognition; and long-term commitment by the university to the applicant and his or her research.

Contact

ONR, c/o ONR program which best represents the proposed work (as

described in ONR Guide to Programs)

Deadlines

New announcement made in Sept. of each year that program is in

force

## OFFICE OF TECHNOLOGY ASSESSMENT (OTA)

Congress of the United States Washington DC 20510

### Congressional Fellowship Program

The Office of Technology Assessment (OTA) offers up to six Congressional Fellowships to qualified candidates from academia, business and industry, and the public sector. The program provides an opportunity for individuals of proven ability to gain a better understanding of science and technology issues facing Congress and the ways in which Congress establishes national policy related to these issues. OTA provides congressional committees with objective analyses of the emerging, difficult, and often highly technical issues of the late 20th century. It explores complex issues involving science and technology, helping Congress to resolve uncertainties and conflicting claims, identifying alternative policy options, and providing foresight or early alert to new developments that could have important implications for future Federal policy. Assessments are conducted in such areas as energy, advanced materials, economic competitiveness, technology transfer, international security, biological applications, health care technologies, natural resources, information technologies, environment, waste management, transportation, education, and science policy. Fellows participate directly in the work of one or more assessments.

The program is open to individuals who have demonstrated exceptional ability in the physical or biological sciences, engineering, law, economics, environmental and social sciences, or public policy. Candidates must have significant experience in technical fields or management or have completed research at the doctoral level. Applicants must have the ability to perform objective, comprehensive analyses; to work cooperatively with individuals of diverse backgrounds, experience, and training; and to present reports in clear, concise language. Salaries are based on the Fellow's current salary and/or training and experience; Fellows may accept salary supplements from their parent organizations.

Contact	Congressional Fellowships Program, Personnel Office, OTA, address above for application information.
Deadlines	31 January (subject to change); awards announced early April
Geographical Restrictions	Tenable at OTA in Washington DC
Citizenship Restrictions	U.S. citizenship not required; but applicant's citizenship must be with nation that has defense obligations with U.S.

## ORGANIZATION OF AMERICAN STATES Department of Fellowships and Training 17th and Constitution Avenues NW Washington DC 20006

Training Among Developing Member Countries of OAS ADPD Fellowships:

OAS provides several types of fellowships to assist the development efforts of member countries by improving technological cooperation, increasing institutional strength, and advancing manpower training. Awards are made to citizens or permanent residents of the member states for advanced study or research in a member country other than that of permanent residence of the applicant. Preference will be given to those fields indicated by the respective countries. The applicant is responsible for arranging admission to the selected center of learning and must have command of the language of the country of study. Applications are submitted to the General Secretariat through official channels established by each member government.

OAS countries include: Antigua and Barbuda, Argentina, Bahamas, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, United

States, Trinidad and Tobago, Uruguay and Venezuela.

ADPD Fellowships are granted by member countries through their educational institutions in order to support training at both technical and academic levels in various development specialties. This program is aimed at satisfying the demand and utilizing the supply of training services at a regional level. The courses offered under this program are negotiated by the General Secretariat and announced through established national entities in the member countries. The cost of tuition and subsistence is paid by the donor country; the General Secretariat provides roundtrip transportation, course announcements, processing of applications and selection of candidates.

Chief, Trainee Selection, OAS, address above Contact

Deadlines

OAS member countries Geographical

Nationals of OAS member country Citizenship

Restrictions

Restrictions

### ORGANIZATION OF AMERICAN STATES

### BECC Fellowships in Education, Science and Culture

The BECC Fellowships are a part of the regional and multinational programs established by OAS in order to contribute to integration and development in the fields of Education, Science and Culture in the member states. In the area of Education, the fellowships complement national efforts to increase the quality, planning, and administration of education; adjust the educational systems to development needs; encourage research and the use of modern methods; and promote cooperation and inter-American integration. Fellowships in the fields of Science and Technology strengthen the scientific infrastructure of the member states; stimulate integration; accelerate development; encourage technological planning, pure and applied scientific research, and basic and advanced training at the graduate level; increase support given to research institutes; and expand cooperation in the fields of marine sciences, earth sciences, research in energy resources. Fellowships in the area of Culture promote integration of the various aspects of development with cultural values, and promote, through cooperative effort, the cultural development of member states.

The General Secretariat offers these fellowships generally through specific announcements which indicate the eligibility requirements and the corresponding benefits. Applications must be submitted through the liaison agency designated by each member government.

Contact

Chief, Trainee Selection, OAS, address above

Deadlines

### CI Fellowships: Training in Inter-American Centers

Fellowships are available to study at the Inter-American Training Centers which train manpower from the member states through basic and advanced courses and seminars. One of these centers is the Inter-American Center for Integrated Development of Water and Land (CIDAT) in Venezuela.

Contact

Chief, Trainee Selection Division, (202) 789-3902

# ORGANIZATION OF AMERICAN STATES

## PEC Fellowships: Special Training Program

PEC Fellowships are used in intensive courses of a practical nature especially designed for a specific training purpose or for purposes of institutional strengthening. The Fellowships are granted for the following types of training: Courses that are part of a regular program at an institution of a sponsoring country; ad-hoc courses organized especially for the OAS; individual training based on requests from member states; and short-term trips to highly specialized technical institutions.

The PEC Fellowship provides roundtrip airfare from the country of residence to the country of study (funded by OAS), and all or almost all costs of living expenses, enrollment, books, health, hospitalization and accident insurance, and local trips made in connection with the training (funded by the sponsoring country). The PEC Fellowships are only open to nationals of the underdeveloped member States of the OAS. Interested persons should contact the OAS offices in member countries or their national liaison in the home country.

Contact

Chief, Trainee Selection, OAS, address above

Deadlines

# PRATA Fellowships and Other Training Opportunities

PRATA Fellowships are granted for post-graduate studies or research related to regional activities approved by the corresponding technical and political organs, as part of their technical cooperation programs. The main objective of these fellowships is to promote institutional development of those entities where the OAS has cooperation projects underway.

Other training opportunities are offered by OAS in various fields of special interest to the governments of the member states. These fields include International Law and Journalism in which courses, inter-American in nature, are given each year. The announcements of these courses state requirements and benefits of the specific fellowship. Information regarding special opportunities can be obtained from the General Secretariat.

Contact

Chief, Trainee Selection Division, (202) 789-3902

## ORGANIZATION OF AMERICAN STATES

# PRA Fellowships (Regular Training Program)

Through the PRA Fellowships (Regular Training Program), OAS provides general support over an extended period of time under which the trainee prepares the study plan and selects the research or study institution. The objectives of this program are threefold: To contribute to the economic, social, educational, scientific, technological, and cultural development of the member States of the Organization; to meet the basic priority needs of the governments, in accordance with their preferences; and to help utilize to the maximum the educational and training institutions existing in the member states. Two types of fellowships are made: To continue study or training at the graduate level; and to conduct research. The beneficiaries of OAS fellowships must commit themselves to return to their respective countries upon completion of their fellowship training and remain there for the length of time specified by their government in order to participate in national development efforts. Deadlines are April 30 and August 31.

Contact

Chief, Trainee Selection Division, (202) 789-3902

# ROCKEFELLER BROTHERS FUND 1290 Avenue of the Americas New York NY 10104

#### Foundation Grants

The Rockefeller Brothers Fund supports international activities that contribute ideas, develop leaders, and encourage institutions in the transition to global interdependence in order to improve the well-being of all people. The Fund makes grants of interest to marine scientists and policy-makers in the area of "One World". This program area is organized into two sections: 1) Sustainable Resource Use which encourages more efficient and renewable use of natural, human and man-made resources; and 2) World Security which supports the strengthening of arms control, improvement of international relations, and encourages development, trade and finance. The World Security section supports exchanges and joint work with the Soviet Union and Eastern Europe, and exchanges and strategic studies institutes in East Asia. The Special Concerns area of funding supports emergency situations and compelling new opportunities. In the past, these have included comparative research and exchange between the People's Republic of China and the U.S. in the area of general education in the arts, and support of human rights in South Africa.

Grants are awarded to tax-exempt organizations and organizations which seek support for a project that would qualify as tax-exempt. The Fund does not make grants to individuals. A preliminary letter of inquiry containing a succinct description of the project, information about the principal staff members involved, a synopsis of the budget, and an indication of the amount requested is recommended as an initial approach to the Fund.

Contact

Secretary, Rockefeller Brothers Fund, address above

Deadlines

попе

Geographical Restrictions Citizenship Restrictions

# ROYAL NORWEGIAN COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

Sognsveien 72, P.O. Box 70 Tasen Oslo 8, NORWAY\_\_\_\_

### Postdoctoral Fellowships

Fellowships are awarded to Norwegian citizens to study in fields of science and engineering. For Postgraduate Fellowships, candidate should not be more than 35 years of age. For Fellowships for Senior Scientists, candidate must have had at least five years of experience in research work after having fulfilled the university degree. Duration of studies is from one to six months. Studies for either fellowship can be carried out in a country chosen by the candidate.

Contact

Royal Norwegian Council for Scientific and Industrial Research at

address above.

Deadlines

Geographical Restrictions

Citizenship Restrictions Norwegian citizens only

### ROYAL SOCIETY

## Carlton House Terrace 6 London SW1 ENGLAND

# Exchange Research Fellowships in the Netherlands

The Exchange Research Fellowships in physical, biological and medical sciences, are offered in conjunction with the Netherlands Organisation for the Advancement of Pure Research. Exchange Research Fellowships are available to British nationals who are research workers of proven ability, in exchange for similar facilities offered to Dutch research workers by the Royal Society in London. The fellowships are tenable in the Netherlands, cover transportation, living costs and research facilities; duration of the award is one academic year or six months.

Royal Society, address above or Netherlands Organisation for the Contact

Advancement of Pure Research,

P.O. Box 93138, 2509 AC The Hague.

Deadlines

Geographical

Tenable in the Netherlands

Restrictions

Citizenship

British citizens

Restrictions

## ALFRED P. SLOAN FOUNDATION 630 Fifth Avenue New York NY 10111

# Sloan Research Grants and Fellowships

The Sloan Foundation has general interests in higher education, with an emphasis on science, technology, economics, management, and education for the public service. "Particular Programs" which focus on sharply defined topics are also established periodically. Because of the great cost of research in mainstream science and technology, the Foundation concentrates its support of these fields under "Particular Programs" such as Cognitive Science, and in projects involving public policy or public understanding. The Foundation also invites outstanding scientists to write about the nature of their experiences and the character of their lives in science in the Science Book Program. Grants are made both for programs and activities developed by the Foundation's staff and for proposals that are unsolicited. The Foundation has no deadlines and no standard application forms. A brief letter of inquiry is recommended as an initial contact.

Sloan Research Fellowships are awarded to young scholars in chemistry, economics, mathematics, neuroscience, and physics, or in a related interdisciplinary field who show outstanding promise of making fundamental contributions to new knowledge. The award is given over a two-year time and is designed to allow the greatest possible flexibility and freedom in its use. The Fellow need not pursue a specific course of research and the award may be used for equipment, technical assistance, or professional travel. Candidates for the Sloan Research Fellowships are nominated by department chairmen or other senior scientists.

Contact

President, Alfred P. Sloan Foundation, address above

Deadlines

none

Geographical Restrictions Citizenship Restrictions

## SMITHSONIAN INSTITUTION Office of Fellowships and Grants L'Infant Plaza, Rm. 3300 Washington DC 20560

### Predoctoral and Postdoctoral Fellowships

Smithsonian Fellowships are awarded to scholars at the predoctoral and postdoctoral level to support research for up to twelve months. These fellowships provide opportunities for research within the facilities of the Institution and association with the research staff. Appropriate members of the professional staff at the Smithsonian must be willing to serve as host or principal advisor and space and facilities must be available to accommodate the proposed research. Predoctoral Fellowships (six to twelve months duration) are available to investigators who have completed preliminary coursework and examinations for the Ph.D. Postdoctoral Fellowships are awarded to scholars who have held the Ph.D. for less than seven years; Senior Postdoctoral Fellowships are awarded to scholars who have held the Ph.D. for more than seven years. 10-week Graduate Student Fellowships provide opportunities to graduate students to conduct research under the direction of the Smithsonian's professional research staff using the facilities and collections of the Institution. Other fellowships are offered by the Smithsonian on a limited or irregular basis, including: Daniel and Florence Guggenheim Fellowship, a residential appointment at the National Air and Space Museum for graduate research in technology transfer, planetary exploration, or the history of aviation; Verville Fellowship, assists scholars in aviation or space studies; Postdoctoral and Predoctoral Fellowships at the Smithsonian Astrophysical Observatory, Cambridge, Massachussetts; Faculty Fellowships to give minority faculty access to the Smithsonian; International Fellowships, support researchers from countries other than the U.S. to work in residence at the National Air and Space Museum for up to one year on subjects of their own interest that are related to the museum's collections or staff research.

Contact Office of

Office of Fellowships and Grants, address above or (202)

287-3271/3321

**Deadlines** 

Geographical Restrictions

Tenable at Smithsonian Facilities

Citizenship Restrictions

## SMITHSONIAN INSTITUTION Office of Fellowships and Grants L'Infant Plaza, Rm. 3300 Washington DC 20560

Restrictions

# Visiting Awards and Special Foreign Currency Grant Program

Short-term visits support scholars so that they may utilize the Smithsonian to conduct research, collaborate and consult with the Institution's staff, and participate in seminars. Additional funds for visits are available to applicants from the developing regions of Africa, Asia, the Caribbean, Latin America, the Middle East. Short-term appointments are also possible at the Smithsonian Tropical Research Institute in Panama for research in tropical biology, climates, ecology, paleoecology of human populations, geology, paleobotany, and paleozoology of tropical regions. Scientists may also arrange visits to the Smithsonian Astrophysical Observatory to study atomic and molecular physics; infrared, optical, radio, and X-ray astronomy; planetary sciences; geophysics; solar and stellar physics; and theoretical astrophysics. The Smithsonian Environmental Research Center in Edgewater, Maryland, is open to visiting scientists and postdoctoral fellows. The Center's research activities include driving forces, landscape ecology, material transport, eutrophication and pollution, succession, estuarine ecology, population and community ecology, and regional comparisons.

The Special Foreign Currency Program awards grants to U.S. institutions of higher learning for studies in countries where the U.S. holds "excess" foreign currencies. Senior scholars in fields including systematic, evolutionary, and conservation biology, astrophysics, and earth sciences may submit proposals to this program. The awards are in local currency and may cover international and local travel, living allowance, and research expenses.

Contact
Office of Fellowships and Grants, address above or (202)
287-3271/3321

Deadlines
Geographical
Restrictions
Short-Term Visits tenable at the Smithsonian or one of its centers
Special Foreign Currency Grants -countries vary

Citizenship

# SOCIAL SCIENCE RESEARCH COUNCIL 605 Third Avenue

# New York NY 10158

# International Doctoral Fellowships, Postdoctoral Grants for Research on Foreign Areas

Of interest to those in the area of marine policy, the Social Science Research Council offers grants and fellowships for foreign policy studies and international research in the social sciences and humanities. Advanced Research Fellowships in Foreign Policy Studies are available to applicants of any nationality who hold a Ph.D. or equivalent. These fellowships support up to two years of research on the processes of U.S. foreign policy making. Research need not be conducted in the U.S.

Fellowships for International Doctoral Research in the social sciences and humanities support research to be carried out in the areas of Africa, Asia, Latin America, the Caribbean, the Near and Middle East, and Western Europe. Fellowships in Russian and Soviet studies are awarded for graduate training and dissertation writing to Ph.D. candidates who have completed their research.

Grants for Advanced International Research in the social sciences and humanities are offered to scholars who hold the Ph.D. or equivalent. The grant programs are designed to support research of individual countries and also comparative research of several countries or regions. Grants are normally made for two months to one year and may be used concurrently with other support. For both the Fellowship and Grant Programs, purposes, deadlines, and eligibility requirements vary for the different countries. Application forms and detailed information may be obtained from the Social Science Research Council.

Contact Office of Grants and Fellowships, (212) 661-0280

Deadlines vary per program

Geographical Restrictions

Citizenship vary per program

Restrictions

# SOCIETY OF EXPLORATION GEOPHYSICISTS FOUNDATION

P.O. Box 702740 Tulsa OK 74170

# Undergraduate and Graduate Scholarships

This foundation offers scholarships for undergraduate and graduate students working toward a career in exploration geophysics. An applicant must intend to pursue a college course directed toward a career in geophysics, must have an interest in and aptitude for physics, mathematics, and geology; must be a graduate student whose studies are directed toward a career in exploration geophysics in operations, teaching or research, or an undergraduate college student whose grades are above average, or a high school student with above average grades planning to enter college the next fall term.

Contact

Society of Exploration Geophysicists, address above

Deadlines

March 1 of the year in which award is to be made

Geographical

None

Restrictions

Citizenship

None

Restrictions

Restrictions

# STATE UNIVERSITY OF NEW YORK-STONY BROOK Marine Sciences Research Center Stony Brook, NY 11794-5000

# Coastal Marine Scholar Postdoctoral Awards and M.P. O'Brien Fellowships

The Coastal Marine Scholar Program aims to promote excellence in research in any aspect of marine science, coastal zone management or related disciplines. Stipend will be provided for 21 months. Scholars are encouraged to pursue their own research interests and to contact faculty sponsors regarding supplementary support. Preference will be given to candidates whose interests overlap with those of faculty (information available upon request).

All requirements for the Ph.D. must be completed at the time of appointment. Applications are encouraged from students near completion or recently graduated with interests in any marine science-related discipline.

The M.P. O'Brien Fellowship Program is intended to stimulate interest in graduate studies at the Marine Sciences Research Center in beach and nearshore processes and coastal engineering. Fellowships are awarded for two years and may be renewed. Each fellowship carries a stipend for the academic year and a full tuition award, plus a supplementary summer stipend if needed.

Contact Chairman, Coastal Marine Scholar Program, or Graduate Program Director, address above

Deadlines Coastal Marine Scholar Program: 31 March

Tenable at Marine Sciences Research Center, State Univ. of New York-Stony Brook

Citizenship None

# TINKER FOUNDATION, INC. 55 E. 59th Street New York NY 10022

# Institutional Grants, Field Research Grants, and Visiting Professorships

The Tinker Foundation is dedicated to respond to the compelling issues facing Portugal, Spain, and Latin America. Three broad areas of interest to the Foundation are Social Sciences, International Relations, and Natural Resources. As Latin American countries are pressured to meet economic and development demands, they are increasingly exploiting their rich biological and mineral resource base. The long-term consequences of this exploitation will have a severe impact on both regional and global scales. The Tinker Foundation Natural Resources Program supports several projects that deal with these concerns including water resources planning and management, ecosystem and land use analysis, education of policy makers in environmental matters, and increasing public awareness of Antarctica and the living marine resources of the Southern Ocean.

Many of the projects of the International Relations Program share a common concern for the accuracy, availability, and accessibility of information. This program supports resources (data centers) that contain information on current developments in Latin America and University programs that enable the exchange of professors and academic information with Latin America. The Social Sciences Program is primarily concerned with the growing awareness of the inherently global nature of national and regional affairs. Projects within this program have included making research and development policy recommendations to strengthen Mexico's competitiveness in the world market and a program for the exchange of graduate students with Brazil. Institutional Grant proposals must be concerned with activities or topics related to Spain, Portugal, Ibero-America or Antarctica. Complete proposals in the English language should be sent to the President of the Foundation. Applications are considered bi-annually; deadlines are March 1 and October 1.

Field Research Grants provide graduate students and junior faculty the opportunity to acquire comprehensive knowledge of language and culture, to gather research data, and to develop contacts with scholars and institutions in their field. These awards are available to all recognized Centers or Institutes of Latin American or Ibero-American Studies with graduate doctoral programs at accredited U.S. universities and are to be used only for brief periods of individual research in Latin America or Iberia. The areas of research should coincide with the major interests of the Foundation: Social sciences, natural resources, and international relations. Successful institutional applicants are required to partially match the Foundation's award. Interested institutions should contact the Foundation for application forms and further information.

Contact Martha T. Muse, President, address above

Deadlines Institutional Grant applications due March 1 or October 1

Field Research Grant applications due October 1

Geographical Restrictions Citizenship Restrictions U.S. DEPARTMENT OF AGRICULTURE/Office of International Cooperation and Development

Auditors Building, Rm. 4200 201 14th Street SW Washington DC 20250

## Foreign Currency and Binational Collaborative Research Programs

The programs of this office seek to promote scientific cooperation between U.S. and foreign agencies, universities, and colleges in the research of food, agriculture, and forestry. The Foreign Currency Research Program is funded by U.S.-owned foreign currencies and supports collaborative research in many countries including Pakistan, India, and Egypt. The Binational Collaborative Research Program offers modest grants to U.S. investigators for travel, supplies, computer time, etc. to carry out joint projects with foreign counterparts. Participating U.S. institutions are expected to share a portion of the project costs. Foreign scientists should be supported by their own institution or funding agencies. The Binational Collaborative Research Program has supported work in the following countries: Argentina, Australia, Barbados, Brazil, Costa Rica, France, Guadeloupe, Haiti, Italy, Mexico, Netherlands, New Zealand, Philippines, Romania, Sierra Leone, Sudan, and West Germany.

Contact

Director, International Research Division, address above (202)

475-4750

Deadlines

Geographical Restrictions

Citizenship Restrictions U.S.

# U.S. DEPARTMENT OF ENERGY/ Programs of the Office of Energy Research

Washington DC 20545

### Programs of the Office of Energy Research

The Office of Energy Research of the U.S. Department of Energy offers a competitive grant program, Special Research Grants, to support basic and applied research and related conference and training activities. Applicants are competitively selected in response to the Department of Energy's solicitation announced annually in the Federal Register.

Any university, institution of higher education, non-profit or for-profit organization, non-Federal Agency, or individual is eligible for a Special Research Grant. Applications may be submitted at any time, but April 15 is the deadline for consideration for funding in the fiscal year which ends September 30. Before formal submission of the application, the proposal may be discussed with the Office of Energy staff. Applications should be submitted to the Acquisition and Assistance Management Division, address above.

The subject areas of research interest for Special Research Grants include Biological Energy, Chemical Sciences, Carbon Dioxide Research, Geosciences, Engineering Research, Materials Sciences, Advanced Energy Projects, Physical and Technological Research, and Ecological Research. Detailed study interests for each one of these areas are discussed in the following sections.

Contact

Program Contact, (301) 353-5995

Deadlines

Proposals to be funded in Federal FY (ending Sept. 30) should be

received no later than April 15 of that year.

Geographical Restrictions

Citizenship Restrictions

### Advanced Energy Projects

Advanced Energy Projects (AEP) support research that explores the feasibility of novel energy-related concepts evolving from basic research. These concepts are at any early stage of scientific definition and, therefore, would not be appropriate as technology programs. AEP also sponsors exploratory research on concepts that do not fit easily into the existing DOE program structure.

AEP supports individual projects for a limited time only. After a period of concentrated effort, typically about three years, a project is expected to have proven itself. In this event, the basic research phase is completed, and the project can be transferred to a technology program or to private industry. If a successful conclusion to the research is not foreseeable, the project is dropped. Projects are selected from unsolicited proposals.

Projects supported cover a broad technological spectrum. Examples include research on holographic solar concentrators, batteries with polyacetylene electrodes, and alternative approaches to nuclear fusion.

Contact Program Contact, (301) 353-5995

Deadlines Proposals to be funded in Federal FY (ending Sept. 30) should be

received no later than April 15 of that year

### Biological Energy Research

The Biological Energy Research subprogram is aimed at gaining an understanding of fundamental biological processes that occur in green plants and microorganisms that are especially relevant to energy conversion and energy conservation. The purpose is to build a base of such information in developing or improving energy-related biotechnologies.

This subprogram focuses on understanding the limits of productivity in green plants, how plants adapt to suboptimal conditions of growth and the mechanisms of microbial conversion of various biomass forms. In particular, the biochemical pathways of degradation of abundant materials such as cellulose, hemicelluloses, and lignins, and the conversion of these materials to fuels or chemicals are studied. An integral part of the subprogram is the development of genetic information that may ultimately be used to produce new or improved microorganisms and plants to facilitate the production of fuels or petroleum-conserving chemicals or to yield biotechnologies capable of conserving energy. This research into the physiology, biochemistry, and genetics of microorganisms and plants is carried out primarily at university laboratories.

Contact Program Contact, (301) 353-2873

**Deadlines** Proposals to be funded in Federal FY (ending Sept. 30) should be

#### Carbon Dioxide Research

Carbon Dioxide Research addresses the relationship between atmospheric carbon dioxide and the global climate. It aims to establish knowns and unknowns, reduce and specify uncertainties, increase data collection, and improve measurements and models directed at answering specific questions about the sources and sinks of carbon dioxide and climate.

Much of the current research is focused on defining and measuring fluxes of carbon dioxide among major sources and sinks of the carbon cycle. Research efforts are aimed at identifying climate changes that result directly from the effects of carbon dioxide. General circulation models are used to study the global response of the climate to atmospheric carbon dioxide, integrating the roles of the land, hydrosphere and cryosphere systems. The photosynthesis, physiology, and water use of plants and trees are also studied to provide a basis for predicting the response of vegetation to rising atmospheric carbon dioxide.

The Division's Climate Systems, Energy Systems and Resource Analysis Programs conduct and have conducted marine research projects in the following areas:

- Ocean-atmosphere exchange of carbon dioxide;
- Biochemical and physical processes that influence the exchange of carbon among oceanic reservoirs;
- Tracer studies of deep water formation and penetration of carbon dioxide into the deep ocean;
- Modeling studies of the physical processes that are responsible for the transport of heat in oceans and exchange heat and moisture with the atmosphere; and
- Development of numerical models of the general circulation of the ocean.

Contact Program Contact, (301) 353-3281

Deadlines Proposals to be funded in Federal FY (ending Sept. 30) should be

## Chemical Sciences

The objective of the Chemical Sciences Program is to expand the nation's knowledge base in the chemical and related sciences in areas most likely to lead to new ideas and improved processes for developing and using domestic energy resources. This subprogram is a major source of Federal support for basic chemical research in the U.S. It includes research in the fields of photo-chemistry, coal chemistry, catalysis, atomic physics of highly charged ions, efficient and clean combustion of various fuels, biomass conversion of liquid fuels by enzyme catalysis and other methods, energy efficient separation of valuable metals from low-grade resources, and detection and measurement of intermediates in energy processes. Equally important is the fundamental research into chemical and physical phenomena which have no irm mediately identifiable related technology but which open new technological possibilities.

Contact

Program Contact, (301) 353-5804

Deadlines

Proposals to be funded in Federal FY (ending Sept. 30) should be

received no later than April 15 of that year

## Ecological Research

The Ecological Research program provides the environmental information needed to satisfy energy demands in a cost-effective, environmentally safe manner for appropriate siting, operation, and disposal of materials from energy activities. To obtain this information base, comprehensive research in terrestrial and aquatic systems is conducted in different climatic regions of the United States and in off-shore regions along the eastern and western U.S. on mechanisms which control and influence the cycling of materials through total ecosytems. The research is carried out by integrating all aspects of the physical biological sciences. This multidisciplinary program covers fields of soil science, plant science, animal biology, chemistry, geology, fresh-water and marine sciences.

Research includes defining the transport and transformation of energy by-products in terrestrial and marine systems, and identifying the major routes and rates of transfer of these by-products through physical and biological pathways to human exposure. Natural and energy-related stresses are studied from the subcellular level to the community level of ecosytems to determine the rate and mechanisms by which populations and ecosystems disturbed by energy activities adapt or react to these stresses. Categories of research opportunity include: Cycling of natural and energy materials which include mobilization and movement of trace elements and compounds through water bodies, soils, sediments, plants and animals; and biological responses derived from community structure, population dynamics and physiological ecology research. Fundamental research on the hydrological transport, mobility, and degradation of energy substances at shallow depth will receive increased attention through 1990.

Contact

Program Contact, (301) 353-4208

Deadlines

Proposals to be funded in Federal FY (ending Sept. 30) should be

### Engineering and Geosciences

The Engineering and Geosciences subprogram supports research in mechanical and electrical engineering, engineering physics, geology, geochemistry, and geophysics. The objective of engineering research is to refine and provide rigorous experimental tests of theories and models of processes needed for energy production facilities and for increased energy efficiency; three research areas are receiving high priority: mechanical sciences, systems sciences, and engineering data and analysis.

The geosciences effort is aimed at developing a quantitative, predictive understanding of the energy-related aspects of geological, geophysical and geochemical processes. The program is emphasizing: 1) rock mechanics and geophysical methods for imaging underground formations; 2) studies in organic geochemistry related to fossil fuel recovery and the disposition of energy-related chemical waste, and 3) studies of magma-hydrothermal systems as part of the interagency Continental Scientific Drilling Program. The efforts in waste isolation, for example, address quantitative assessment of local changes of stress, with subsequent development of new fracture systems, which provide pathways for the migration of wastes; interactions among waste container, rock and fluids in the rock; and concentration, diffusion rates, and element migration of wastes from a disposal site into its surroundings. Other research involves geodynamics, resource definition and use, and solar-terrestrial interactions.

Contact

Program Contact, (301) 353-5822

Deadlines

Proposals to be funded in Federal FY (ending Sept. 30) should be

received no later than April 15 of that year

### Health Effects Research

The Health Effects Research program supports a coordinated research effort in biological systems designed to yield experimental health effects data of the type needed to predict long-term health impacts that may be associated with developing energy technologies. A comprehensive experimental program of health effects research is necessary because of severe and unavoidable limitations that inevitably complicate the acquisition and interpretation of health data on human populations exposed to environmental agents. The research utilizes molecular, cellular, and animal test systems to obtain quantitative data on dose-response relationships and to develop an understanding of species differences in sensitivity. Included is the development of improved biological test systems and improved techniques for the extrapolation of experimental data to man.

Health effects research cuts across virtually all of the energy technologies. Areas of ongoing research include those that address health effects associated with ionizing radiation, magnetic fields, and a variety of energy-related chemicals, including polycyclic aromatic hydrocarbons and related compounds associated with synthetic fuel development. Extensive research is conducted to elucidate mechanisms of carcinogenesis and mutagenesis, metabolism of energy-related chemicals, and mechanisms of DNA repair.

Contact

Program Contact, (301) 353-5468

Deadlines

Proposals to be funded in Federal FY (ending Sept. 30) should be

#### Physical and Technological Research

The Physical and Technological Research subprogram is the physical sciences component of the health and environmental research program. It addresses a broad range of fundamental and applied activities. Many of the projects are interactive with the biological and ecological components of the office. Other projects involve development of experimental techniques or advanced measurement instrumentation. The major areas addressed are the physical and chemical characterization of products and effluents of new energy technologies; the transport and transformation of pollutants in the atmosphere; measurement sciences; and the fundamental mechanisms of pollutant interaction with environmental and biological systems.

Contact Program Contact, (301) 353-3213

Deadlines Proposals to be funded in Federal FY (ending Sept. 30) should be

received no later than April 15 of that year

### University-Laboratory Cooperative Research Program

This program is designed to increase the interactions and the flow of information between universities and DOE laboratories, to familiarize engineers and scientists with energy sciences and techniques, and to stimulate transfer of knowledge from DOE laboratories to the academic community for incorporation into their education and training curricula. Graduate and undergraduate students as well as faculty members are assigned to DOE laboratories to receive instruction and research experience in advanced science and technology.

Appointments in DOE laboratories are available to college and university faculty members for periods ranging from one month to several months. DOE laboratory training opportunities are available to graduate and undergraduate students usually during the summer months, with selected science students able to spend an academic semester at a DOE facility. Opportunities are provided to qualified graduate students who have completed their graduate course work for an advanced degree to complete their dissertation or thesis research. All research participants must engage in laboratory-approved projects only. Inquiries may be directed to directors of the following organizations:

Ames Laboratory, Ames, Iowa 50010

Argonne Natl. Laboratory, Argonne, IL 60440

Associated Western Universities, 142 E. South Temple, Salt Lake City, UT 84111

Brookhaven National Laboratory, Upton, NY 11973

Oak Ridge National Laboratory, Oak Ridge, TN 37830

Solar Energy Research Institute, 1536 Cole Blvd., Golden, CO 80401

Northwest College and Univ. Assoc. for Science, 100 Sprout Rd., Richland, WA 99352

Oak Ridge Associated Universities, Oak Ridge, TN 37830

Savannah River Ecology Laboratory, Aiken SC 29801

Contact

see text above

Deadlines

Vary

# U.S.-ISRAEL BINATIONAL AGRICULTURAL RESEARCH AND DEVELOPMENT FUND

Building No. 005, BARC-West Beltsville MD 20705

## Research Grants and Postdoctoral Fellowship Programs

BARD supports cooperative research projects of mutual interest to the United States and Israel in areas including Aquaculture and Soil and Water Conservation Management and Utilization. The research proposal should be prepared jointly by Israeli and U.S. scientists. A single principal investigator and institution should be determined by mutual agreement. Research proposals from institutions of higher learning, non-profit research organizations, and government institutions are accepted.

BARD also offers a one-year postdoctoral fellowship for the exchange of U.S. and Israeli scientists who have recently obtained the doctorate. The Postdoctoral Fellowship Program emphasizes innovation in agriculture.

Contact

BARD, address above, or (301) 344-2605

Deadlines

Grant proposals, Sept. 1 Fellowships, December 1

Geographical

U.S. and Israel

Restrictions

Citizenship

U.S. and Israel

Restrictions

# U.S.-ISRAEL BINATIONAL SCIENCE FOUNDATION P.O. Box 7677 Jerusalem 91076, Israel

#### U.S.-Israel Binational Science Foundation

This binational program serves to enhance cooperative scientific research and related activities for participants from the U.S. and Israel. Activities must be of mutual interest to both countries in the fields of health sciences, energy, natural sciences, and social and behavioral sciences. Research is to be conducted principally in Israel and funding is in Israeli currency.

Proposals should be submitted to the U.S.-Israel Binational Science Foundation. Proposals judged to be meritorious by The Foundation are referred to the U.S. government for comment before they are funded. The interests of the U.S. government in this program are coordinated through the U.S. Department of State, Bureau of Oceans and International Environmental Scientific Affairs. Deadline for receipt of proposals in Jerusalem is November 15. Awards will be made in August of the following year. Further information may be obtained from the BNF or from the National Science Foundation, Division of International Programs.

Contact

U.S.-Israel BNF or the National Science Foundation, Division of

International Programs, Washington, D.C. 20550

**Deadlines** 

November 15

Geographical

Tenable in Israel

Restrictions

U.S. or Israeli

Restrictions

Citizenship

# U.S.-YUGOSLAV JOINT BOARD FOR SCIENTIFIC AND TECHNOLOGICAL COOPERATION c/o National Science Foundation Division of International Programs 1800 G Street NW Washington DC 20550

# U.S.-Yugoslav Joint Board for Scientific and Technological Cooperation

The governments of Yugoslavia and the U.S. established this Joint Board for Scientific and Technological Cooperation to support cooperation between scientific researchers of both countries. Cooperative research proposals jointly prepared by U.S. and Yugoslav co-investigators are submitted to the Board by the Yugoslav investigator. The National Science Foundation helps review proposals, makes funding recommendations to the Board and monitors and aids project activities. The U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, exercises overall policy management on the U.S. side and provides the annual U.S. contribution to the Joint Fund (the source of financial support for all program activities). Awards are made in Yugoslav currency. No dollar support for research is available for research in the U.S. The Fund does, however, support international travel and living expenses for U.S. investigators.

U.S. scientists who wish to participate in this joint program must contact and work directly with potential Yugoslav co-investigators in preparing research proposals. More detailed information about program guidelines and procedures are available from the Division of International Programs, National Science Foundation.

Contact Division of International Programs, NSF, address above

Deadtines

Geographical Tenable in U.S. and Yugoslavia

Restrictions

Citizenship U.S. and Yugoslav

Restrictions

UNESCO
Division of Marine Sciences
1, rue Miollis
75015 Paris FRANCE

# Fellowships and Grants in Marine Science; International Group Training Activities

Unesco Division of Marine Sciences serves the marine scientific community in the development of programs, manpower, and infrastructure. This support has included cooperative research programs in study areas such as mangroves, coral reefs, and interaction of marine systems. Unesco has concentrated much effort in the Major Inter-regional Project on Research and Training leading to the Integrated Management of Coastal Systems (COMAR). To assist development in the marine sciences, Unesco offers fellowships and grants for the training of young scientists. The awards are for up to nine months duration and are intended for specialized training, not for formal education leading to a higher degree. Fellowships support international travel, a stipend, tuition fees, book and equipment allowances. Training grants are in the form of a lump sum contribution to complement other support for studies and training abroad by selected scientists from countries with limited marine science capabilities. Candidates should have a B.Sc. degree or equivalent. Selection for the awards is made on a competitive basis, with preference given to qualified candidates from countries with a limited number of marine science specialists particularly in the fields of geological, physical, and chemical oceanography. Other areas of interest include biological oceanography, fisheries, coastal ecology, coastal engineering, remote sensing, computer applications, and surveying. Special consideration will be given to women applicants. Those interested in applying for a fellowship or grant should contact the National Commission for Unesco in their country for the necessary forms.

International Group Training Activities on various specialized topics in marine science are supported by Unesco. Unesco both organizes international training courses and supports the organization and participation in other international courses. Through a program to strengthen university marine science teaching, Unesco provides guidelines for curricula development, advisory services, and teaching services. Unesco has also placed a tutorial course in oceanography in universities around the world. Further information on these activities can be obtained from the Marine Information Centre, address above.

Contact

Marine Information Center, address above

**Deadlines** 

Geographical Restrictions

Citizenship Restrictions

# UNIV. OF TEXAS AT AUSTIN Marine Science Institute Port Aransas, Texas 78373

# E. J. Lund Fellowship in Marine Science

This program of postdoctoral fellowships has been established at the Marine Science Institute (MSI) to be awarded annually on a competitive basis to support research by outstanding young scientists in any area of marine sciences. Awards are intended for support of postdoctoral scientists working with staff of the Marine Science Institute for one calendar year (beginning September 1) and may be renewed.

Candidates must be employed as full-time faculty at the Univ. of Texas/Austin or elsewhere, must qualify as a visiting scholar or postdoctoral student based on recommendation from a UT/Austin faculty member or member of the Marine Science Institute research scientist staff. During the period of support, the research is to be based at MSI and conducted as a collaborative effort with a member of the MSI research scientist staff.

Contact	Chairman, Scholarship Committee, Univ. of Texas/Austin, address above
Deadlines	15 February, with notification by 1 March.
Geographical Restrictions	Tenable at Marine Science Institute, Port Aransas, Texas
Citizenship Restrictions	None

# G. UNGER VETLESEN FOUNDATION

c/o Harmon Duncombe 30 Rockefeller Plaza, Rm. 3217 New York NY 10112

# Foundation Grants

The Vetlesen Foundation has broad-based interests including geological, climatic, maritime and environmental research and higher education and public policy concerns. Recipients of support from the Vetlesen Foundation include universities, research foundations, and educational programs.

Contact

Deadlines

Geographical Restrictions Citizenship Restrictions

## VOLLMER FOUNDATION, INC.

# 95 River Street, Suite 411 Hoboken NJ 07030

#### Foundation Grants

This foundation has as its principal purpose to make charitable distributions which will in some way benefit the people of Venezuela and Latin America. Areas of interest are education and scientific investigation. Grants are made in Venezuelan currency to researchers established in Venezuela.

Contact

Asst. Secretary, address above

Deadlines

Grant requests (in duplicate) at any time; no application forms.

Geographical Restrictions

Citizenship

Some restrictions; see text above

# ALEXANDER VON HUMBOLDT FOUNDATION Jean-Paul Strasse 12 D-5300 Bonn 2, FEDERAL REPUBLIC OF GERMANY

#### Research Fellowships, Research Awards, Senior U.S. Scientist Awards

The von Humboldt Foundation has programs to support both research by foreign (non-German) scholars in The Federal Republic of Germany and for German scholars to conduct research abroad.

- A) FOR FOREIGN (NON-GERMAN) SCHOLARS:
- 1) Fellowships are offered by the Foundation to citizens of any country (other than the Federal Republic of Germany). These fellowships provide opportunities to pursue specific research projects at universities or research institutes in the FRG and in West Perlin and are awarded for periods of six to twelve months with extensions up to 24 months possible. Fields of study are unrestricted; candidate must present evidence of academic qualification equivalent to the doctorate; have sufficient knowledge of German; be no older than 40 years of age; present evidence of employment in independent research work at the university level; and have scientific publications to his/her credit.
- 2) Senior U.S. Scientist Awards are granted to outstanding U.S. scientists in recognition of past accomplishments in research and teaching, thereby promoting scientific cooperation between institutions in the FRG and the U.S. The award offers the right to stay for an extended period at research institutes in the FRG. Nominations only by German scientists.
  - B) FOR GERMAN SCHOLARS:
- 1) Feodor Lynen research fellowships for highly qualified German scholars holding doctorate degree, not over age 38, to conduct research abroad in cooperation with former Humboldt Fellow or Awardee; open to all disciplines for periods ranging from 1 to 4 years. Requires detailed research proposal approved by the host, good knowledge of respective country's language; joint financing by the von Humboldt Foundation and host.
- Research awards for scientific cooperation with France--awarded annually to at least 3 German and 3 French highly qualified researchers specially engaged in bilateral scientific cooperation. All disciplines included, no age limit. The award includes an invitation for a period of research work in the partner's country of at least 6 months. Nominations of French scholars directed by German researchers to the von Humboldt Foundation which is entrusted with selection and administration; French coordination lies with its Ministry for Research and Industry.

Contact Alexander von Humboldt Foundation, address above

Deadlines

Geographical

Vary, sec text above

Restrictions

Vary, see text above

Citizenship Restrictions

# WHITEHALL FOUNDATION, INC. 249 Royal Palm Way, Suite 202 Palm Beach FL 33480

# Research Grants and Grants-in-Aid

The Whitehall Foundation offers grants and grants-in-aid to assist scholarly research in the life sciences. It is the Foundation's policy to support those dynamic areas of basic biological research that are not greatly assisted by other funding agencies. In order to respond to the changing funding environment, the Foundation periodically reassesses the specific fields of biological research that it will support. Research grants, up to three years duration, are available to established scientists working at accredited institutions. Grants are not awarded to researchers who have received substantial support elsewhere, even if it is for an unrelated purpose. Grants-in-aid are awarded for a one year period to support researchers at the assistant professor level who are not yet well established in the funding environment.

Funds provided by the Whitehall Foundation may be used for salary support for post-doctoral and graduate students, technicians, and undergraduates in work-study programs; permanent equipment purchase; materials and supplies; publication costs for papers resulting from the funded research project; travel necessary for research (foreign travel is supported only in exceptional cases). Funds may not be used for salary for the principal investigator; building projects or renovations; secretarial or office expenses; travel to meetings; or tuition. Overhead is limited to indirect expenses of no more than 20% of equipment and research supplies.

Contact The Whitehall Foundation, address above

Deadlines Research grants, March 1, September 1, and December 1

Grants-in-aid, January 1, June 1, and October 1

Geographical Restrictions Citizenship Restrictions

# WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

Smithsonian Institution Building 1000 Jefferson Drive SW Washington DC 20560

#### Fellowship Program

Fellowships to study at the Woodrow Wilson International Center are awarded to established scholars with doctoral degrees or equivalent who have demonstrated their scholarly development through published work beyond the Ph.D. Each fellow is expected to work on a single major project on a full-time basis in Washington, D.C. Fellows' projects are expected to result in publication. The duration of fellowships is four to twelve months. The Center is interested in scholarship in all disciplines of the humanities and social sciences, and in transcending narrow specialties. Primary research in the natural sciences is usually beyond the range of the Center's interests, although projects that seek to relate the findings or methods of the natural sciences to broader social and intellectual issues are welcomed. The Center is organized into the following programs: History, Culture, and Society; Kennan Institute for Advanced Russian Studies: Latin American Program: Asia Program: The European Institute; West Europe Program; East European Program; and International Security Studies Program.

Fellowships include a stipend and limited travel expenses. The Center recommends that fellows seek outside support for travel. Non-U.S. fellows are expected to apply concurrently for a Fulbright Travel Grant from the U.S. Educational Commission in their own country. Completed applications, including proposal and reference letters are due by October 1.

Contact

address above or (202) 357-2841

Deadlines

October 1

Geographical Restrictions

Tenable in Washington, D.C.

Citizenship

# WOODS HOLE OCEANOGRAPHIC INSTITUTION **Education Office** Woods Hole MA 02543

# Postdoctoral Fellowships in Marine Policy

The Marine Policy Center at the Institution places emphasis on the economics of ocean space and on the role of science in governmental and industrial ocean policy. Research at the Center is oriented around four thematic areas: Marine Science and Public Policy; Development and Management of Ocean Resources; Ocean Jurisdictions, Law of the Sea, and International Relations; and Areawide Planning and Management. The objectives of this fellowship program are to provide support and experience to Research Fellows interested in marine policy issues; to provide opportunities for interdisciplinary application of social sciences and natural sciences to marine policy problems; and to conduct research and convey information necessary for the development of effective local, national and international ocean policy.

Applicants must have completed a doctoral-level degree or possess equivalent professional qualifications through career experience; intended for both recent doctorate recipients and experienced professionals. Fields include the social sciences, law, or the natural sciences related to marine policy and ocean management. Previous policy fellows have been trained in economics, law, political science, international relations, statistics, anthropology, sociology, engineering, marine science, and geography. Fellowships are granted for one year.

Contact Education Office, address above

Deadlines 15 January; notification by 1 April

Geographical

Restrictions

Tenable at Woods Hole Oceanographic Institution

None Citizenship

Restrictions

#### Postdoctoral Scholar Awards in Ocean Science and Engineering

Applicants for the Postdoctoral Scholar Awards must have recently received a doctoral degree. Fields include all areas of science and engineering related to the oceanographic sciences (biological, chemical, geological, geophysical, mathematics, meteorology, physical), and oceanographic engineering. Recipients are selected on a competitive basis, with primary emphasis on the research promise of the applicant. Awards are made for a one-year period, primarily to further the education and training in oceanography of the recipient.

Contact Education Office, address above

5 January; awards announced 1 March Deadlines

Geographical Restrictions

Tenable at Woods Hole Oceanographic Institution

Citizenship None

# WOODS HOLE OCEANOGRAPHIC INSTITUTION

Education Office Woods Hole MA 02543

# Summer Student Fellowships

Summer Student Fellowships are awarded to upperclass undergraduates or beginning graduates studying at colleges or universities in any of the fields of science or engineering with at least a tentative interest in oceanography and/or marine policy. Fellows pursue an independent research project under the guidance of a member of the Research Staff. The Institution's aim is to give a promising group of science and engineering students experience which will assist them in determining whether they wish to devote careers to the study of the oceans. Stipend is paid for the 12-week program.

Contact Ed

Education Office, address above

Deadlines

March 1; fellowships announced April 15

Geographical Restrictions Tenable at Woods Hole Oceanographic Institution

Citizenship

None

# WOODS HOLE OCEANOGRAPHIC INSTITUTION Education Office Woods Hole MA 02543

# Traineeships in Oceanography for Minority Group Undergraduates

Traineeships are awarded to minority undergraduates who are enrolled in U.S. colleges or universities and who have completed at least two semesters of undergraduate study. These awards provide a training and research experience in Woods Hole for students who have academic interests in physical or natural science, mathematics or engineering. Traineeships may be awarded for a ten-to-twelve week period in the summer or for a semester during the academic year and may be renewed the following year. A trainee is paid the same salary as that paid other employees with similar experience. In addition, the trainee receives the cost of round-trip travel to Woods Hole.

Contact

Education Office, address above

Deadlines

Geographical Restrictions Tenable at Woods Hole Oceanographic Institution

Citizenship

None

# **BIBLIOGRAPHY**

Commerce Business Daily. Government Printing Office, Washington, D.C.

Directory of Financial Aids for International Activities, Fourth Edition, 1985. Office of International Programs, University of Minnesota, Minneapolis, MN 55455.

Federal Register. Government Printing Office, Washington, D.C.

Government Research Directory, K. Gill, Ed. Gale Research Co., Book Tower, Detroit, Mich 48226

Guide to Federal Funding for Social Scientists, S.D. Quarles, Ed. Russell Sage Foundation, New York. 1986.

International Funding Guide, Resources and Funds for International Activities at Colleges and Universities. American Association of State Colleges and Universities, Washington, D.C. 20036-1192. 1985.

International Marine Science Newsletter. UNESCO, Paris. Published quarterly. National Science Foundation Guide to Programs. National Science Foundation,

Washington, D.C. Published annually.

Office of Naval Research, Guide to Programs. Office of the Chief of Naval Research, Arlington, VA. Published annually.

Research Support for Political Scientists: A Guide to Sources of Funds for Research Fellowships, Grants, and Contracts, Second Edition, S.F. Szabo, Ed. The Departmental Services Program, American Political Science Association, Washington, D.C. 20036. 1981

Source Book Profiles. The Foundation Center, New York, NY. 1984 Taft Foundation Reporter, 19th Edition, 1988. Y. Henry, Ed., The Taft Group, Washington, D.C.

The Foundation Directory, The Foundation Center, New York, NY.

# **ACKNOWLEDGMENTS**

Creation and maintenance of the international marine science funding source database, as well as preparation and distribution of this Funding Guide, were supported by NOAA, National Sea Grant College Program, Dept. of Commerce, under grant number NA86-AA-D-SG090, WHOI Sea Grant project E/L-1.

All of the database work including program descriptions and indices was done using Software Discoveries, Inc.'s RecordHolderPlus on Macintosh computers and printed on Apple LaserWriter equipment.

# SUPPORT TYPE INDEX

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#### ACADEMIC EXCHANGE

Bicentennial Swedish-American Exchange Fund Centre National de la Recherche Scientifique Consiglio Nazionale della Richerche Ford Foundation

Foundation for Microbiology

German Academic Exchange Service

Graduate Studies and Research Program

German Marshall Fund of the United States

International Research and Exchanges Board (IREX)

Japan Foundation

National Academy of Sciences

National Program for Advanced Study and Research in China

Soviet and East European Exchanges

National Science Foundation

Eastern European Cooperative Science Programs

Program for Long and Medium-Term Research at Foreign Centers of Excellence U.S.-Industrialized Countries--Program for Exchange of Scientists and Engineers

National Sea Grant College Program / NOAA

Royal Society

## COLLABORATIVE RESEARCH

Agency for International Development / Program in Science and Technology Cooperation

American-Scandinavian Foundation / Awards for Study in Scandinavia

Bermuda Biological Station / Grants-in-Aid and Visiting Internship Awards

Center for Field Research

Foundation for Microbiology

Japan Foundation

National Academy of Sciences / Soviet and East European Exchanges

National Science Foundation

Bilateral Cooperative Science Activities

Eastern European Cooperative Science Programs

Mathematical and Physical Sciences

Program for Long and Medium-Term Research at Foreign Centers of Excellence

Research Initiation and Improvement

Science in Developing Countries Program

U.S. Dept. of Agriculture / Office of International Cooperation and Development

U.S. Dept. of Energy

Écological Research

Health Effects Research

Physical and Technological Research

U.S.-Israel Binational Science Foundation

U.S.-Yugoslav Joint Board for Scientific and Technological Cooperation

# CONFERENCES, WORKSHOPS, AND SEMINARS

Alcoa Foundation

Foundation for Microbiology

German Marshall Fund of the United States

Japan Foundation

National Academy of Sciences / National Program for Advanced Study and Research in China

National Science Foundation

Bilateral Cooperative Science Activities

Biological, Behavioral and Social Sciences

Eastern European Cooperative Science Programs

Mathematical and Physical Sciences

Science in Developing Countries Program

NATO

Advanced Research Workshop Advanced Study Institutes

# CONFERENCES, WORKSHOPS, AND SEMINARS (continued)

U.S. Dept. of Energy

Programs of the Office of Energy Research

Advanced Energy Projects

Biological Energy Research

Carbon Dioxide Research

Chemical Sciences

Ecological Research

Engineering and Geosciences

Health Effects Research

Physical and Technological Research

UNESCO / Division of Marine Sciences

# DISSERTATION / PRE-DOCTORAL

American Association of University Women / American and International Fellowships American Museum of Natural History / Frank M. Chapman Memorial Grants and Lerner-Gray Grants for Marine Research

American-Scandinavian Foundation:

Awards for Scandinavians to study in the U.S.

Awards for Study in Scandinavia

Amoco Foundation / PhD Fellowship Program

Bermuda Biological Station / Visiting Internship Awards

Carnegie Institution of Washington

Department of Plant Biology Postdoctoral and Predoctoral Fellowships

Department of Terrestrial Magnetism Postdoctoral and Predoctoral Fellowships

Geophysical Laboratory Postdoctoral and Predoctoral Fellowships

East-West Center

German Academic Exchange Service

Graduate Studies and Research Program

Short Term Research Program and Study Visits

Grass Foundation

Hague Academy of International Law

Japan Foundation

Japan, Government of / Monbusho Scholarships

National Academy of Sciences / National Program for Advanced Study and Research in China

National Research Council

Graduate Fellowships

National Science Foundation

Doctoral Dissertation Research Improvement

Science in Developing Countries Program

National Wildlife Federation

Netherlands Universities Foundation for International Cooperation

Office of Naval Research / Graduate Fellowship Program

Organization of American States (OAS)

Fellowships Program / CI Fellowships, Training in Inter-American Centers

Fellowships Program / PRA Fellowships

Society of Exploration Geophysicists Foundation

State University of New York-Stony Brook / Marine Sciences Research Center

M.P. O'Brien Fellowships

**EQUIPMENT** Agency for International Development / Program in Science and Technology Cooperation

American Museum of Natural History / Frank M. Chapman Memorial Grants and Lerner-Gray Alcoa Foundation Grants for Marine Research

Center for Field Research

Foundation for Microbiology

National Science Foundation

Biological, Behavioral and Social Sciences

Engineering

## EQUIPMENT (continued)

National Science Foundation

Mathematical and Physical Sciences

Ocean Sciences Research

Research Initiation and Improvement

U.S. Dept. of Energy / Programs of the Office of Energy Research

Advanced Energy Projects

Biological Energy Research

Carbon Dioxide Research

Chemical Sciences

**Ecological Research** 

Engineering and Geosciences

Health Effects Research

Physical and Technological Research

#### **FELLOWSHIPS**

Alcoa Foundation

American Association for the Advancement of Science (AAAS)

Congressional Science and Engineering Fellowships

Science, Engineering, and Diplomacy Fellowships

American Association of University Women / American and International Fellowships

American Chemical Society

Congressional Science and Engineering Fellowships

Science Policy Sabbatical

American Geophysical Union / Congressional Science Fellowship

American Society for Microbiology / Congressional Science Fellowship

American-Scandinavian Foundation / Awards for Study in Scandinavia

Bunting Institute / Fellowship Programs

Carnegie Institution of Washington

Department of Plant Biology Postdoctoral and Predoctoral Fellowships

Department of Terrestrial Magnetism Postdoctoral and Predoctoral Fellowships

Geophysical Laboratory Postdoctoral and Predoctoral Fellowships

Postdoctoral Fellowships in Science Policy

Environmental Protection Agency (EPA)

Minority Research Grant and Student Fellowship Programs

FAO-UN

Andre Mayer Research Fellowships

Technical Assistance Fellowships

Foundation for Microbiology

Geological Society of America / Congressional Science and Engineering Fellowships

German Academic Exchange Service / Graduate Studies and Research Program

German Marshall Fund of the United States

Grass Foundation

Guggenheim (John Simon) Memorial Foundation

Hague Academy of International Law

Institute of Electrical and Electronics Engineers / Congressional Science and Engineering

Fellowships

Intergovernmental Oceanographic Commission / Research Fellowships

Japan Foundation

Japan, Government of / Science and Technology Agency Fellowship

Kellogg (W.K.) Foundation

Lamont-Doherty Geological Observatory / Postdoctoral Fellowships

National Academy of Sciences / National Program for Advanced Study and Research in China

National Research Council

Cooperative Research Associateships-Naval Ocean Research and Development Activity

Cooperative Research Associateships-Naval Research Laboratory

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Technology and Society

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Canada Centre for Remote Sensing

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Fisheries and Oceans, Gulf and Quebec Regions

Fisheries and Oceans, Newfoundland Region

Fisheries and Oceans, Pacific Region

Fisheries and Oceans, Scotia-Fundy Region

Geological Survey of Canada

Inland Waters Lands Directorate

National Research Council Canada

Royal Roads Military College

Netherlands Universities Foundation for International Cooperation

Office of Naval Research / Graduate Fellowship Program

Office of Technology Assessment / Congressional Fellowship Program

Organization of American States (OAS) Fellowships Program:

ADPD Fellowships, Training Among Developing Countries

BECC Fellowships in Education, Science and Culture

CI Fellowships, Training in Inter-American Centers

PEC Fellowships, Special Training Program

PRATA Fellowships and Other Training Opportunities

PRA Fellowships

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Smithsonian Institution-Office of Fellowships and Grants

Predoctoral and Postdoctoral Fellowships

State University of New York-Stony Brook / Marine Sciences Research Center

Coastal Marine Scholar Program

U.S.-Israel Binational Agricultural Research and Development Fund

UNESCO / Division of Marine Sciences

Univ. of Texas at Austin / E.J. Lund Fellowship in Marine Science

von Humboldt (Alexander) Foundation

Woodrow Wilson International Center for Scholars

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University-Laboratory Cooperative Research Program

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BECC Fellowships in Education, Science and Culture

PEC Fellowships, Special Training Program

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