NSF-NATO Postdoctoral Fellowships in Science and Engineering (NSF-NATO)

Including Special Fellowship Opportunities for Scientists from NATO Partner Countries

Program Solicitation

NSF 00-145

DIVISION OF GRADUATE EDUCATION DIRECTORATE FOR EDUCATION AND HUMAN RESOURCES

DEADLINE: November 28, 2000





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SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Title: NSF-NATO Postdoctoral Fellowships in Science and Engineering (NSF-NATO)

Synopsis of Program: On behalf of the North Atlantic Treaty Organization (NATO), the National Science Foundation (NSF) invites applications for 12-month postdoctoral research fellowships from beginning scientists, mathematicians, and engineers. Approximately 5 fellowships will be offered to US scientists for research abroad and approximately 13 awards will be made to US institutions that would like to host scientists from NATO Partner countries (Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Romania, Russian Federation, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, the former Yugoslav Republic of Macedonia, Ukraine, and Uzbekistan). Eligible fields of research are: mathematics, engineering, computer and information science, geosciences, the physical, biological, social, behavioral, and economic sciences, the history and philosophy of science, and interdisciplinary areas comprised of two or more of these fields. Research in the teaching and learning of science, mathematics, technology, and engineering is also eligible for support. Application deadline is November 28, 2000. Awards will be announced March 30, 2001.

Cognizant Program Officer(s):

- Dr. Sonia Ortega, Program Director, Education and Human Resources, Division of Graduate Education, 907N, telephone: 703-292-8697, e-mail: nsf-nato@nsf.gov.
- Mrs. Carolyn Lyons Piper, Assistant Program Director, Education and Human Resources, Division of Graduate Education, 907N, telephone: 703-292-8697, e-mail: nsf-nato@nsf.gov.

Applicable Catalog of Federal Domestic Assistance (CFDA) Number:

• 47.076 --- Education and Human Resources

ELIGIBILITY INFORMATION

- Organization Limit: US applicants may apply for scientific research at appropriate government and non-profit scientific institutions in NATO member or NATO Partner countries. NATO Partner country applicants may conduct research at US universities or scientific research laboratories.
- PI Eligibility Limit: <u>US Scientists must:</u> 1.) be US citizens, nationals or permanent residents as of November 28, 2000; 2.) have been awarded a doctoral degree (Ph.D. or equivalent) on or after October 1, 1996 but normally no later than October 1, 2001; and

- 3.) desire to conduct scientific research at appropriate government and non-profit scientific institutions, which are located in the NATO member or NATO Partner countries other than the United States. NATO Partner Country Scientists: Applications for scientists from NATO Partner countries must be submitted by an eligible US host institution. Applicants must: 1.) identify a host sponsor (Principal Investigator); 2.) be citizens of a NATO Partner country; and 3.) have been awarded a doctoral degree (Ph.D. or equivalent) on or after October 1, 1996 but normally no later than October 1, 2001.
- **Limit on Number of Applications:** One application per person or institutional department. Recipients of previous NSF-NATO Postdoctoral Fellowships are not eligible.

AWARD INFORMATION

- Anticipated Type of Award: Fellowship
- Estimated Number of Awards: Approximately 18
- **Anticipated Funding Amount:** Approximately \$750,000 will be available.

APPLICATION PREPARATION AND SUBMISSION INSTRUCTIONS

A. Application Preparation Guidelines

- Application Preparation Instructions: Supplemental Preparation Guidelines
 - The program solicitation contains supplements to the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full program solicitation for further information.

B. Budgetary Information

- Cost Sharing Requirements: Cost Sharing is not required
- Indirect Cost (F&A) Limitations: No indirect costs are allowed.
- Other Budgetary Limitations: None

C. Deadline/Target Dates

- Letter of Intent Due Date(s): None
- **Preapplication Due Date(s):** None
- Full Application Due Date: November 28, 2000

D. FastLane Requirements

• **FastLane Submission:** Electronic application required via the NSF FastLane Postdoctoral Fellowships instructions no later than 5:00 PM, local time of the submitter, November 28, 2000.

• FastLane Contact:

• Sheryl T. Balke-Smith, Program Analyst, Education and Human Resources, Division of Graduate Education, 907N, telephone: 703-292-8630, e-mail: sbalke@nsf.gov.

APPLICATION REVIEW INFORMATION

• **Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full program solicitation for further information.

AWARD ADMINISTRATION INFORMATION

- **Award Conditions:** Additional award conditions apply. Please see the program solicitation for further information.
- **Reporting Requirements:** Standard NSF Reporting Requirements apply.

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I. INTRODUCTION

On behalf of the North Atlantic Treaty Organization (NATO), the National Science Foundation (NSF) invites applications for 12-month postdoctoral fellowships from or on behalf of beginning scientists, mathematicians, and engineers. Women, underrepresented minorities, and persons with disabilities are particularly encouraged to apply. These Fellowships have the following goals:

- to promote the progress of science and closer collaboration between scientists and engineers of NATO member and NATO Partner countries and scientists and engineers in the United States; and
- to recognize the accomplishments to date of the beginning scientists and engineers and to provide an experience abroad which will increase professional competence.

Submission to this competition will be of two types:

- applications submitted by US citizens, nationals, or permanent residents for postdoctoral research in other NATO member countries (Belgium, Canada, Czech Republic, Denmark, France, Germany, Greece, Hungary, Iceland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Turkey, the United Kingdom) or NATO Partner countries; or,
- applications submitted by US institutions on behalf of scientists or engineers from NATO
 Partner countries (Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia,
 Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Romania, Russian
 Federation, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, the former Yugoslav
 Republic of Macedonia, Ukraine, and Uzbekistan) for postdoctoral research at the
 submitting institution.

II. PROGRAM DESCRIPTION

Award of these fellowships will be made for work in mathematics, engineering, computer and information science, geosciences, the physical, biological, social, behavioral, and economic sciences, the history and philosophy of science, and interdisciplinary areas comprised of two or

more of these fields. Research in the teaching and learning of science, mathematics, technology, and engineering is also eligible for support.

NSF-NATO does not normally support technical assistance, pilot plan efforts, research requiring security classification, the development of products for commercial marketing or market research for a particular project or invention. Applicants working in clinical, education (except research in the teaching and learning of science, mathematics, technology and engineering) or business fields, or in history (except the history or philosophy of science), social work or public health, and individuals who propose to use the Fellowship to support residency training or similar work that may lead to qualification or certification in a clinical field are NOT eligible. These fellowships are not intended to support the preparation of prior research results for publication or the writing of textbooks as a primary objective.

Bioscience research with disease-related goals, including work on the etiology, diagnosis, or treatment of physical or mental diseases, abnormality, or malfunction in human beings or animals is normally not supported. Animal models of such conditions, or the development or testing of drugs or other procedures for their treatment also generally are not eligible for support. However, research in bioengineering with diagnosis or treatment-related goals, that applies engineering principles to problems in biology and medicine while advancing engineering knowledge is eligible for support. Bioengineering research to aid persons with disabilities is also eligible.

NSF-NATO Fellowships are administered by the National Science Foundation, an agency of the United States Government, at the request of the US Department of State. Approximately 5 fellowships will be offered to US scientists for research abroad and approximately 13 awards will be made to US institutions that would like to host a scientist from a NATO Partner country.

III. ELIGIBILITY INFORMATION

All Applicants:

- a) must have been awarded a doctoral degree (Ph.D. or equivalent) on or after October 1, 1996 but normally no later than October 1, 2001; and
- b) have not previously held an NSF-NATO Postdoctoral Fellowship.

US Scientists:

Must be US citizens, nationals, or permanent residents on or before November 28, 2000.

NATO Partner Country Scientists:

Scientists from NATO Partner countries (Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Romania, Russian Federation, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, the former Yugoslav Republic of Macedonia, Ukraine, and Uzbekistan) must be working in their home country or in another NATO Partner country at the time of application. The FY 2001 competition is the last year citizens from the Czech Republic, Poland and Hungary are eligible to apply under the NATO Partner country fellowships. Applications to support a scientist from NATO Partner countries may be subject to security review by the United States Committee on Exchanges (COMEX)

according to government policy. This review may be necessary before the State Department will issue a visa. The US host scientific advisor is responsible for obtaining research permits and import/export documents, where applicable.

Host Site Eligibility:

US applicants may apply for scientific research at appropriate government and non-profit scientific institutions in NATO member countries (Belgium, Canada, Czech Republic, Denmark, France, Germany, Greece, Hungary, Iceland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Turkey, the United Kingdom) or NATO Partner countries. NATO Partner country applicants must identify a specific US scientific advisor holding a full-time position at a US institution to serve as his/her sponsor. The US scientific advisor will be the Principal Investigator (PI) on the fellowship application. The PI will be responsible for assuring the completeness of the application material. NATO Partner country scientists may conduct research at US universities or scientific research laboratories.

IV. AWARD INFORMATION

TENURE LIMITATIONS

A Fellow will have a full-time tenure of 12 months. Requests to divide tenure between two institutions should be clearly described in the application and will be handled on a case-by-case basis.

A recipient of a postdoctoral fellowship must begin tenure on or after June 1, 2001 but normally not later than October 1, 2001. If unforeseen circumstances delay completion of the Ph.D. degree requirement or the expected start of tenure, a request for a delay of the start date will be considered. A US applicant already working under another fellowship abroad at the time of application may request a delay of the start date in order to complete the previous fellowship as long as he/she remains at the same institution abroad. An awardee who declines a fellowship because he/she is unable to begin tenure by the specified time period may re-apply to the program as long as he/she remains eligible. This declination will not prejudice any subsequent application.

STIPEND AND SPECIAL ALLOWANCE

All Fellows:

The stipend is \$2,750 per month for 12 months for the Fellow. Fellows are also provided with dependency allowances of \$200 per month for a dependent spouse and for each of not more than two dependent children for 12 months. The level of funding of NSF-NATO stipends for Fellows will be determined based on the Fellow's status at the time of application. Adjustment for individuals entitled to sabbatical leave pay or whose employer wishes to supplement the stipend to match regular salary will be considered. NSF-NATO funding in such instances will be determined on a case-by-case basis.

In addition, the Fellow is provided with \$1,200 (\$100 for each month of tenure) to aid in defraying costs of research and special travel such as short visits to other laboratories or scientific meetings. This special allowance is expendable at the Fellow's discretion and is usually provided with the advance stipend and travel allowance.

All Fellows are entitled to the full stipend and special research allowance provided by the fellowship.

NATO Partner Country Scientists:

Fellowship grants for NATO Partner country scientists are made to US institutions and not directly to individuals. The host institution will be responsible for the disbursement of all funds associated with a fellowship award.

TRAVEL ALLOWANCE

A travel allowance to assist fellows to cover travel costs to their fellowship institution and back will be provided as specified below. All travel must be by US flag carriers if such service is available, even though other carriers may be more convenient or less expensive.

US Fellows:

The total round-trip travel allowance for Fellows traveling overseas will be: \$2,500 for the Fellow; \$2,500 for an accompanying spouse; and \$1,000 each for up to two accompanying dependent children.

For Fellows traveling to Canada, the travel allowance will be: \$1,000 for the Fellow; \$1,000 for an accompanying spouse; and \$600 each for up to two accompanying dependent children.

NATO Partner Country Scientists:

The total round trip allowance from the Fellow's place of residence in the Partner country, at the time of application, to the US host institution to begin tenure and later to return will be as follows: \$3,000 for the Fellow; \$3,000 for an accompanying spouse; and \$1,200 each for up to two accompanying dependent children.

INSTITUTIONAL ALLOWANCE

The fellowship institution in NATO member or NATO Partner country, upon its request, will receive \$1,200 (\$100 for each month of the Fellow's resident tenure, i.e., 12 months). This allowance is paid on behalf of the Fellow to assist the institution in meeting the cost of fees chargeable to the Fellow and in providing the Fellow with space, supplies and equipment. THE US HOST INSTITUTION DOES NOT RECEIVE AN INSTITUTIONAL ALLOWANCE. OVERHEAD EXPENSES ARE NOT PROVIDED AS PART OF THE FELLOWSHIP.

V. APPLICATION PREPARATION AND SUBMISSION INSTRUCTIONS

A. Application Preparation Instructions

Applications submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in this solicitation.

A COMPLETE application must be submitted via FastLane Postdoctoral Fellowship.

All Applicants:

1. NSF-NATO Postdoctoral Fellow Cover Sheet

The NSF-NATO Cover Sheet must be completed in accordance with the FastLane Postdoctoral Research Fellowship Application instructions.

- 2. Abstract of Doctoral Dissertation (Limit: 1 Page)
- 3. Abstract of Proposed Plan of Research (Limit: 150 words)
- 4. Proposed Plan of Research (Limit: 2 Pages, including footnotes)

The plan should be a relatively non-technical statement understandable by non-specialist experts. This statement should BRIEFLY include the applicant's 1) educational objectives and 2) long-range professional goals. The applicant should describe in detail the activities expected to be undertaken during tenure and should also comment on the appropriateness of both the institution/country selected. Finally, the applicant should indicate what plans have been made to date for the projected tenure period.

5. Curriculum Vitae (Limit: 3 Pages)

This information MUST include (but is not limited to) the following sections:

- A) **Education.** This section should list the applicant's educational background beginning with undergraduate and including postdoctoral training: Institution & Location; Degree; Year Conferred; Field of Study.
- B) **Academic Honors.** This section should include fellowships, scholarships, teaching assistantships, mentoring activities, and other relevant positions held or awards received with dates and locations in reverse chronological order.
- C) **Foreign Languages.** This section should indicate the proficiency of the applicant, in the language of the country in which the Fellow plans to conduct research.
- D) **Employment and Experience.** This section should begin with the applicant's current position (e.g. full-time graduate student, postdoctoral Fellow, lecturer, etc. and institution). Relevant professional history should be provided in reverse chronological order.
- E) **Research Accomplishments.** This section should list any research previously pursued, giving the title and reference of any published works. List the titles of any unpublished work in process. Other accomplishments may include, but are not limited to, patent and software credits, papers presented at seminars, workshops, national or international meetings, etc.
- F) **Other Accomplishments.** This section is optional and may include relevant information that the applicant wishes to provide to the reviewers.

6. Letter of Support from the Host Scientific Advisor and/or Institution

Provide a letter of support from the proposed scientific advisor and/or institution acknowledging willingness to accept the applicant to conduct the proposed research.

REFERENCE LETTERS

Four references are required. At least two of the four references should be from persons with whom the applicant has worked in his/her major field, including the thesis advisor if possible.

List the thesis advisor's name first on the application's Cover Page. Other referees should be in closely allied fields. It is important to send referees a copy of the proposed plan of research for their review and comment in the reference report. If the host advisor is writing an institutional support letter and he/she is also listed as a referee, a separate letter addressing the criteria listed in the following paragraph must be included.

Reference letters should CLEARLY include comments on the following: mastery of fundamental knowledge in the applicant's field, design of research projects, laboratory skills and technique, growth during period observed, creativity, originality, self reliance and independence.

Before submitting the letters, referees should indicate whether they wish their comments to be held in confidence and their identity as authors of the letters not revealed. Otherwise, the Foundation may provide the comments to the applicants (if requested) under the Privacy Act of 1974.

US Applicants Only:

The applicant's permanent US residence address, including zip code, must be given; institutional address may be used only if no other is available. The permanent address will be used in all correspondence concerning the fellowship application. The applicant is responsible for notifying the program of any changes of the permanent address.

NATO Partner Country Applicants Only:

The US host institution is responsible for assuring the completeness of application materials. The NATO Partner country scientist is responsible for providing all the appropriate sections to be included in the application.

Cover Sheet for Application to the National Science Foundation (NSF Form 1207)

This information must be completed by the scientific advisor at the US institution that is submitting the application on behalf of the NATO Partner country scientist with FULLY signed certifications. (See FastLane Requirements Section D.)

The NATO Partner country applicant's current address is the address where the NATO Partner country scientist resides in the NATO Partner country; permanent US address should be the host university address.

Sponsor Statement from US Host Institution

A statement of support from the US host scientific advisor (PI) is required. Verification of resources being made available to the NATO Partner country scientist (e.g., housing, supplementary travel, equipment, and facilities to be provided by the host institution) should be included in this statement. The scientific advisor should also indicate why the NATO Partner country scientist would benefit from such a research opportunity and what contribution this scientist is expected to make. Any host institution financial commitment of support to the NATO Partner country scientist should also be described. The scientific advisor should seek input from whatever sources she/he deems appropriate, and may attach to this statement any external references it chooses.

Applicants are reminded to identify the program solicitation number (NSF 00-145) in the

program solicitation block on the application Cover Sheet (NSF Form 1207). Compliance with this requirement is critical to determining the relevant application processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

Cost Sharing is not required in applications submitted under this Program Solicitation.

Indirect Cost (F&A) Limitations: No indirect costs are allowed.

Other Budgetary Limitations: None

C. Deadline/Target Dates

Applications submitted in response to this solicitation must be submitted by 5:00 PM, local time on the following date:

November 28, 2000

AWARDS ANNOUNCED: MARCH 30, 2001

D. FastLane Requirements

Applicants are required to prepare and submit all applications for this Program Solicitation through the FastLane Postdoctoral Research Fellowship system no later than 5:00 PM, local time of the submitter, November 28, 2000. Detailed instructions for application preparation and submission via FastLane are available at: https://www.fastlane.nsf.gov/d11/D11Menu.htm. For FastLane user support, call 1-800-673-6188.

Submission of Signed Cover Sheets. The signed copy of the application Cover Sheet (NSF Form 1207) must be postmarked (or contain a legible proof of mailing date assigned by the carrier) within five working days following application submission and be forwarded to the following address:

National Science Foundation

DIS - FastLane Cover Sheet

4201 Wilson Blvd.

Arlington, VA 22230

VI. APPLICATION REVIEW INFORMATION

A. NSF Application Review Process

Reviews of applications submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the applicant to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the applicant. Special efforts are made to

recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the application.

Applications will be reviewed against the following general review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given application. Each reviewer will be asked to address only those that are relevant to the application and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the applicant to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Applicants should address the following elements in their application to provide reviewers with the information necessary to respond fully to both of the above-described NSF merit review criteria. NSF staff will give these elements careful consideration in making funding decisions.

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens - women and men, underrepresented minorities, and persons with disabilities - is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

Additional Review Criteria

The NSF-NATO Fellowships Program is a multidisciplinary activity managed by the NSF Directorate for Education and Human Resources. The review criteria for all applications include:

• Applicant's scientific competence in science and engineering, including

achievements to date, particularly as attested by academic records and letters of recommendation.

- Applicant's potential for continued professional growth as demonstrated in the proposed plan of research from the standpoint of its appropriateness to the background and professional goals of the applicant and its feasibility within the time constraints imposed by tenure.
- Applicant's potential for furthering international collaboration in science including the factors that influenced the applicant's selection of host institution and scientific advisor and the likelihood that the proposed plan of research might result in the establishment of a professional, working relationship between the applicant, foreign scientists and US host scientist.

In situations where English is not the primary language, consideration may be given to how communication is to be managed. Likewise consideration will be given to the English language proficiency of the NATO Partner country scientist. These are suggestions and not all will apply to any given application. Each reviewer will be asked to address only those that are relevant to the application and for which he/she is qualified to make judgments.

A summary rating and accompanying narrative will be completed and signed by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are mailed to the Applicant and US host Principal Investigator by the Program Director. In addition, the applicant will receive an explanation of the decision to award or decline funding.

B. Review Protocol and Associated Customer Service Standard

All applications are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the application. Applications submitted in response to this solicitation will be reviewed by Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each application. The Program Officer assigned to manage the application's review will consider the advice of reviewers and will formulate a recommendation. In most cases, applicants will be contacted by the Program Officer after his or her recommendation to award or decline funding has been approved by the Division Director. This informal notification is not a guarantee of an eventual award.

NSF will be able to tell applicants whether their applications have been declined or recommended for funding within six months for 95 percent of applications. The time interval begins on the application deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. The interval ends when the Division Director accepts the Program Officer's recommendation.

In all cases, after programmatic approval has been obtained, the applications recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement.

Applicants are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. An applicant or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting applicant or organization* by a Grants Officer in the Division of Grants and Agreements. Applicants or organizations whose applications are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See section VI. A, for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the application referenced in the award letter; (4) the applicable award conditions, and (5) any NSF brochure, program guide, announcement or other NSF issuance that may be incorporated by reference in the award letter.

C. Reporting Requirements

Within 90 days after the expiration of an award, the Fellow is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the Fellow and US host PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending applications for that Fellow or PI. Fellows and PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented an electronic project reporting system, available through FastLane. This system permits electronic submission and updating of project reports, including information on: project participants (individual and organizational); activities and findings; publications; and other specific products and contributions. Fellows and US host PIs will not be required to reenter information previously provided, either with an application or in earlier updates using the electronic system.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries should be made to the NSF-NATO Postdoctoral Fellowships in Science and Engineering Program:

• Dr. Sonia Ortega, Program Director, Education and Human Resources, Division of

Graduate Education, 907N, telephone: 703-292-8697, e-mail: nsf-nato@nsf.gov.

 Mrs. Carolyn Lyons Piper, Assistant Program Director, Education and Human Resources, Division of Graduate Education, 907N, telephone: 703-292-8697, e-mail: nsf-nato@nsf.gov.

For questions related to the use of FastLane, contact Sheryl T. Balke-Smith, Program Analyst, Education and Human Resources, Division of Graduate Education, 907N, telephone: 703-292-8630, e-mail: sbalke@nsf.gov.

IX. OTHER PROGRAMS OF INTEREST

The NSF Guide to Programs is a compilation of funding for research and education in science, mathematics, and engineering. The NSF Guide to Programs is available electronically at http://www.nsf.gov/cgi-bin/getpub?gp. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices listed in Appendix A of the GPG. Any changes in NSF's fiscal year programs occurring after press time for the Guide to Programs will be announced in the NSF E-Bulletin, which is updated daily on the NSF web site at http://www.nsf.gov/home/ebulletin, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's Custom News Service (http://www.nsf.gov/home/cns/start.htm) to be notified of new funding opportunities that become available.

X. FIELDS OF SPECIALIZATION

1. LIFE SCIENCES

BIOLOGY

- 101 Animal physiology
- 102 Biochemistry and biophysics
- 103 Biotechnology
- 104 Cell biology and physiology, microbiology
- 105 Developmental biology and zoology
- 106 Ecosystems, landscapes and environment
- 107 Molecular biology and genetics, virology
- 108 Neurosciences, cognition and psychology
- 109 Plant biology: botany, physiology and pathology

- 110 Population biology and genetics, evolution
- 111 Biology (other)

2. MATHEMATICS, PHYSICS AND ASTRONOMY

MATHEMATICS

- 201 Algebra and number theory
- 202 Analysis
- 203 Biomathematics
- 204 Computational mathematics and numerical analysis
- 205 Discrete Mathematics
- 206 Geometry and topology
- 207 Logic and foundations of mathematics
- 208 Mechanics and mathematical physics
- 209 Optimization and control theory
- 210 Probability
- 211 Mathematics (other)

PHYSICS

- 221 Acoustics
- 222 Atomic and molecular physics
- 223 Condensed matter physics
- 224 Electromagnetism, plasmas and electric discharges
- 225 Elementary particles and fields
- 226 Fluid dynamics
- 227 General physics
- 228 Mathematical physics
- 229 Nuclear physics
- 230 Optics
- 231 Statistical physics
- 232 Physics (other)

ASTRONOMY AND ASTROPHYSICS

- 241 Astronomy
- 242 Astrophysics
- 243 Cosmology
- 244 Space and Planetary Physics
- 245 Astronomy and astrophysics (other)
- 200 Physical and Mathematical Sciences (non-specific)

3. CHEMISTRY MATERIALS

CHEMISTRY

- 302 Analytical biochemistry
- 303 Analytical chemistry
- 304 Bio-inorganic chemistry
- 305 Bio-organic chemistry
- 306 Catalysis
- 307 Computational chemistry
- 308 Electro chemistry
- 309 Inorganic chemistry
- 311 Organic chemistry
- 312 Physical chemistry
- 313 Polymer chemistry
- 314 Solid-state chemistry
- 315 Theoretical chemistry
- 316 Chemistry (other)

MATERIALS SCIENCES

- 321 Ceramics, inorganic materials
- 322 Corrosion, chemical degradation
- 323 Electrical, magnetic and optical properties
- 324 Mechanical and thermal properties

- 325 Metals and alloys
- 326 Polymers
- 327 Structure, composition and properties
- 328 Materials science (other)
- 300 Chemistry and Materials (non-specific)

4. EARTH SCIENCES

SOLID EARTH

- 401 Engineering geology
- 402 Geochemistry
- 403 Geology
- 404 Geomorphology
- 405 Geophysics
- 406 Hydrology and hydrogeology
- 407 Mineralogy and petrology
- 408 Paleontology and paleobotany
- 409 Remote sensing and detection
- 410 Sedimentology and stratigraphy
- 411 Soil science
- 412 Solid earth (other)

ATMOSPHERIC SCIENCE

- 421 Aerology
- 422 Climatology
- 423 Meteorology
- 424 Radiometeorology
- 425 Atmospheric science (other)

OCEANOGRAPHY

- 431 Air-sea interaction
- 432 Biological oceanography

- 433 Chemical oceanography434 Hydrography
- 435 Physical oceanography
- 436 Oceanography (other)

5. ENVIRONMENTAL SCIENCES

- 501 Air
- 502 Disasters
- 503 Ecosystems
- 504 Environmental change
- 505 Environmental chemistry
- 506 Environmental policy
- 508 Noise
- 509 Soil
- 510 Waste
- 511 Water
- 512 Environmental sciences (other)
- 500 Environmental Sciences (non-specific)

6. APPLIED SCIENCES AND ENGINEERING

ENGINEERING

- 601 Aeronautical and astronautical engineering
- 603 Bioengineering
- 604 Biomedical engineering
- 605 Ceramic engineering
- 606 Chemical engineering
- 607 Civil engineering
- 608 Electrical engineering
- 609 Energy
- 610 Engineering mechanics

- 611 Hydraulics
- 612 Industrial engineering
- 613 Mechanical engineering
- 614 Metallurgical engineering
- 615 Mining engineering
- 616 Nuclear engineering
- 617 Petroleum engineering
- 618 Sanitary engineering
- 619 Engineering (other)

COMPUTER SCIENCE

- 621 Artificial intelligence and knowledge-based systems
- 622 Computer databases and banks
- 623 Human-computer interaction
- 624 Operating systems and networks
- 625 Software and requirements engineering
- 626 Theory and mathematics of computing
- 627 Computer science (other)

SYSTEMS SCIENCE

- 631 Automatic control
- 632 Operational research
- 633 Systems analysis
- 634 Systems engineering
- 635 Systems science (other)

INFORMATION SCIENCE

- 641 Communications
- 643 Information science (other)
- 600 Diverse Applied Sciences (non-specific)

7. SOCIAL AND BEHAVIORAL SCIENCES

SOCIAL SCIENCES

701 Economic and social history 702 Economics (Bus. Admin. NOT eligible) 703 Education 704 Environmental planning 705 Human geography 707 Linguistics 708 Management and business studies 709 Political Science and international relations 710 Science and technology policy 711 Social administration 712 Social anthropology 713 Social psychology 714 Socio-legal studies 715 Sociology (Social Work NOT eligible) 716 Social science (other) **BEHAVIORAL SCIENCES** 721 Archeology 722 Developmental science 723 Ergonomics and human engineering 724 Human factors 725 Organizational science 726 Personality 727 Psychology 728 Psychometrics 729 Behavioral science (other) 999 Not Listed (Specify)_____

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