

National Foundation of Science and Advanced Technologies (NFSAT)

PROGRAM ANNOUNCEMENT

Travel Fellowship Program – 2004-2005

I. Introduction

On a competitive basis, NFSAT will sponsor travel to the United States and living expenses for scientific visits of **two to three months** in duration for Armenian young scientists and engineers. Grants will include travel costs and living expenses up to **US\$6,000**.

The goal of this program is to enable young Armenian scientists and engineers, 35 years of age or younger, to identify and develop new contacts, which will promote further collaboration between Armenian and U.S. researchers and strengthen the next generation of Armenian scientists. The initiative will do this by providing young Armenian scientists and engineers an opportunity to explore their research ideas and work with a U.S. host who is able to provide access to the facilities of a modern and well-equipped U.S. laboratory.

The Travel Fellowship Program is carried out under an award provided to NFSAT by the U.S. Civilian Research and Development Foundation (CRDF), in support of NFSAT's "Basic Research in Universities and Integration of Science and Economy of Armenia." Funding for the Travel Fellowship Program is provided to the CRDF by the U.S. Department of State.

NFSAT is an independent nonprofit foundation that was established in 1997. NFSAT promotes scientific research and technological development in Armenia through competitive grants, training, and technical resources.

The CRDF is a nonprofit organization authorized by the U.S. Congress and established in 1995 by the National Science Foundation. This unique public-private partnership promotes scientific and technical collaboration between the United States and other countries, primarily the countries of the former Soviet Union (FSU), through grants, technical resources, and training.

Proposals must be submitted to NFSAT by 18:00 local time on Wednesday, June 30, 2004.

The competition results will be announced on approximately August 20, 2004.

II. Funding Guidelines and Eligibility:

NFSAT plans to support up to three Travel Fellowship Grants of up to US\$6,000 each. NFSAT requires that each application include a letter of invitation from a U.S. scientific university, nonprofit institution, or industrial research facility to carry out the project in the fields of the basic and applied sciences (Appendix 1).

The travel may be planned for anytime during the period of **October 1, 2004 to May 31, 2005**. All travel under these grants will be subject to the U.S. Government Fly America Act.

The NFSAT will give special consideration to proposals that contain the following:

- New research topics for Armenia, including new research methods for solving scientific tasks and problems;
- Research topics aimed at solving actual scientific-technological problems in Armenia;
- Research topics with a high likelihood of resulting in a publication in a prominent international scientific journal;
- Applicants currently attending Armenian state research organizations who are graduate students or undergraduate students who have completed at least three years of study;
- Applicants who are first-time visitors to the United States.

Successful applicants under the Travel Fellowship Grants Program will be eligible to apply for follow-on grants of up to US\$2,000 each after returning to Armenia. These grants are designed to help the young scientists maintain scientific communications with their newly established U.S. collaborators and for continuing joint research started in the U.S.

Further information about these follow-on grants will be distributed to successful applicants.

III. Eligibility:

Proposals must meet each of the following eligibility requirements:

- The applicant must be either an undergraduate student who has completed at least three years of study, a graduate student or a recent Kandidat graduate (degree completed within the last 6 years).
- Applicants must be 35 years of age or younger at the time of their application.
- The applicant **must be an Armenian citizen** currently residing and working in Armenia.
- The applicant must have a proficient working knowledge of English, both written and spoken.
- Armenian scientists who are Principal Investigators on any active NFSAT or CRDF grants (including CGP, BGP, RESC, NSTM, FSTM, etc.) are NOT eligible for this program. However, all other Armenian team members on these grants are eligible, provided that they meet the other eligibility requirements stated in this announcement.
- The U.S. host scientist must be a U.S. citizen or permanent resident of the United States and must reside in the United States during the course of the project.
- The applicant and U.S. host must work full-time in a civilian research environment.
- The project must be oriented toward non-defense and non-military objectives and must be carried out in a civilian research environment.
- NFSAT complies with all U.S. laws and regulations pertaining to export control and the participation of foreign nationals or institutions in its activities. It is NFSAT's policy not to conduct any transactions with U.S. restricted entities without appropriate authorization from the CRDF.
- NFSAT reserves the right to restrict the participation of any individual or institution in its programs.

IV. Application Guidelines

Program applicants must submit the following application materials:

1. Cover Sheet (Form A)

2. Budget (Form B). The budget must detail all estimated expenses, including round-trip airfare between Armenia and the designated research location in the United States (economy class, lowest-cost applicable), visa fees, living expenses (including meals and lodging), emergency health insurance, and ground transportation.

2.1 Air travel must comply with the provisions of the Fly America Act. Specifically, transoceanic air tickets must be purchased from a U.S. carrier. For more information on this regulation, contact the NFSAT office.

2.2 Living allowances may not exceed US\$2,000 per month or the prorated equivalent. For information regarding U.S. Government per-diem rates for cities throughout the United States, applicants should refer to the following website:

<http://www.govexec.com/travel>.

2.3 **The maximum award amount is US\$6,000 for each successful candidate.**

3. **Biographical sketch of the applicant**, including the following:

3.1 **Curriculum Vitae** for the applicant that includes the full name, date and place of birth, contact address, information on the applicant's education, prior and current employment, honors received, research interests, and long-term educational and professional goals (maximum 2 pages).

3.2 **Publications.** A statement indicating the total number of publications and a list of five relevant publications.

3.3 **Information on English language ability**, including the number of years of English language study.

3.4 **Information on prior professional visits abroad**, including information on doctoral or postdoctoral training abroad, and attendance of international conferences including papers presented at international meetings.

4. **Project narrative**, including the following:

4.1 **Description of scientific research** to be undertaken during the grant period, its importance, its relevance to the applicant's present research, its expected results and its possible contribution to solving actual scientific-technological problems faced by Armenia (maximum 5 pages).

4.2 **The time period** proposed for the visit and a detailed **working plan**, including a timeline of specific tasks to be performed (maximum 1 page).

4.3 **A response to each of the evaluation criteria listed below (Section VI.A)**

5. **Invitation letter from a U.S. scientific host**

This letter should indicate familiarity with the proposed research project, an indication that the host is able to provide the research facilities necessary for the Armenian scientist to successfully carry out the project, a willingness to assist the applicant with logistical (though not necessarily financial) support for his or her visit, and an affirmation that the host will support efforts by the applicant to arrange publication of the results of the research. The U.S. host institution may be a university, U.S. government laboratory, or for-profit company.

6. **Two signed letters of reference (Form C)**

One letter must come from the applicant's current supervisor. The other letter should come from a person with whom the applicant has worked in his/her major field, such as a thesis advisor, professor, or employer. Reference letters should be submitted directly by the referee to NFSAT and should include comments on the applicant's:

- Mastery of fundamental knowledge in the applicant's field;
- Potential within his/her field;
- Design of the proposed research project;
- Laboratory skills and technique (if applicable);
- Adaptability: creativity, originality, self-reliance, and language abilities.

7. Optional

Proof of any additional financial or in-kind support from the U.S. host or other sources (not individuals) besides use of laboratory equipment, supplies, and facilities.

V. Timetable and Proposal Submission

- **The deadline for proposals to be submitted to NFSAT is 18:00 local time on Wednesday, June 30, 2004.**
- The competition results will be announced on approximately **August 20, 2004.**
- The travel must occur between **October 1, 2004 and May 31, 2005.**

Program applicants must submit:

- One original hardcopy and one electronic copy in English;
- One original hardcopy and one electronic copy in Armenian or Russian.
- The invitation letter from the U.S. scientific host (in English) must be scanned and attached to the electronic copies of the proposal (English and Armenian or Russian).
- The applicant must submit the original hardcopy of the invitation letter from the U.S. scientific host along with the hard copies of the proposal.

For questions about the application process or for further information about this program, please contact the NFSAT office.

Applications must be sent to:

Ms. Anna Baghramyan, Senior Program Manager
National Foundation of Science and Advanced Technologies (NFSAT)
26, Azatutyun Ave., Yerevan, 375014,
Republic of Armenia
Tel: 28-81-92
Email: tfp@nfsat.am

NFSAT will not accept fax submissions.

VI. Review of Proposals

Each proposal will be screened for eligibility and completeness upon receipt by NFSAT. NFSAT will evaluate all eligible proposals according to the criteria listed below. A select number of applicants will be interviewed in Yerevan to assess the applicants' English language proficiency. NFSAT reserves the right to contact the applicants for additional information as needed. The CRDF will contact the U.S. hosts for any additional information on behalf of NFSAT.

A. Evaluation criteria:

- 1) **Performance Excellence:** *The capability of the applicant, the technical soundness of the proposed approach, the adequacy of the technical resources and capabilities available to the project, and soundness of the plan to manage and coordinate the project within three months.*
- 2) **Intrinsic Merit:** *The likelihood that the project may lead to new knowledge and will promote further collaboration between the Armenian applicant and U.S. Scientist.*
- 3) **Utility:** *The likelihood that the results of the project will make a contribution to solving actual scientific-technological problems faced by Armenia.*

- 4) **Professional Benefit:** *Relevance of proposed work to applicant's career goals and areas of specialization and interest. Potential for proposed work to facilitate the applicant's career goals and development.*
- 5) **Participation of U.S. Scientific Host:** *Level of U.S. host assistance to the visiting Armenian scientist. Equipment and facilities that will be accessible to the Armenian scientist. Long-term plans for collaboration beyond the research visit.*
- 6) **English Language Proficiency:** *How easily the applicant understands and speaks English and how long the applicant has studied English.*

B. Intellectual Property

The NFSAT makes no claim to intellectual property rights under any award. The NFSAT's primary interest is that intellectual property rights be equitably allocated. Both the U.S. and Armenian parties should be familiar with and abide by the laws regarding intellectual property in their respective countries and by the regulations regarding grants for research projects.

C. Confidentiality

The NFSAT will treat all proposals as confidential material and will require all panelists and reviewers to respect the confidentiality of proposals. However, proposal authors are advised that successful proposals will be treated as being in the public domain. Therefore, at the author's discretion, if there is specific information in the proposal that is business-confidential and not intended for public dissemination, it should be clearly labeled as such at the top and bottom of the applicable page of the proposal. Such passages will be withheld from public distribution if the proposal is successful. Proposals that do not result in awards are not subject to public dissemination by the NFSAT.

D. Special Instructions for Proposals Involving Human Subjects Research: Funding proposals involving human subjects research requires both the U.S. Scientific Host and the Armenian applicant and their respective institutions to certify that:

It has obtained Institutional Review Board (IRB) or Institutional Ethics Committee (IEC) approval of the research (or a determination that written approval is not required, *e.g.*, exempt research) from an IRB/IEC registered with the U.S. Department of Health and Human Services' Office of Human Research Protections (OHRP);

It has obtained the required approval(s) (or a determination that written approval is not required) from the applicable governmental office(s) for the research, including but not limited to the filing of the required applications related to investigational new drugs or investigational devices;

It has a Federalwide Assurance (FWA) on file with OHRP, and it will comply with the FWA throughout the term of the Project Agreement. The FWA represents a public commitment to comply with the human subjects protections standards of the Belmont Report and the Common Rule;

It will conduct the research in accordance with the National Science Foundation (NSF) regulation entitled, "**Protection of Human Subjects**" [45 CFR § 690 *et seq.*];

If the proposal involves human research subjects, the U.S. Scientific Host and the Armenian applicant must both provide the following additional documentation:

- 1) Copies of Institutional Review Board (IRB) or Institutional Ethics Committee (IEC) approval of the project or a formal written determination that said approval is not required, e.g. exempt research. The IRB/IEC must be registered with the U.S. Department of Health and Human Services' Office of Human Research Protections.
- 2) Copies of required approval(s) (or determination that said approval is not required) from the applicable governmental bodies for the research, including but not limited to the filing of required applications related to investigational new drugs or investigational devices.
- 3) Confirmation that the each institution has a Federalwide Assurance (FWA) on file with the U.S. Office for Human Research Protections (<http://ohrp.osophs.dhhs.gov/>) and certification that it will comply with the FWA throughout the term of any resulting CRDF award. If an FWA has not been obtained, please so note in the proposal. Please be advised that, in the event the proposal is selected for an award, an FWA must be applied for and received by the Principal Investigators' institutions prior to the issuance of any project agreement by the NFSAT.

These materials, indicating an approval or an exemption of the project to use human subjects, must be submitted along with the electronic and hard copies of the proposal materials as described in Section III. Applicants will be required to submit these materials as separate documents in addition to the proposal file. Failure to submit this additional information may result in the proposal being declared ineligible or in substantial processing delays.

Prior to the issuance of any award agreement by the NFSAT, the Armenian participants, U.S. Scientific Host and their institutions must provide certification that all project participants involved in the project have undertaken appropriate training in human subjects protections consistent with the requirements of the regulations cited above.

Checklist of Application Contents	
<input type="checkbox"/> Cover Sheet (Form A)	<input type="checkbox"/> Budget (Form B)
<input type="checkbox"/> Biographical Sketch of Applicant	<input type="checkbox"/> Project Narrative
<input type="checkbox"/> Invitation Letter from a U.S. Scientific Host	<input type="checkbox"/> Two Signed Letters of Reference (Form C)
<input type="checkbox"/> Proof of Any Additional Financial or In-Kind Support (Optional)	

FORM A (NFSAT TRAVEL FELLOWSHIP PROGRAM FOR ARMENIAN SCIENTISTS)

I. General Information

- A. **Topic of Investigation:** _____

- B. **Total Amount Requested from NFSAT:** \$ _____; **C. Dates of proposed visit:** _____ to _____

II. Information on the Applicant

- A. **Full Name (as on international passport):** _____

- B. **Date of Birth (Month/Day/Year)** _____; **Sex:** _____
- C. **Highest Degree Earned:** _____; **Field:** _____; **Year awarded:** _____
- D. **Office Phone:** _____; **Fax:** _____; **E-mail:** _____
- E. **Professional Title/Position:** _____
- F. **Institution/Address:** _____

III. Status

- A. **Are you currently an undergraduate or graduate student at a state university?** ___NO; ___YES;
- B. **Have you received a grant under a previous NFSAT or CRDF program?** ___NO; ___YES;
If "YES", please list program _____; Grant No _____
- C. **Have you visited the U.S. before?** ___YES; ___NO;
If YES, please provide a brief description of the reason for your previous visit _____
- D. **Do you have current or prior experience with weapons related research?** ___YES ___NO
If YES, please select the code from Appendix 2 and provide a brief description below of the type of work involved.

IV. Information on the Applicant's Institution Director

- A. **Institution Director Name** _____
- B. **Institution Name and Complete Mailing Address** _____

- C. **Institution Director Contact Data: Phone** _____; **E-mail** _____

V. Information on the U.S. Host

- A. **Full Name of Host Scientist:** Last: _____, First _____, Middle _____
- B. **Highest Degree Earned:** _____, **Field:** _____, **Year Awarded:** _____
- C. **Office Phone:** _____; **Fax:** _____; **E-mail:** _____
- D. **Professional Title/Position:** _____
- E. **Citizenship:** Permanent resident _____; U.S. Citizen _____
- F. **Institution Name and Complete Mailing Address:** _____

- G. **Name of Institutional Representative¹** Last: _____, First _____
- H. **Office Phone:** _____; **Fax:** _____; **E-mail:** _____
- I. **Professional Title/Position:** _____

VI. Signatures (original)*

- A. **Applicant:** _____; **Date:** _____
- B. **Applicant's Institute Director:** _____; **Date:** _____

¹ Must be an individual, other than the U.S. host scientist, who can authorize support for visiting Armenian scientist.

* By signing this application, I certify that I meet all the eligibility requirements in this announcement, and that all information provided is accurate to the best of my knowledge. I recognize that the U.S. visit is two to three months in duration and that I am expected to return to Armenia after the research visit.

**NFSAT TRAVEL FELLOWSHIP PROGRAM APPLICATION
 FORM B (Budget)**

Category	Amount Requested from NFSAT	Support from other sources
International Transportation ¹		
Air passenger exit duty		
Visa Fees		
Per Diem (Including Lodging) ²		
Health Insurance ³		
Ground Transportation ⁴		
Total Amount ⁵		

¹ Air ticket price should reflect the lowest-cost applicable airfare offered by a U.S. carrier for an economy class, round-trip ticket between Armenia and the designated research location in the U.S. All air tickets must be purchased by NFSAT.

² Per diem may not exceed US\$2,000 per month or the prorated equivalent.

³ Emergency health insurance is mandatory for all travelers.

⁴ Reimbursement up to US\$50 upon presentation of receipts.

⁵ Not to exceed US\$6,000.

RECEIVED BY: _____ DATE: _____
 NFSAT staff signature

NFSAT TRAVEL FELLOWSHIP PROGRAM APPLICATION
FORM C
Letter of Reference

1. Full Name of applicant (as on international passport): _____
2. Full Name of Referee: _____
Institutional Affiliation: _____
Position/Title: _____
Contact Data: Phone: _____, Fax: _____, E-mail: _____
3. Relationship to Applicant _____

Signature: _____

Date: _____

Letters (one original hardcopy in Armenian, Russian or English and one electronic copy in Armenian, Russian or English) must be sent directly to NFSAT by 18:00 local time on Wednesday, June 30, 2004. The mailing address of NFSAT is: 26, Azatutyan Ave., Yerevan-14, Armenia. The electronic copy should be sent to: tfp@nfsat.am.

In your letter (maximum 2 pages), please comment on the applicant's

- Mastery of fundamental knowledge and mastery in his/her field
- Potential within his/her field
- Design of proposed research project
- Laboratory skills and techniques (if applicable)
- Adaptability: creativity, originality, self-reliance and language abilities, i.e. ability to communicate sufficiently to carry out the proposed research.

Appendix 1

LIST OF ELIGIBLE SCIENTIFIC AREAS AND SUB-DISCIPLINES

Biological & Biomedical Sciences & Engineering

Agriculture & Agronomy
Bacteriology
Behavioral Biology
Biochemistry
Biophysics
Biotechnology
Botany (Plant Biology)
Cardiology
Cell Biology
Conservation Biology
Developmental Biology
Entomology
Environmental Health
Epidemiology
Genetics
Hematology
Immunology
Marine Biology
Medicine
Molecular Biology
Molecular Medicine
Mycology
Neurology
Oncology
Ophthalmology
Physiology
Population Biology
Radiology
Toxicology
Microbiology
Virology
Zoology

Chemical Sciences and Engineering

Analytical & Surface Chemistry
Biochemistry
Catalysis
Chemical Engineering
Inorganic Chemistry
Organic Chemistry
Physical Chemistry: General
Physical Chemistry: Kinetics
Physical Chemistry: Physical Organic
Physical Chemistry: Theory & Dynamics
Polymer Chemistry

Electrical and Materials Manufacturing

Aero/Astro Engineering
Ceramics
Composite Materials
Electrical Engineering
Electronic Materials
Instrumentation
Lasers
Magnetic Materials
Manufacturing
Materials Science

Mechanical Engineering
Metallurgy
Nuclear Engineering
Optical Material
Polymers
Power Engineering
Superconducting Materials

Geological Sciences and Engineering

Atmospheric Science
Civil and Mechanical Engineering
Environmental Science
Geochemistry
Geological Engineering
Geology
Geophysics
Hydrology
Meteorology
Mineralogy
Oceanography
Paleoclimate
Petroleum Geology
Radioactivity
Remote Sensing
Seismology
Soil Science
Volcanology

Mathematical Sciences

Abstract Algebra
Applied Mathematics (non-physics)
Complex Systems & Chaos
Computer Science
Geometry & Topology
Mathematical Physics
Mathematical Logic & Number Theory
Modern Analysis
Numerical Methods

Physical Sciences

Acoustics
Astronomy/Astrophysics
Atomic and Molecular Physics
Beams
Condensed Matter: General
Condensed Matter: Magnetic Properties
Condensed Matter: Structure
Condensed Matter: Superconductivity
Condensed Matter: Theory and Transport/Semiconductors
Electronics
Hydrodynamics
Lasers
Mechanics
Medical Physics
Nuclear Physics
Optics and Spectroscopy:
Nonlinear optics and Quantum Statistics
Optics and Spectroscopy: Lasers
Particles and Fields
Plasma Physics: Fluids
Space
Theoretical Physics
Thermodynamics

Quantum Computing and
Cryptography

Appendix 2

FORMER FSU WEAPONS SCIENTIST CODE LIST

Former Weapons Scientist – defined as project participants who are currently or were formerly actively engaged in research at a current or former defense laboratory or institution. Five categories of former defense researchers are provided below (Categories B, C, and D are classified as Weapons of Mass Destruction researchers):

CATEGORY A: MISSILE TECHNOLOGY EXPERTS	
CODE	DESCRIPTION
A1	Design, construction and performance of air, space, surface and underwater - launched missiles. Materials and technologies for these missiles. Production of engines, fuels, composites, integrated elements, radio-electronic equipment, different testing devices for missiles.
A2	Techniques for guidance and control of missiles from launching to impact. Includes optical guidance, television guidance, wire guidance, present and terminal guidance, internal guidance, command guidance, and homing guidance.
A3	Missile handling and launching, including transportation, storage, and preparation for launching. Air, space, surface and underwater launching and support equipment and technologies; Checkout equipment and procedures. Guided missile ranges.
A4	Techniques and systems for tracking missiles as defensive measures. Can be from surface installations or air and space-borne platforms.
CATEGORY B: CHEMICAL WEAPONS EXPERTS	
B1	Design and performance of missile warheads and rockets for delivery of chemical weapons.
B2	Materials, facilities and performance processes needed for the production of chemical weapon agents and their key precursors.
B3	Dissemination of chemical weapon agents.
B4	Basic knowledge on CW design and their effect on human system.
CATEGORY C: BIOLOGICAL WEAPONS EXPERTS	
C1	Design and performance of missile warheads and rockets for delivery of biological weapons.
C2	Biopolymer production related to biological warhead capabilities.
C3	Dissemination of biological weapon agents.
C4	Basic knowledge on BW design and their effect on human system.
CATEGORY D: NUCLEAR WEAPONS EXPERTS	
D1	Basic knowledge of Nuclear Weapons design, construction, characteristics and the effect on human system,
D2	Design, construction and performance of missile warheads for delivery of nuclear weapons.
D3	Design, construction and performance of the equipment and Components for Uranium and Plutonium separation.
D4	Design, construction and performance of the equipment connected with Heavy Water Production.
D5	Design, construction and performance of the equipment for Development of Detonators.
D6	Design, construction and performance of Explosive Substances and Related Equipment.
D7	Design, construction and performance of the equipment and Components for Nuclear Testing.
D8	Design, construction, performance and operation of production-type nuclear reactors for fissile and tritium-content materials production (breeding).
D9	Design, construction, performance of nuclear reactors and units for submarine and for military space program.
CATEGORY E: OTHER	
E1	Design, construction, and performance of powerful laser facilities for military applications.
E2	Design, construction and performance of accelerator facilities for military applications in space programs
E3	Others