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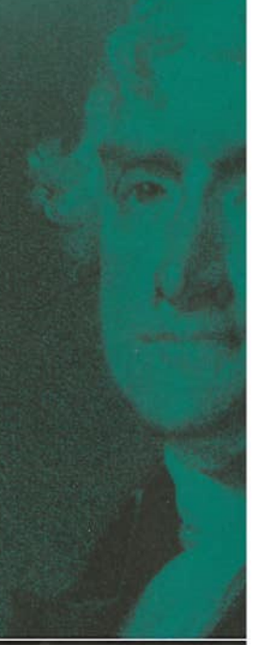
For additional information on the Jefferson Science Fellowship program, contact us by email at ***jsf@nas.edu*** *or by telephone at (202) 334-3560.*



"When I contemplate the immense advances in science and discoveries in the arts which have been made within the period of my life, I look forward with confidence to equal advances by the present generation, and have no doubt they will consequently be as much wiser than we have been as we than our fathers were . . ."

—THOMAS JEFFERSON, MARCH 3, 1818

JEFFERSON SCIENCE FELLOWSHIPS

"Science is more essential for our prosperity, our security, our health, our environment, and our quality of life than it has ever been before."

—PRESIDENT BARACK OBAMA, 2009

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JEFFERSON SCIENCE FELLOWSHIPS

INTRODUCTION

Science and technology make fundamental contributions to the security, economic, health, and cultural foundations of modern societies. In order for the State Department to pursue effectively its mission to "create a more secure, democratic, and prosperous world for the benefit of the American people and the international community," an appreciation and understanding of science and technology must be integral to the formulation and implementation of government policy. The articulation of "accurate science for statecraft" to policy makers has become an essential element in establishing effective international relationships in the 21st century.

Recognizing this need, on October 8, 2003, the Secretary of State announced the Jefferson Science Fellowship (JSF) program at the U.S. Department of State. This program, which includes the U.S. Agency for International Development (USAID), serves as an innovative model for engaging the American academic science and engineering communities in U.S. foreign policy and international development.

PROGRAM DESCRIPTION

Tenured, or similarly ranked, academic scientists, engineers, and physicians from U.S. institutions of higher learning, who are U.S. citizens, are eligible to apply for the Jefferson Science Fellowship. Each Fellow will spend one year at the U.S. Department of State or USAID in Washington, D.C. The assignments may be coordinated with relevant U.S. embassy overseas. All JSF assignments will be designed through a consultation that considers both the interests and expertise of the Fellow and the needs of the hosting office. Following the fellowship year, the Jefferson Science Fellow will return to his/her academic career, but will remain available to the U.S. government as an experienced consultant for short-term projects.

TERMS OF THE FELLOWSHIP

Since the JSF program is a collaborative effort between the U.S. academic community, the U.S. Department of State, and USAID, financial and institutional support for the program is shared among these partners.

During the one-year assignment at the U.S. Department of State or USAID, the salary and benefits of the Fellow will be paid by the academic institution at which the appointment is held. The academic position of the Fellow, together with all the rights and privileges associated with that position, will be maintained during his or her assignment at the U.S. Department of State or USAID.

The Jefferson Science Fellow will be paid approximately $50,000 to cover local living expenses for a full year. In addition, $10,000 will be made available to the Fellow for travel associated with their assignments at the U.S. Department of State or USAID. Additional travel support may also be provided by the Fellow's office or bureau.

MEMORANDUM OF UNDERSTANDING (MOU)

To formalize the respective responsibilities of the partnership, a JSF MOU must be executed between the participating academic institution at which the applicant holds a tenured or similarly ranked position and the National Academy of Sciences. Over 160 universities have MOUs in place. To determine if your university currently holds an MOU with the National Academy of Sciences or to initiate a new MOU, contact the Jefferson Science Fellowship program office at **jsf@nas.edu** or 202-334-3560.

THE SELECTION PROCESS

Panels selected by the National Academies of Sciences, Engineering, and Medicine conduct a review of all application packages and a group of finalists are invited to Washington, D.C. for interviews with the JSF Selection Committee. The JSF Selection Committee includes former Jefferson Science Fellows and representatives from the U.S. Department of State, USAID, the U.S. academic community, and professional scientific and engineering societies. This committee will make final decisions on awards.

2014 JSF Announcement with Secretary John Kerry.

SELECTION CRITERIA

Eligible applicants will be evaluated using the following criteria:

- Stature, recognition, and experience in the national and international scientific, technical or engineering community.
- Ability to rapidly and accurately understand scientific advancements outside his or her discipline area and to effectively integrate this knowledge into international policy discussions.
- Ability to identify and articulate relevant science and technology issues to non-specialist audiences.
- Interests and experiences that are applicable to informing or advancing policy discussions and processes at the U.S. Department of State or U.S. Agency for International Development.

Those individuals offered Jefferson Science Fellowships must successfully complete and maintain security clearances required for them to undertake their duties within the U.S. Department of State or USAID.

APPLICATIONS

An online application and detailed instructions on the application process are available on the JSF website: **www.nas.edu/jsf.**

A complete application package consists of the following: biographical information; a Curriculum Vita; a Statement of Interest; two Essays; and three to five Letters of Recommendation.

In the Statement of Interest, the applicant should explain what benefits he/she hopes to derive for him/herself and his/her university, if selected for the program, and also indicate any knowledge he/she might have of the U.S. Department of State or the U.S. Agency for International Development and possible contributions he/she might make to different bureaus and offices therein.

In the Essays, the applicant is asked to demonstrate his/her knowledge and understanding of the impact of science, engineering, and medicine on foreign policy decision making; to discuss major advances in his/her fields of expertise that have had significant societal impact on an international scale; and to identify emerging issues in science and technology with implications for foreign policy.

ANNUAL TIMELINE

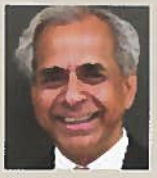
For each program year, the following general timeline applies:

Early August	Competition opens
Late October	Application deadline
Early December	Interviews of finalists and selection of awardees
February	JSF Placement Week in Washington, D.C.
Mid-August	Jefferson Science Fellows report to the Office of the Science and Technology Adviser and the U.S. Agency for International Development.

For a list of deadlines for the current Jefferson Science Fellowship competition, please visit **www.nas.edu/jsf**

PROFILES OF PAST JEFFERSON SCIENCE FELLOWS

DR. OSAMA O. AWADELKARIM, 2006 (Department of Engineering Science and Mechanics, Penn State) At the U.S. Department of State, Dr. Awadelkarim worked in the Office of Public Diplomacy and Public Affairs at the Bureau of African Affairs and the Office of Science and Technology Cooperation in the Bureau of Oceans and International Environmental and Scientific Affairs. Dr. Awadelkarim focused on promoting collaboration between African, Arab, and Moslem scientists and U.S. scientists, and toured a number of African and Islamic countries where he spoke at universities, scientific seminars, and educator workshops. Notably, Dr. Awadelkarim participated in meetings that led to the conclusion of science and technology agreements between U.S. government agencies and their partners in Africa and the Islamic World. Upon completing his fellowship, Dr. Awadelkarim has worked as a Science and Technology Senior Consultant for the U.S. Department of State from July 2007 to present. Dr Awadelkarim is currently focusing on sharing Penn State's experiences in nanotechnology workforce development with several countries in East Africa and the Middle East.



DR. PURU JENA, 2007 (Department of Physics, Virginia Commonwealth University) Dr. Jena worked extensively on the Washington International Renewable Energy Conference (WIREC) organized by the Bureau of Oceans, Environment, and Science. He was in charge of coordinating the R&D sessions for the WIREC conference, a high-level gathering with over 9000 participants, for which he recruited speakers, panelists and moderators from academia, industry, and government laboratories. Dr. Jena edited a conference report that was distributed worldwide, and an abridged version of this report, emphasizing R&D needs in renewable energies, has appeared in a number of scientific and engineering bulletins and journals. Following his tenure, Dr. Jena has continued to assist the State Department by regularly lecturing on Nanoscience and Technology issues at the Foreign Science Institute, serving on the Presidential Bilateral Russia-USA Commission on Nano(Energy), and by inviting State Department officials to lecture students at Virginia Commonwealth University on science policy and climate negotiations.

DR. DEBORAH LAWRENCE, 2009 (Department of Environmental Sciences, University of Virginia) Dr. Lawrence worked as the scientific advisor on forests and climate in the Office of Global Change at the U.S. Department of State where she also supported the office of the Special Envoy for Climate Change. She focused on international negotiations and bilateral efforts to reduce emissions from deforestation and degradation (REDD) in tropical forests. She served on the U.S. delegation to the United Nations Framework Convention on Climate Change, the World Bank Forest Carbon Partnership Facility, the Group on Earth Observations and its Forest Carbon Task. Prof. Lawrence also served on a USAID assessment on REDD programming in Southeast Asia. Since 2010, she has been a consultant to the U.S. Forest Service and USAID. She serves on the steering committee of SilvaCarbon, an interagency program of the U.S. Government on forest carbon management, measurement and monitoring.

DR. DOUGLAS LAUBE, 2010 (Obstetrics and Gynecology, University of Wisconsin School of Medicine and Public Health) Dr. Laube worked with the USAID Office of Population and Reproductive Health, Bureau of Global Health (GH/PRH) on the expansion of global services materials in Post Abortion Care [PAC], contraceptive provision, and maternal health risk from such disorders as post-partum hemorrhage, unsafe abortion, pre-eclampsia/eclampsia. Additionally, he was involved with assessing morbidities accruing from the lack of provision of quality women's reproductive health care, including fistula and female genital mutilation. The MCH office also works to develop programs for health care providers in education and incentives designed to diminish the abuse of pregnant women and provide them with longer term reproductive options through contraception. Dr. Laube continues to support the initiatives of USAID's Global Health Initiative through his work in helping to include the American College of Obstetricians and Gynecologists with other professional organizations in the recently formed Global Development Alliance entitled "Survive and Thrive".

DR. JEAN RISTAINO, 2012 (Department of Plant Pathology, North Carolina State University) served as a senior science advisor in the Bureau of Food Security, Office of Agriculture Research and Policy (BFS/ARP). She helped launch the Borlaug Higher Education Agriculture Research Development Program and conducted a country-wide needs assessment of agricultural research capacity in Bangladesh. Dr. Ristaino worked with the Association of Public and Land Grant Universities (APLU) and the Board for International Food and Agricultural Development (BIFAD) on human and institutional capacity development and implementation of BIFADS's review of the Cooperative Research Support Program (CRSP). She also provided technical analysis of emerging plant disease threats and helps review progress in the research portfolio in BFS/ARP. Finally, Dr. Ristaino served on an Interagency Working Group on the National Plant Genome Initiative and helped write the strategic plan. She continues to work on a portfolio of issues including human and institutional capacity development in Feed the Future countries.

PROFILES OF PAST JEFFERSON SCIENCE FELLOWS

DR. STEPHANIE FORREST, 2013 (Department of Computer Science, University of New Mexico) Dr. Forrest served as a science advisor to the Office of the Coordinator for International Communications and Information Policy (EB/CIP) at the U.S. Department of State, focusing on cyberpolicy. In this capacity, she also supported the State Department Office of the Coordinator for Cyber Issues (S/CCI) and the Bureau of Democracy and Human Rights. She provided technical expertise and support for a wide range of issues, including Internet governance, cybersecurity, cloud computing, privacy, and big data. She served as a U.S. Delegate to bilateral meetings, provided advice on the proposed globalization of the Internet IANA functions, helped develop negotiating strategies for multi-lateral fora such as the International Telecommunications Union, and developed a set of proposed confidence building measures for cyberspace.

DR. B.L. RAMAKRISHNA, 2013 (Ira A. Fulton Schools of Engineering, Arizona State University) Dr. Ramakrishna served as a senior science and technology advisor in the Africa Bureau at USAID. His specific responsibilities included working with a team to design and guide the implementation of the Presidential initiative "Power Africa." Dr. Ramakrishna assisted in the development of strategies, programs, and partnerships that supported the objectives of the energy sector as it relates to African agriculture, environment, health and economic growth. He was also a member of the team from the Global Development Labs at USAID that visited Armenia to help develop their Science, Technology, Innovation and Partnerships (STIP) related to energy and water resource management. Dr. Ramakrishna worked with other U.S. government agencies to propose industry/business - university collaborations on power systems engineering and capacity building in Sub-Saharan Africa.

DR. JAMES ALLEMAN, 2014 (Department of Civil, Construction, and Environmental Engineering, Iowa State University) served as a senior science advisor for civil, construction, and environmental project focus elements within USAID's Bureau of Europe and Eurasia. Primary activity areas involved Ukraine's ongoing Chernobyl "arch" sarcophagus construction and an artesian groundwater depletion challenge within Armenia's Ararat Valley. His Chernobyl project interactions included USAID representation within a Department of State construction contract review team in Kiev, and continuing review of site monitoring reports for both the "new safe confinement" and "interim spent fuel storage facility" construction elements. As for his contributions with Armenia's water issues, his mission-level efforts in collaboration with USAID's Global Development Lab addressed both assessment and technology strategies intended to advance sustainable public and private sector water abstraction.

DR. MARGARET MARTONOSI, 2015 (Department of Computer Science, Princeton University) served in the Economics Bureau's Office of International Communications and Information Policy. EB/CIP is responsible for the formulation, coordination, and oversight of policy related to information and communication technology (ICT). Martonosi's research expertise is in computer architecture and mobile systems, with a particular emphasis on power-aware computing. Martonosi's focus within CIP drew from this expertise; she worked on a range of computing-related topics, particularly emphasizing technical and policy issues related to the Internet of Things, as well as initiatives to increase the world population's ability to effectively and affordably access the Internet. Martonosi participated frequently in U.S. inter-agency discussions including the Department of Commerce (NTIA), FCC, and others. Her work also involved engagement with multilateral organizations such as the International Telecommunications Union.

DR. PAMELA McCAULEY, 2015 (Department of Industrial Engineering and Management Systems, University of Central Florida) served as a senior science advisor to the State Department Office of the U.S. Global AIDS Coordinator and Health Diplomacy, Office of Research and Science, supporting the Presidents Emergency Program for AIDS Relief (PEPFAR) global initiative. She provided technical expertise and support, utilizing principles of Industrial Engineering and Ergonomics to create a system known as the Innovative Methods, Processes and Critical Technologies (IMPACT) Model to enhance efficiency and promote sustainability in HIV/AIDS Healthcare Service Delivery. She visited several countries in Africa to examine and improve upon the integration of appropriate, scalable and affordable technology interventions throughout PEPFAR countries. She also was involved in outreach and the mentoring of women in Malawi to promote STEM education and STEM entrepreneurship as a part of the DREAMS Program in the PEPFAR office.

Profiles of all Fellows can be found online at: **www.nas.edu/jsf.**