

*"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

# 2012 JEFFERSON SCIENCE FELLOWSHIPS

*"Science diplomacy and science and technology cooperation between the United States and other countries is one of our most effective ways of influencing and assisting other nations and creating real bridges between the United States and counterparts."*

—SECRETARY OF STATE HILLARY RODHAM CLINTON, 2009



## 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, the Secretary of State announced, on October 8, 2003, the Jefferson Science Fellows (JSF) program at the U.S. Department of State. This program, which now 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.*

## 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 the 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 JSF AWARD

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/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/USAID.

The Jefferson Science Fellow will be paid a per diem of up to \$50,000 by the U.S. Department of State/USAID 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/USAID. 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 U.S. Department of State. Currently, over 125 universities have MOUs in place. To determine if your university currently holds an MOU with the U.S. Department of State, or to initiate a new MOU, contact the National Academies' Jefferson Science Fellows program office at [jf@nas.edu](mailto:jf@nas.edu) or 202-334-2643.

## THE SELECTION PROCESS

Panels selected by the National Academies 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.

## SELECTION CRITERIA

Applications are limited to scientists, technologists, engineers, and physicians holding a tenured, or similarly ranked, academic appointment at a U.S. college or university. Eligible applicants will be evaluated using the following criteria:

- Stature, recognition, and experience in the national and international scientific or engineering community.
- Ability to rapidly and accurately understand scientific advancements outside his or her discipline area and to effectively integrate this knowledge into U.S. Department of State/USAID policy discussions.
- Ability to articulate science and technology issues to non-specialist audiences.
- Interest and experience in policy issues, and open-mindedness toward policy discussions at the U.S. Department of State/USAID.

Those individuals offered JSF awards must successfully complete and maintain security clearances required for them to undertake their duties within the U.S. Department of State/USAID.

## APPLICATIONS

An online application and detailed instructions on the application process are available on the JSF website: [www.nas.edu/jsf](http://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, technology, and engineering 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 issues in science and technology that have not received sufficient attention by U.S. foreign policy makers.



2010 JSF Announcement with Secretary Hillary Clinton



2009 JSF Announcement with Secretary Hillary Clinton

## PROGRAM DATES

For the 2012 program year, the following schedule will apply:

January 13, 2012	Application deadline
February/March 2012	Interviews of finalists and selection of awardees
August 2012	JSF Fellows report to the Office of the Science and Technology Adviser

For a list of the 2011 Jefferson Science Fellows, please view our website at: [www.nas.edu/jsf](http://www.nas.edu/jsf).

## PROFILES OF PAST JEFFERSON SCIENCE FELLOWS



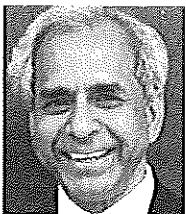
**DR. MELBA CRAWFORD, 2004** (School of Civil Engineering, Purdue University) Dr. Crawford divided her time between the International Organization Affairs Bureau (IO) and Intelligence and Research (INR). For IO, Dr. Crawford served as the Science Committee Coordinator for the U.S. National Commission to UNESCO, advising on U.S. priorities and objectives in re-establishing close linkages to the UNESCO science section. She also served as an advisor for the joint NASA/UNESCO project on the preservation of bioserves and World Heritage sites. Dr. Crawford's focus with INR was on disaster mitigation and she was a delegate to the World Conference on Disaster Reduction in Kolbe, Japan. Since completing her tenure, Dr. Crawford has served on an advisory committee to the South African Department of Science and Technology for capacity building in space technologies and remote sensing applications, assessing educational programs and recommending potential opportunities for advancing networks of universities.



**DR. MICHAEL PRATHER, 2005** (Earth System Science, University of California, Irvine) Dr. Prather worked in the State Department's Bureau of Intelligence and Research on global science and environmental issues, providing a link between the intelligence community and the policy bureaus. He initiated and drafted assessments of the current state of knowledge on hurricanes, illegal logging, and climate change. Dr. Prather traveled to the environmental hub offices in the embassies of Costa Rica and Brazil to work with the regional science and technology officers and planned a conference on the role of disaster risk management in a world of changing climate. Since his departure from State in 2006, Dr. Prather remained badged (thru STAS) until 2010, which enabled him to consult informally. He has maintained contact with his INR colleagues on emerging issues in environmental science and technology and since 2009 has been an IC Associate through State/INR.



**DR. OSAMA O. AWADELKARIM, 2006** (Department of Engineering Science and Mechanics, Pennsylvania State University) 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. 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.

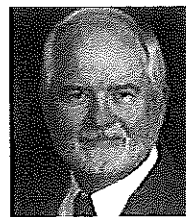
# PROFILES OF PAST JEFFERSON SCIENCE FELLOWS



DR. TIMOTHY DEVOOGD, 2008 (Department of Psychology, Cornell University) Dr. DeVoogd worked in the Office of Diplomacy and Public Affairs in the Bureau of Western Hemisphere Affairs, where he improved science and technology ties between U.S. and Latin American countries through a variety of methods. Dr. DeVoogd created and implemented a Western Hemisphere science website that allows for exchanges of ideas, equipment, and event announcements in the region; he pushed for more access to scientific journals, websites, and magazines in Chile; he helped devise an engineering accreditation program to be used throughout the western hemisphere; and he supported several initiatives in Paraguay, Ecuador and Colombia. Since his year at the State Department, DeVoogd has remained active in science policy. He has consulted with scientists and engineers in Colombia, Paraguay, El Salvador and Cuba, and is building exchange programs between students and researchers of Cornell University and Latin America.



DR. CYNTHIA BALDWIN, 2009 (Department of Veterinary and Animal Sciences, University of Massachusetts Amherst) Dr. Baldwin worked at the U.S. Agency for International Development (USAID) in the Office of Environment and Science Policy/Bureau of Economic Growth, Agriculture and Trade. Dr. Baldwin initiated the pilot program of an MOU between the National Science Foundation and USAID that will fund a number of partner research projects in developing countries. She served on a working group to determine the research agenda for the Feed the Future (FtF) initiative, to increase funding for agriculture research in light of the needs for a growing population. She traveled to Africa and Rome to conduct consultations, co-authored a webpage on the initiative, and organized workshops with other U.S. government agencies. Since completing her fellowship, Dr. Baldwin continues to work closely with USAID on the FtF initiative which included traveling to Africa with representatives from USDA to meet with scientists in Kenya.



DR. JEROME DOBSON, 2009 (Center for Research, University of Kansas) Dr. Dobson served as senior scientist in the Office of the Geographer and Global Issues where he focused on human geography, including the understanding of culture, language, lifestyles and livelihoods, through the Bowman Expeditions program. Dr. Dobson worked to expand this program which leads participatory mapping in a number of countries throughout the world. He also led the progress of DemoBase, a new population database, and worked to improve the use of geographic information systems in the State Department and USAID in order to improve their internal infrastructure and capacity to coordinate worldwide programs. Dr. Dobson authored an opinion editorial on the BP Oil Spill from a geographer's perspective that was seen by a number of U.S. government officials. Dr. Dobson continues to participate with the Office of the Geographer to promote human geography, participatory mapping and Bowman Expeditions.



DR. DOUGLAS LAUBE, 2010 (University of Wisconsin School of Medicine and Public Health, Obstetrics and Gynecology) Dr. Laube has worked with the USAID Office of Population and Reproductive Health, Bureau of Global Health (GH/PRH) and has been involved with work related to 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 has been 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 Office of Population and Reproductive Health.

Profiles of all past Fellows can be found online at: [www.nas.org/jsf](http://www.nas.org/jsf).