

**National Science Foundation  
Advisory Committee for International Science and Engineering**

**MEETING MINUTES**

March 14-15, 2013

Members Present:

Saifur Rahman, Chair AC-ISE  
Peter Arzberger  
Steven McLaughlin  
George Middendorf, CEOSE Liaison  
Efrain O'Neill-Carrillo  
Anne Petersen

[A list of Advisory Committee Members' affiliations and dates of service is attached.]

The National Science Foundation (NSF) Advisory Committee for International Science and Engineering (AC-ISE) met at the NSF Office of International and Integrative Activities (OIIA), International Science and Engineering (ISE), Stafford II, Room 1155 on March 14 and 15, 2013. The public was welcome to observe the proceedings. The meeting agenda is attached to these minutes; headings in the following minutes reflect agenda items.

**Thursday March 14, 2013**

Welcome, Review of Meeting Agenda and Objectives, Approval of Minutes, and Housekeeping

Dr. **David Stonner**, Deputy Director, Office of International and Integrative Activities, welcomed AC-ISE members, NSF staff, and the public. He noted that AC-ISE members Vicki Colvin and Susan McCouch were not able to attend the meeting.

Dr. **Saifur Rahman**, Chair, AC-ISE, reviewed the meeting agenda and objectives. The minutes of the October 25 and 26, 2012 AC-ISE meeting were approved by members.

International Activities across NSF and Beyond

Dr. Stonner informed the Committee about recent NSF senior management transitions, progress on organizational realignments, and budget issues. Cognitive staff reported on program developments and status of evaluations of Partnerships for International Research and Education (PIRE) and the NSF Overseas Offices.

Dr. Stonner reported that an updated charter for the AC-ISE was submitted to Congress as required by the Federal Advisory Committee Act (FACA). [The updated charter is attached to these minutes.]

### Follow-ups from October meeting

During the October meeting, the Committee urged NSF to compile a listing of funding opportunities for U.S. researchers, educators and students from non-NSF sources, including options of supporting international collaborators. In response, at the March meeting, Dr. **DeAndra Beck**, OIIA/ISE, summarized a new partnership between NSF and CRDF-Global to compile such a list. She introduced **Steve Bergen**, CRDF-Global, who discussed the objectives and status of the *Newton's List: A Gateway to International Research Collaboration*. He showed the Committee a demonstration of a beta version of the web-based format.

In response to the Committee's interest in data-mining of NSF databases for information about international activities, Dr. **Middendorf** and Dr. **O'Neill** agreed to form an informal Data-mining Working Group to develop guidance for the effort.

Dr. Stonner reported that the Committee's suggestion for incorporating an international element into the NSF-wide Committees of Visitors template was under consideration by the Office of the Director.

### Presentations of NSF Disciplinary International Activities

Dr. Stonner moderated a series of presentations by NSF staff on international activities. Dr. **Gail McClure** summarized international activities within the Directorate for Education and Human Resources.(EHR), including a draft logic model that EHR is developing to guide their international activities. Dr. **Kevin Thompson** provided a series of examples of international connections and projects of the recently realigned Computer Information Science and Engineering Directorate, Division of Advanced Cyberinfrastructure. (CISE/ACI), with emphasis on International Research Network Connections (IRNC) linking researcher across continents. Dr. **Rathindra DasGupta** discussed international collaborations in the NSF Industry/University Cooperative Research Center (I/UCRC) program. He noted that NSF's \$15 million investment in I/UCRCs leveraged nearly \$150 million in industry members and other sources.

### Member Discussion of NSF Disciplinary Activities

Dr. Stonner pointed out that much of NSF's current international initiatives involve establishing enhanced funding mechanisms, rather than new programs. Dr. McLaughlin suggested a Kickstarter model for "crowd-sourcing" of research ideas. Dr. Arzberger urged the use of the principles of international engagement to inform development of the NSF strategic plan.

### Meeting with NSF Senior Management

Dr. **Cora Marrett**, Acting Director, NSF and Dr. **Wanda Ward**, Office Head, Office of International and Integrative Activities, joined the meeting. Dr. Marrett emphasized that the AC-ISE serves the entire NSF; ISE organizes the Committee on behalf of the Office of the Director. Advisory committees provide valuable input to NSF by keeping the Foundation grounded and helping think through what NSF ought to be doing. Advisory committees should help identify priorities and suggest effective strategies for implementing them. The recent organizational realignment maintains the importance of international engagements at NSF. She cautioned that inquiries and recommended actions should be balanced against expected staff workload.

Dr. Ward posed the question of what constitutes “international activity” and how it should be documented.

#### Summary of Afternoon Discussions and Plans for Friday Session

Dr. Middendorf described some of his initial efforts with data-mining. He pointed out that in addition to expected international engagements through large facilities, a surprising amount of international activities are supported in small projects. These collaborations within disciplines and projects are often not readily obvious and need to be teased from the data.

Dr. Rahman reiterated Dr. Ward’s concern about how international engagement should be operationally defined. Other members added that a meaningful baseline of international activities would be important for assessing progress over the next several years.

### **Friday, March 15, 2013**

#### Discussion of External International Activities

Dr. Rahman invited AC members to comment on external international activities and opportunities in five areas: academic institutions, professional societies, students, NSF policies, and industry.

Dr. Arzberger observed that international activities at academic institutions are increasing in number and variety. Universities are incubators for new types and models of research, training, teaching, and infrastructure. Multinational companies are seeking skilled STEM workers with international experience.

Dr. McLaughlin described an exemplar Global Positioning Strategy at Georgia Tech that benefits faculty, students, and institutional interests. International movement of researchers and students to and from Georgia Tech is a key feature. A score-card for determining actions and monitoring results is being developed. The concept of institutional “branding” of activities was discussed.

Dr. O’Neill identified three professional groups who are notably focusing resources on their international community: the American Chemical Society, including a web-based public portal for developing global partnerships; the Board on International Scientific Organizations at the National Academies; and the National Oceanographic Center in the United Kingdom, with an informative website.

Dr. Petersen remarked that forging international partnerships must go beyond “extractive research” – collecting data or samples from a place – and involve mutually beneficial and trusting collaborations.

Dr. McLaughlin highlighted the distinction among three layers of origin for international programs: national, institutional, and grass-roots. Dr. Middendorf emphasized the value of field stations abroad for attracting students, especially in the biological and social sciences. He noted

that Fulbright scholars operate through the education desk at an embassy, but those offices are often cut during difficult financial circumstances and in small countries.

Dr. Petersen commented that policy proclamations have to be accompanied by clear implementation plans from senior management in order for them to take hold within an agency. Funding is important for leveraging action, but much can be accomplished with minimal investments. Funding loses are difficult, but this makes it more critical to have a clear sense of priorities, effective strategies, and articulation at all levels in an organization.

A member asked about policies for engaging with other agencies. In response, it was noted that, through a Memorandum of Understanding, NSF “embedded” an NSF Fellow at USAID and successfully facilitated development and implementation of the USAID Partnerships for Enhanced Engagement in Research (PEER) program. In addition, the NSF Partnerships for International Research and Education (PIRE) program met with counterpart agencies from partnering countries to align topical priorities.

Dr. Rahman urged NSF to find ways to build global partnerships with industry and attract emerging talent to international engagements. There must be a clear value-added component of the interaction to attract participation.

#### Considerations for Future Direction and Structure of AC-ISE

Members raised the option of the AC-ISE sending a letter to the National Science Board and to the Director encouraging priorities for international initiatives. A draft letter was circulated among members for consideration.

Members felt that international priorities should be clearly expressed throughout the forthcoming updated NSF Strategic Plan.

The importance was stressed of having a clear understanding of the current status of NSF’s global reach. Data-mining tools are available to address this matter, as discussed at earlier AC-ISE meetings. Dr. Middendorf and Dr. O’Neill agreed to develop analytic questions and approaches through an informal Data-Mining Working Group. In the course of the data-mining effort, various metrics for tracking NSF’s international activities are expected to emerge.

Members were encouraged to continue collecting examples of successful global engagements and to find ways to communicate broadly the value to active U.S. science and engineering involvement. Dr. Arzberger offered to compile members’ concerns and ideas following the meeting.

The AC-ISE meeting adjourned at 12:10 pm.

**NATIONAL SCIENCE FOUNDATION  
ADVISORY COMMITTEE FOR  
INTERNATIONAL SCIENCE AND ENGINEERING (AC-ISE)  
March 2013**



***Dr. Saifur Rahman, Chair, AC-ISE***

Editor-in-Chief, IEEE Transactions on Sustainable Energy  
Joseph R. Loring Professor  
Director, Virginia Tech Advanced Research Institute  
900 N. Glebe Road  
Arlington, VA 22203, USA  
Phone: 571-858-3300  
E-mail: [srahman@vt.edu](mailto:srahman@vt.edu)  
Website: <http://www.ari.vt.edu/people/saifur-rahman/>

AC-ISE Term: October 1, 2007 – September 30, 2013



***Dr. Peter Arzberger***

Director, National Biomedical Computation Resource  
Chair, PRAGMA Steering Committee  
University of California, San Diego  
9500 Gilman Drive, MC 0040  
La Jolla, CA 92093-0040  
Phone: 858-534-5079  
E-mail: [parzberg@ucsd.edu](mailto:parzberg@ucsd.edu)  
Website: <http://www.nbcr.net/parzberger.php>

AC-ISE Term: January 1, 2012 - December 31, 2014



***Dr. Vicki Colvin***

Vice Provost for Research  
Kenneth S. Pitzer-Schlumberger Professor of Chemistry  
Professor of Chemical & Biomolecular Engineering  
Rice University  
Office of Research  
6100 Main Street, MS603  
Houston, TX 77005  
Phone: 713-348-5741  
E-mail: [colvin@rice.edu](mailto:colvin@rice.edu)  
Websites: <http://chemistry.rice.edu/FacultyDetail.aspx?RiceID=602>

and

<http://research.rice.edu/colvinBio.cfm>

AC-ISE Term: January 1, 2012 - December 31, 2014



***Dr. Susan McCouch***

Professor of Plant Breeding and Genetics and of Plant Biology  
Emerson Hall, Room 162  
Cornell University  
Ithaca, NY  
Phone: 607-255-0420  
E-mail: [srm4@cornell.edu](mailto:srm4@cornell.edu)  
Websites: <http://ricelab.plbr.cornell.edu/> and  
<http://plbrgen.cals.cornell.edu/cals/pbg/people/faculty.cfm?netId=srm4>

AC-ISE Term: January 1, 2012 - December 31, 2014



***Dr. Steven W. McLaughlin***

Steve W. Chaddick School Chair & Professor  
School of Electrical and Computer Engineering  
Georgia Institute of Technology  
Atlanta, GA 30332-0250  
Phone: 404-894-4468  
E-mail: [swm@ece.gatech.edu](mailto:swm@ece.gatech.edu)  
Website: <http://users.ece.gatech.edu/~swm/>

AC-ISE Term: January 1, 2012 - December 31, 2014



***Dr. George Middendorf, CEOSE Liaison***

Graduate Professor  
Department of Biology  
Howard University  
415 College Street  
206 E. E. Just Hall  
Washington, DC 20059  
Phone: 202-806-7289  
E-mail: [gmiddendorf@howard.edu](mailto:gmiddendorf@howard.edu)  
Website:  
[http://www.biology.howard.edu/faculty/middendorf/middendorf\\_biosketch.html](http://www.biology.howard.edu/faculty/middendorf/middendorf_biosketch.html)

AC-ISE Term: April 18, 2011 – January 31, 2016 (CEOSE)



***Dr. Efraín O'Neill-Carrillo, PE***

Associate Director, CIVIS: Center for Resources in General Education

Director, Power Quality & Energy Studies Laboratory

Professor, Electrical & Computer Engineering Department

University of Puerto Rico-Mayagüez (UPRM)

Call Box 9000

Mayaguez, PR 00680

Phone: 787-832-4040 ext. 5843

E-mail: [oneill@ieec.org](mailto:oneill@ieec.org)

Website:

[http://www.ece.uprm.edu/people/faculty\\_info.php?user=oneill](http://www.ece.uprm.edu/people/faculty_info.php?user=oneill)

AC-ISE Term: January 1, 2012 - December 31, 2014



***Dr. Anne C Petersen***

President, Global Philanthropy Alliance and

Research Professor, Center for Human Growth and Development

University of Michigan

300 N. Ingalls, Room1011SW

Ann Arbor, MI 48109

Phone: 734-764-2443

E-mail: [annepete@umich.edu](mailto:annepete@umich.edu) and

[anne@globalphilanthropyalliance.org](mailto:anne@globalphilanthropyalliance.org)

Website: <http://chgd.umich.edu/people/petersen-anne-c-phd> and

[www.globalphilanthropyalliance.org](http://www.globalphilanthropyalliance.org).

AC-ISE Term: January 1, 2012 - December 31, 2014

## **PUBLIC AGENDA**

### **NATIONAL SCIENCE FOUNDATION ADVISORY COMMITTEE FOR INTERNATIONAL SCIENCE AND ENGINEERING**

**March 14-15, 2013**

*Meeting will be held at NSF Stafford II, Room 1155*

### **Thursday March 14, 2013**

- 9:30-9:45**     **Welcome, Review of Meeting Agenda and Objectives, Approval of Minutes, and Housekeeping**  
*David Stonner, Deputy Director, Office of International and Integrative Activities (OIIA)*  
*Saifur Rahman, Chair, Advisory Committee for International Science and Engineering (AC-ISE)*
- 9:45-10:30**   **International Activities across NSF and Beyond**  
*David Stonner*
- 10:30-10:45   Break
- 10:45-12:00**   **Follow-ups from October meeting**
- 12:00-1:30     Lunch
- 1:30-3:00**     **Presentations of NSF Disciplinary International Activities**  
*David Stonner, Moderator*
- 3:00-3:15      Break
- 3:15-4:00**     **Member Discussion of NSF Disciplinary Activities**
- 4:00-4:30**     **Meeting with NSF Senior Management**
- 4:30-5:00**     **Summary of Afternoon Discussions and Plans for Friday Session**  
*Saifur Rahman*
- 5:00**          **Adjourn**
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**PUBLIC AGENDA**

**NATIONAL SCIENCE FOUNDATION  
ADVISORY COMMITTEE FOR  
INTERNATIONAL SCIENCE AND ENGINEERING**

**Friday, March 15, 2013**

- 8:30-10:30**    **Discussion of External International Activities**  
*Committee Member Moderators*  
**Action Items for Follow-up**
- 10:30-10:45    Break
- 10:45-11:30**    **Considerations for Future Direction and Structure of AC-ISE**  
*David Stonner*
- 11:30-12:30**    **Around the Table and Wrap-up**  
*Saifur Rahman*  
*David Stonner*
- 12:30**            **Adjourn**

## Federal Advisory Committee

### CHARTER

#### National Science Foundation

#### Advisory Committee for International Science and Engineering

- 1. Committee's Official Designation** Advisory Committee for International Science and Engineering (AC-ISE), #25104
- 2. Authority** This committee is established in accordance with the provisions of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., App. 2, and the FACA Implementing Regulations (41 CFR 101-6 and 102-3).
- 3. Objective and Scope of Activities** To provide advice and recommendations concerning support for research, education and related activities involving the U.S. science and engineering community working in a global context as well as strategic efforts to promote a more effective NSF role in international science and engineering.
- 4. Description of Duties**

Advise NSF on the impact of NSF and U.S. Government policies on international engagements of the U.S. research and science education communities.

Advise NSF on agency-wide strategic goals and initiatives in the international science and engineering research and education arena.

Advise NSF on the Office of International and Integrative Activities / International Science and Engineering (OIIA/ISE) stewardship of NSF's international leadership in science and engineering activities.

Review and advise on the impact of research and education programs supported by (OIIA/ISE).
- 5. Official to Whom the Committee Reports** The Committee reports to the Deputy Director, OIIA.
- 6. Agency Responsible for Providing the Necessary Support** The National Science Foundation will be responsible for financial and administrative support.
- 7. Estimated Annual Operating Costs and Staff Years** The estimated annual operating cost of the Committee is about \$104,000 that includes about \$50,000 in staff support costs. Staff support is approximately .4 person-year.

8. **Designated Federal Officer** A full-time or permanent part-time NSF employee will serve as the Designated Federal Officer (DFO). The DFO will approve or call the Committee and subcommittee meetings, prepare and approve meeting agendas, attend committee meetings, adjourn any meeting when the DFO determines adjournment to be in the public interest. The Deputy Director, OIIA will serve as DFO. Alternate DFOs may be appointed.
9. **Estimate Number and Frequency of Meetings** The committee will meet approximately two times a year.
10. **Duration** It is expected that the Committee will continue indefinitely with renewals of the charter every two years as required under FACA.
11. **Termination** The committee is subject to biennial review and will terminate 2 years from the date the charter is filed, unless the charter is renewed in accordance with Section 14 of FACA.
12. **Memberships and Designation** The standing membership of the full committee will consist of approximately 15 individuals selected to be representative of the scientific areas and types of institutions encompassed by the Foundation's international objectives and activities. Every effort will be made to achieve a diverse membership and representation, including individuals from underrepresented groups, various institutional types, including non-academic, as well as different geographic regions of the U.S. It is anticipated that Committee will be comprised of Special Government Employees (SGE) and Regular Government Employees (RGE).
13. **Subcommittees** NSF may form subcommittees for any purpose consistent with this charter. Such subcommittees must report their recommendation and advice to the full committee for full deliberation and discussion.
14. **Recordkeeping** The records of the Committee shall be handled according to section 2, General Records Schedule 26 or applicable agency records disposition schedule.
15. **Certification** This Committee is determined to be necessary and in the public interest.



David Stonner  
Deputy Director, Office of International and Integrative Activities

Date Filed with Congress: