Partnerships for International Research and Education (PIRE)

John Tsapogas, Amelia Greer, and Anne Emig

Webcast July 29, 2014
Webcast outline

- PIRE Introduction (John Tsapogas)
  - PIRE program and organization
- Funding Opportunities for Foreign PIRE Partners (Amelia Greer)
- PIRE solicitation (Anne Emig)
  - How to prepare a strong PIRE pre-proposal
- Questions and Answers
PIRE Introduction

John Tsapogas
Cluster Coordinator
Global Initiatives Cluster
Introduction

- NSF International and Integrative Activities, International Science and Engineering Section (ISE) structure and organization
- Global Initiatives Cluster
- PIRE
  - ISE managed NSF-wide program
  - PIRE Coordinating Committee (PCC)
ISE Structure

Administrative Management

Overseas Offices
- Paris
- Tokyo
- Beijing

Americas
Europe and Eurasia
Africa, Near East and South Asia
East Asia and Pacific

Global Initiatives

Partnerships for International Research and Education

NSF PIRE Webcast
PIRE supports international activities across all NSF supported disciplines.

The primary goal of PIRE is to support high quality projects in which international collaboration provides critical advantages in advancement of research and education. PIRE seeks to catalyze a higher level of international engagement in the U.S. science and engineering community.

This PIRE competition will be focused on all areas of NSF-supported science, engineering, and STEM education research. It will not be focused exclusively on Science, Engineering and Education for Sustainability (SEES).
Four cohorts of PIRE awards to date

There are 59 PIRE awards

Competition outcomes:

- PIRE 1 2005 12 awards
- PIRE 2 2007 20 awards
- PIRE 3 2010 15 awards
- PIRE 4 2012 12 awards
- PIRE 5 2015 12 awards (anticipated)

Average award size in last competition-$4.4M
Summary of PIRE 5

<table>
<thead>
<tr>
<th>All Science, Engineering, and STEM Education focus areas</th>
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<tbody>
<tr>
<td>One pre-proposal per lead institution</td>
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<tr>
<td>Full proposals by invitation only</td>
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<tr>
<td>No limit on the number of proposals on which a PI, co-PI can participate</td>
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<tr>
<td>Proposals with partners from any country are eligible</td>
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<tr>
<td>Additional funding opportunities with select foreign and domestic partner agencies</td>
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PIRE Competition

Two stage process
- Pre-proposal Deadline: October 21, 2014
- Full Proposal Deadline: May 15, 2015
  - Expect invitations in February, 2015

Expected Numbers
- ~200 preliminary proposal submissions
- 40-60 pre-proposal teams invited to submit full proposals
- 10-15 awards
PIRE Basics

Budget
- Expected average size ~$5M/per award
- Budget request should scale with the scope and effort

Duration
- Up to five years

New Aspects
- Additional funding opportunities for international partners

Decision Making
- Panel recommendations
- ISE and PCC program managers
- NSF partner agencies representatives
Disciplinary expertise

Coordination across NSF

Potential co-funding

PCC is involved all the way to award
PCC Members Introductions

BIOLOGICAL SCIENCES
SALLY O’CONNOR - SOCONNOR@NSF.GOV, (703) 292-4552

COMPUTER AND INFORMATION SCIENCE AND ENGINEERING
DMITRY MASLOV - DMASLOV@NSF.GOV, (703) 292-8910

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MARIA UHLE - MUHLE@NSF.GOV, (703) 292-2250

MATHEMATICAL AND PHYSICAL SCIENCES
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SOCIAL, BEHAVIORAL & ECONOMIC SCIENCES
SHOBHANA CHELLIAH - SCHELLIA@NSF.GOV, (703) 292-4381

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Funding Opportunities for Foreign PIRE partners

Amelia Greer
PIRE Science Assistant
Additional Funding Opportunities

- **China:**
  - Ministry of Science and Technology (MOST), China

- **Finland:**
  - Academy of Finland
  - Tekes—the Finnish Funding Agency for Innovation

- **France:**
  - Agence Nationale de la Recherche (ANR)
  - Centre National de la Recherche Scientifique (CNRS)

- **Germany:**
  - Deutsche Forschungsgemeinschaft (DFG)

- **India:**
  - Science and Engineering Research Board (SERB)

- **Japan:**
  - Japan Society for the Promotion of Science (JSPS)
  - Japan Science and Technology Agency (JST)
Korea:
- National Research Foundation of Korea (NRF)

Mexico:
- Consejo Nacional de Ciencia y Tecnología (CONACYT)

Russia:
- Ministry of Education and Science (MES)
- Russian Foundation for Basic Research (RFBR)

Spain:
- Ministry of Economy and Competitiveness (MINECO)

Taiwan:
- Ministry of Science and Technology (MOST), Taiwan

US Agency for International Development (USAID)
- Partnerships for Enhanced Engagement in Research Program (PEER Science)
Role of Foreign Counterpart Agencies

- Provide funding for the foreign side
- Recommend reviewers and panel members
- Observe panel meetings
- Advise NSF on the process
- Consult in post-award activities

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Participation in these programs is:
- Optional
- Not a requirement

Proposals will be reviewed based on their merit whether or not a partner agency is involved.

Additional documentation will be required in the proposal on the foreign partnership.
Additional Funding Opportunities

- NSF funding will support US PIs
- Partner agencies funding will support international collaborators
- Funding will be awarded in accordance with the policies of each agency

Relevant information about additional submission requirements, proposals and review of proposals is provided in PIRE solicitation
Applicants are not limited to these additional opportunities

Applicants are also free to explore any other research funding sources

Researchers from any country are encouraged to participate in PIRE projects as partners.

Present your project as an integrated concept, include roles and benefits of all domestic and foreign partners.
Specific programs may be limited to defined research themes

For example:

- Academy of Finland: Science of Learning
- France ANR: Bilateral US-France proposals (not multilateral) only in areas of Energy, Advanced Manufacturing and the Social Sciences
- Japan JST: Open to Grantees with active awards in the CREST and PRESTO programs

See solicitation for additional details
How to prepare a strong PIRE proposal

Anne Emig
Program Director
# PIRE Program Objectives

<table>
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<tr>
<th>Excellence in Research</th>
<th>Unique Opportunities</th>
<th>Shared Resources</th>
<th>Students</th>
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<tr>
<td>• Support excellence in NSF supported research areas via the international partnership</td>
<td>• Promote opportunities where international collaboration can provide unique advantages of scope, scale, flexibility, or facilities to advance science</td>
<td>• Engage and share resources and research infrastructure within and across institutions to build strong international partnerships</td>
<td>• Create and promote opportunities for students and early career researchers to participate in substantive international research experiences</td>
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Eligibility: Organizations

Lead Institution

- If not listed, consult PIRE staff
- All types of institutions are encouraged as partners
- There is no limit on the number of proposals in which institutions can participate as partners

NSF PIRE Webcast
Eligibility: People

Individual

- There is no limit on the number of proposals in which individuals can participate as partners and collaborators.
- PI, co-PI, other Senior Personnel must be affiliates of U.S. institutions.
  - Only PI needs to be from Ph.D.-granting university.
  - Partnerships with researchers at wide range of institutions are encouraged.
- Foreign collaborators should be listed as “Foreign collaborators”.

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Eligibility: Current PIRE Projects

Institutions holding current PIRE awards are eligible to apply only if submitted proposals are significantly different in scope from those previously awarded. Incremental expansions of funded projects do not qualify and will be returned without review.
# Preliminary Proposals

## Concept paper/Project description
- Maximum length 6 pages

## Relevance
- As interpreted by the PI(s)
- You explain how your project advances your research area

## Cover page
- Budget: $2
- Identify all countries involved

## Project Summary
- Should stand on its own
- Be understandable to a scientifically literate reader
- Intellectual Merit, Broader Impact

NSF PIRE Webcast
Concept Paper/ Project Description

Challenges
- Outline the research challenges being addressed or breakthroughs being sought

Novelty
- Emphasize novelty and/or originality of proposed approaches

Interdisciplinarity
- Proposals that are interdisciplinary in scope are not required but are encouraged

Impacts
- What significant or transformative impacts in science, engineering or education are expected?

Value Added of International Partnership
- How is this research made better by the international collaboration?

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PIRE Integrated Project

Research

Education

Partnership

NSF PIRE Webcast
**Project Description: Details**

**Administrative Summary**
- Provide information about project and participants

**Research Summary**
- Main ideas and essence of the proposed research
- Issues to be addressed within the research focus, overall goals, approaches, expected outcomes, and the synergy that each participant brings to the project

**Education Summary**
- Goals of education programs and activities, the integration of research and education
- Educational activities should be described in the context of current knowledge of teaching and learning

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Important Notes

- The revised NSF PAPPG, NSF 14-1, is effective.
- **Cost Sharing:** Inclusion of voluntary committed cost sharing is prohibited.
  - All resources necessary for the project must be described in the Facilities, Equipment and Other Resources section of the proposal.
- **Data Management Plan:** Required within the standing data policy (not required in preliminary proposal).
- **Postdoctoral Researcher Mentoring Plan:** Each proposal that requests funding to support postdocs must include a description of the mentoring activities that will be provided for such individuals (not required in preliminary proposal).

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What makes a strong proposal?

**Goals**
- Address the PIRE program objectives in your proposal

**Ideas**
- Preliminary proposal stage is about ideas and excitement of your concepts, not implementation

**Team**
- Provide sufficient details to allow merit review, describe the essence of your project and your research team
Review Criteria: Standard NSF

NSB approved

Intellectual Merit | Broader Impact

Additional

Integration of Research and Education | Integration of Diversity into NSF Activities

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Review Criteria: PIRE-specific

- Value Added through International Partnership
- Internationally-Engaged Educational Activities
- Institutional Engagement
- Evaluation and Assessment
- Project Management
Typical Mistakes in large group proposals

Proposed project is too broad
- Appears overly ambitious, usually lacks important details and specifics
- Difficult to convince reviewers that the goals of the project will be achieved

Proposed project is too narrow
- Appears as an individual PI project or a collection of separate efforts
- Difficult to convince reviewers that group funding is needed

Proposed project is weakly integrated
- Appears as a list of activities rather than a coherent program
- Contributions and benefits of partners are not clear
Review Process

- Pre-proposals to be panel reviewed
  - Augmented by *ad hoc* review as needed
- All proposals will be grouped into disciplinary areas
- All panels will be formed and managed by ISE in partnership with members of the PCC
- Counterpart agency representatives will observe, provide technical expertise, and advise ISE on the process
Selection of Reviewers

- US and International Reviewers
- Mix of researchers from academic, industrial, and national and government institutions
- Panelists will have expertise in
  - Science/engineering/education research area, typically with strong international focus
  - Managing international research projects, group projects with international participation, and/or international student research programs
Review PIRE abstracts & project web sites via URLs listed on:

- **PIRE 4**: http://www.nsf.gov/od/oise/pire-2012-list.jsp
- **PIRE 3**: http://www.nsf.gov/od/oise/pire-2010-list.jsp
- **PIRE 1**: http://www.nsf.gov/od/oise/pire-2005-list.jsp

Looking Beyond Borders: A Project Director’s Handbook of Best Practices for International Research Experience for Undergraduates:


Additional Links on PIRE website:

It’s time for questions
Contact us

For questions regarding PIRE contact
PIRE-info@nsf.gov

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- Cassandra Dudka  cdudka@nsf.gov
- Anne Emig  aemig@nsf.gov