

**UM Call for Internal Pre-proposals
NSF Partnerships for International Research and Education (PIRE)**

The PIRE program supports fundamental research in **all areas of science and engineering** that are supported by NSF (including education research in any area that NSF supports) and that involve an **international collaborator** from **any country** in the world. Unlike in previous solicitations, there will be **NO thematic emphasis** for this year's competition.

Key Dates (2014-15):

July 21, 2014	NSF 2014-15 PIRE Solicitation announced
July 29, 2014	NSF PIRE Webinar briefing held
Monday, Sept 15:	Internal proposals due by midnight to jghale@olemiss.edu
Sept. 16-25:	ORSP will coordinate reviews and select pre-proposal to submit
Friday, Sept 26:	ORSP will announce selected pre-proposal
Sept 27 – Oct 14:	Investigators can edit/improve pre-proposal
Tuesday, Oct 14:	Final pre-proposal due to ORSP (Program Development Specialist)
Tuesday, Oct 21:	Pre-proposal due to NSF
May 15, 2015	Full proposal deadline to NSF (invited proposals only)

Funding: 40 to 60 invited proposals (or about 25% of an estimated 200 pre-proposals), with an expected 10 to 15 awards (or about 25% of invited full proposals) averaging a total of **\$4.5M** per award for up-to-**five-year projects**. Thus, about 12% of all pre-proposals will result in awarded full proposals.

Limitations: UM, as a PhD granting institution, may submit 1 pre-proposal as the lead; An individual investigator may participate in multiple proposals as a partner or collaborator.

For More information:

- Full Solicitation: <http://www.nsf.gov/pubs/2014/nsf14587/nsf14587.htm>
- FY12 PIRE Awards List: <http://www.nsf.gov/od/iaa/ise/pire-2012-list.jsp>
- FY11 PIRE FAQ: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11073
- Handbook on Best Practices for International Undergraduate Research Experiences: <http://www.nsf.gov/pubs/2006/nsf06204/index.html>

Questions on:

- *UM internal pre-proposals* and process: Contact Jason Hale
- *NSF pre-proposal*: Contact your ORSP Research Advocate/Program Development Specialist

UM/ORSP Internal Pre-proposal Process and Review Criteria for NSF-PIRE

Internal pre-proposals will follow the pre-proposal format described in the Solicitation.

Read the entire solicitation carefully and watch the full **~2-hour webinar video**¹.

Down-selection of UM internal pre-proposal will be conducted based on *ORSP Standard*

Procedure on Limited Submissions: <http://www.research.olemiss.edu/resources/limitedsubmissions>

Internal pre-proposal² Must follow the format described in the Solicitation:

- Project Summary (1 page, w/*Overview, Intellectual Merit, & Broader Impacts*)
Understandable by a scientifically literate reader from any discipline.
- Project Description (<= 6 pages) addressing: *Challenges, Novelty, Inter-disciplinarity, Impacts, and Value of International Partnership*, in 3 sub-sections:
 - Administrative Summary (<= 1 page) including: *Title, PI, Duration, Estimated Total Budget, Lead Institution, List of Partners and Key Personnel in U.S. and Abroad, Co-Funding Agencies (if applicable)*
 - Research Summary (<= 3 pages), including: *main ideas; overall goals; approaches; expected outcomes; contribution of each partner*
 - Education Summary (<= 2 pages), including: *goals; integration w/research; and activities (in the context of current knowledge of teaching/learning)*
- Biosketch of PI in NSF Format; References Cited.
- Informal (e.g., e-mail) evidence of partners' agreements to collaborate, including resources they will require, and whether those resources have been secured or, of not, the plan and timeframe for obtaining them (e.g., by submitting a co-funding proposal to one of the 16 NSF PIRE partners, or some other funding agency)

Not Required for UM internal pre-proposal, but required for NSF pre-proposal:

Biosketches of Co-PIs, Other Senior Personnel, or Foreign Collaborators; Conflict of Interest Statement; Cover Page.

Not Required for NSF pre-proposal: Data Management Plan; Postdoc Mentoring Plan; Current/Pending Support; Facilities Equip & Other Resources; Budget & Justification

If co-funding is proposed for one of NSF's 16 PIRE partners, topic/partner compliance.

1) China-Ministry of Science and Technology of the People's Rep. of China (MOST); 2) Finland-Academy of Finland; 3) Finland-Tekes-The Finnish Funding Agency for Innovation; 4) France-Agencce Nationale de la Recherche (ANR); 5) France-Centre National de la Recherche Scientifique (CNRS); 6) Germany-Deutsche Forschungsgemeinschaft (DFG); 7) India-Science and Engineering Research Board (SERB); 8) Japan-Japan Society for the Promotion of Science (JSPS); 9) Japan-Japan Science and Technology Agency (JST); 10) Republic of Korea-National Research Foundation of Korea (NRF); 11) Mexico-The National Council for Science and Technology (CONACYT); 12) Russia-The Ministry of Education and Science of the Russian Federation (MES); 13) Russia-Russian Foundation for Basic Research (RFBR); 14) Spain-Ministry of Economy and Competitiveness (MINECO); 15) Taiwan-Ministry of Science and Technology of Taiwan (MOST); 16) USAID, through the Partnerships for Enhanced Engagement in Research Program (PEER Science).

¹ NSF PIRE Webinar (recorded 7/29/14; you still must "register" to watch the 2-hour recorded video): <http://www.tvworldwide.com/events/nsf/140729/>

² For precise details of pre-proposal format, see NSF solicitation.

UM Internal Review Criteria/Checklist

Standard NSF Review Criteria

- **Intellectual Merit: Research**
 - Exciting, clear, Ideas and Concepts
 - Identifies specific, ambitious, attainable, basic science research goals
 - Identifies an exciting, big impact or transformation opportunity
 - Essence of Team (and value of each partner) is clear
 - Coherence of proposed activities
 - Specific details reflect well-considered approaches
 - Summary understandable to scientifically literate reviewers of any field
 - Strength of PI: Experience managing major projects

- **Intellectual Merit: Education**
 - Integrates research with education
 - Clarity and reasonableness of educational goals, activities, and outcomes
 - Educational activities described in the context of current (cited) knowledge about teaching and learning
 - Why goals can't be met through other funding mechanisms
 - Justification described in pedagogical context

- **Broader Impacts:** state in NSF terms, including one or more of these:
 - Fully and quantifiably engages under-represented U.S. groups in STEM
 - Improves STEM education and educator development
 - Increases science literacy or public engagement w/ science & technology
 - Improves well-being of individuals in society
 - Develops a diverse, globally competitive workforce
 - Increases partnerships between academia, industry, nations, etc.
 - Improves U.S. national security
 - Increases U.S. economic competitiveness
 - Enhances U.S. infrastructure for research and/or education
 - Involves jr. faculty, undergraduate/graduate students, and/or post-docs

Additional PIRE Review Criteria

- Integration of education and research
- Integration of diversity into project activities
- Obviousness of strength of the international partnership
- Budget is appropriate scope and scale for proposal; reflects true needs (esp. at full proposal stage)
- Project management plan is detailed and confidence inspiring (esp. at full proposal stage)

Pitfalls to Avoid in Large Collaborative Proposals

- Too broad (even at the pre-proposal stage) to be able to give sufficient detail to inspire reviewer confidence that the project can be accomplished
- Too narrow: don't establish the need for the "PIRE-scale" level of activity (\$\$)
- Weakly integrated: seems like a list of individual activities, not a coherent program, with unclear benefits of the partnership

ORSP notes from NSF PIRE Webinar Q/A (selected)

- NSF PIRE funds may only be spent for the U.S. institution(s), including international travel; NSF PIRE funds will generally not be available to the international partner(s).
- NSF funds basic science research and education, but not medical research. NSF will fund research on animals, sometimes; NSF will generally not fund research on humans. Basic research that has *implications* for health might be ok. If in doubt about whether the proposal is with NSF's domain, contact the appropriate NSF program officer.
- Q: What documentation is needed from partners?
A: At the pre-proposal stage, only informal documentation (e.g., an e-mail) of each partner's agreement to participate is required. By full proposal stage, you will need to document formal commitment of each partner, and that they have, or have a feasible plan to obtain, resources to participate.
- Q: Must international partners be conventional academic institutions?
A: No, international partners are not restricted to conventional academic institutions; but, one or more partners (but not necessarily all partners) should be able to provide research experiences for students.
- Q: Can you do the research development here in the U.S. and the testing at an international site.
A: Yes.
- Q: If the collaboration already exists, is that bad?
A: No, that's ok. No priority for new collaborations vs. established ones.
- Q: Have assistant professors ever been awarded PIRE's?
A: Yes, and they can be again, but must demonstrate expertise and experience that will inspire confidence that he/she can manage a large international project.
- Q: What about a multidisciplinary proposal that involves only one U.S. institution and one or more international partners? (No domestic partners).
A: This is ok. They have many such PIRE projects.
- Q: What about proposals with only one international partner?
A: This is ok. Between 1 and 8 international partners is allowed. More partners are better than fewer. (He actually said that of the 59 PIRE projects that have been funded in the past, 55 of them have involved 2 or more U.S. institutions, and some of them have 8; however, I'm pretty sure he meant international, not U.S.)

- Q: What is the \$ cutoff for equipment purchases?
A: PIRE is not focused on instruments. Examples of acceptable costs are laptops for your students, seismographs, etc. Any equipment should be a small fraction of the total budget and clearly needed/justified.
- Q: Are Educational Research Proposals for K-12 acceptable?
A: Yes.
- Q: Partnerships with Russia OK, given Ukraine crisis?
A: Yes, for now anyway.
- Q: NSF guidelines for IP?
A: No, but UM proposers should identify potential IP opportunities in their UM internal pre-proposals and any preliminary plans on how these will be managed
- Q: Expectation that students funded under PIRE be given international experiences?
A: Yes, and many or most of them should U.S. citizens or permanent residents, and a recruitment plan that pays special attention to U.S. students is advisable. No rules on how long the international experiences should be, but often the more advanced students will spend longer (3 to 9 months) where as less advanced students will spend less time abroad (2 to weeks)
- Q: How many students should be impacted?
A: No minimum or maximum requirements. See abstracts of funded proposals.
- Q: How much detail about methods in the pre-proposal?
A: Not that much, unless the choice of methods is an important aspect.
- Visit www.globalresearchcouncil.org to learn about counterpart organizations are in SOME other institutions
- Q: What about pending support from NSF?
A: Don't have to list this at pre-proposal stage. At full proposal stage, it still wouldn't be held against you, except possibly CAREER proposal holders, who would have to argue why they could do both projects effectively.