

## Announcing International Research Opportunities in Summer 2012 for Penn State Undergraduate Students

Penn State's Center for Language Science (CLS) announces Year 2 of an exciting and unique opportunity for undergraduate students. With the generous support of funding from the National Science Foundation program *Partnerships for International Research and Education* (PIRE), the CLS will sponsor undergraduate students' travel to international sites in Summer 2012 to conduct research on the science of bilingualism.

One of Penn State's main educational goals, in line with our country's key educational priorities, is to enrich the undergraduate academic experience by increasing participation of undergraduate students in research abroad. The PIRE grant "***Bilingualism, mind, and brain: An interdisciplinary program in cognitive psychology, linguistics, and cognitive neuroscience***," awarded to the CLS on August 15<sup>th</sup> 2010 for a 5-year period (2010-2015), allows for the creation of international research opportunities for qualified undergraduate students working on language research, who have had research experience with CLS faculty. Each year, eight CLS undergraduate students will receive funding to conduct innovative research on bilingualism at leading collaborating institutions in Europe and Asia. These include Beijing Normal University (Beijing, China); University of Hong Kong (China); Max Planck Institute (Leipzig, Germany); Radboud University (Nijmegen, The Netherlands); University of Granada (Granada, Spain); Universitat Rovira i Virgili (Tarragona, Spain) and Bangor University (Wales, UK). We anticipate adding Lund University (Lund, Sweden) as a collaborating institution by Summer 2012.

Funding will cover airfare, housing and meals, tuition, and some incidentals and research expenses. Applications are **due Monday December 05<sup>th</sup>, 2011** (please note that the deadline has been extended beyond the original deadline of November 04<sup>th</sup>) and must be sent by email to Sharon Elder at [pireundergrads@gmail.com](mailto:pireundergrads@gmail.com). **No hardcopy applications will be accepted**

### 1. Application materials.

- (1) Completed application form. A copy of the application form can be directly downloaded from [http://cls.psu.edu/pire/pire\\_faq.html](http://cls.psu.edu/pire/pire_faq.html). Questions about the application process should be directed to your PIRE faculty advisor. You can also write to Sharon Elder at [pireundergrads@gmail.com](mailto:pireundergrads@gmail.com)
- (2) Copy of applicant's Curriculum Vitae
- (3) A letter of recommendation from the CLS faculty research advisor. The letter of recommendation must be sent directly to Sharon Elder at [pireundergrads@gmail.com](mailto:pireundergrads@gmail.com)

### 2. Eligibility requirements.

- (1) Must be a US citizen
- (2) Must conduct research for the proposed summer research experience that fits with the goals of the CLS PIRE project (see the abstract for the PIRE grant appended below).
- (3) Must have completed research experience with a CLS research faculty member **for at least one year prior to summer travel**. Students currently enrolled in research credits with CLS faculty and students who plan to enroll for research credits during the entire upcoming academic year (i.e., Fall 2011 and Spring 2012) are eligible to apply.
- (4) Eligible students will have at least once semester in residence remaining at PSU after returning from the summer abroad research experience.

Priority will be given to students with more research experience and to junior students. Students who currently do not have research experience can prepare themselves for eligibility by enrolling in research credits with a CLS faculty member starting in Fall 2011 and continuing in Spring 2012.

Students selected to receive PIRE awards will be required to:

- Enroll in 6 credits of LING 496 during the summer of travel abroad.
- Enroll in 3 research credits with their PIRE advisor during the returning in-residence semester (i.e. Fall 2012 for students traveling during Summer 2012) to complete their project, present their work at the CLS and serve as a “PIRE buddy” for the undergraduate cohort traveling in Summer 2013.
- Attend the CLS meetings, which are held every Friday morning. Time and place to be announced prior to the beginning of classes.

**Any questions should be directed to your PIRE faculty advisor. You can also write to Sharon Elder at [pireundergrads@gmail.com](mailto:pireundergrads@gmail.com)**

**Award#0968369 - PIRE: Bilingualism, mind, and brain:**

**An interdisciplinary program in cognitive psychology, linguistics, and cognitive neuroscience**

**Abstract.** This PIRE project, a collaboration between three U.S. and seven foreign institutions in Europe and Asia, will investigate the cognitive and neural consequences of bilingualism to understand the ways in which multiple languages are learned and used. Recent behavioral and neuroscience evidence suggests that there is more extensive processing interaction between the two languages of a bilingual than previously thought, and this is true even when bilinguals are using only one language. Bilingual science therefore provides a tool for revealing fundamental principles about the mind and the brain otherwise obscured in research focused on monolinguals. The next stage of research on bilingualism calls for national and international collaborations to unify our understanding of the nature of the bilingual mind and brain, the process of bilingual language development, and the consequences of bilingualism for cognition. International collaboration is essential for accessibility to widely differing bilingual populations of several spoken, written, and signed languages. This award enables an international network of collaborators with common research goals and methods to exploit unique and complementary opportunities to investigate properties of human languages. Leveraging the diverse perspectives inherent in interdisciplinary and cross-cultural research will facilitate the establishment of a world-class research context for investigating bilingualism science, enable generalization of research findings, and exploit bilingualism as a tool for investigating the representation and processing of language in the mind and brain.

This PIRE project will bring together the complementary international expertise of collaborators studying bilinguals who communicate in a variety of languages (e.g., Spanish, Catalan, Welsh, and Chinese). A unique feature of this project is the partnership of U.S. and Dutch scientists exploring the consequences of bimodal bilingualism in deaf people. The NSF-funded VL2 Science of Learning Center at Gallaudet University, a world leader in education for deaf students and research on topics related to

deaf people, focuses on issues of visual language processing recognizing deaf readers as bilinguals using a signed language for communication yet reading a written language. Researchers in The Netherlands also study sign language and gesture, deaf literacy development, and speech-sign translation but using different signed and written languages. The convergence of these projects provides a unique opportunity for cross-linguistic collaboration and training that would not be possible in the U.S. alone. Enthusiasm for bilingual research naturally draws an unusually diverse group of students, scientists, and research participants. This PIRE project will be committed to harnessing that excitement to create opportunities for broadening participation in science by research participants from a broad spectrum of ages and linguistic abilities, and by students and researchers from groups under-represented in the sciences. This PIRE project will provide training and research opportunities to students and scientists not possible without the international collaboration, such as conducting research abroad, participating in virtual international colloquia, developing and sustaining international collaborations, and training by industrial partners with specific expertise in speech, literacy, and neuroimaging. The project also provides institutional opportunities for research with diverse populations, enriching undergraduate, graduate, and post-doctoral training, and increasing opportunities for early career faculty to develop research programs globally engaged and solidly grounded in cross-disciplinary collaborations. The nature of the science of bilingualism is inherently interdisciplinary and cross-cultural and this project provides opportunities for the participating U.S. institutions to strengthen international offices and activities, develop survey tools to evaluate student's international experiences, and provide energy and synergy for integration and for strengthening links across disciplinary units. This project will strengthen the U.S.'s scientific capital through international training not otherwise available in the U.S. U.S. institutions will benefit from attracting international visiting researchers and students to enrich the internationalizing initiatives and cultures on their campuses. The U.S. population is also increasingly bilingual with ever-diversifying demographic and cultural characteristics so research results are expected to reach well beyond academia.

US project partners include The Pennsylvania State University, Gallaudet University (DC), and Haskins Laboratories at Yale University (CT). International partners include Normal University (China), the University of Hong Kong (China), the Max Planck Institute for Human Cognitive and Brain Sciences (Germany), Radboud University (The Netherlands), Universidad de Granada (Spain), Universitat Rovira i Virgili (Spain), and the ESRC Centre for Research on Bilingualism in Theory and Practice, Bangor University (Bangor, UK).

This project was jointly funded by NSF's Office of International Science and Engineering and the Division of Behavioral and Cognitive Sciences.

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