International REU for Gravitational Physics

Bernard Whiting and Guido Mueller
University of Florida
with support from NSF

http://www.phys.ufl.edu/ireu

Early Years (2004-2007)

- Initial Hosts
 - LSC-groups:
 - Glasgow, Hannover, ANU, UWA
- Students from LSC-Institutions (2-5 students/year)
 - UF, Trinity College, Embry-Riddle, San Jose State University, Simmons College, CSU Dominguez Hills, ...
 - Students who participated in UF's national REU, and CIT/LIGO SURF Program

Last Years (2008-2009)

- Additional Hosts
 - VIRGO groups (through NSF/INFN agreement): Cascina, Sannio, Rome, Napoli, Benevento, ...
 - NAOJ, Cardiff, Birmingham, Paris, ...
- Students from all over the US (2008: 12, 2009: 15 students)
 - Very diverse background (ranging from Princeton to New College in Florida)
 - Still prefer students from small LSC institutions

What we do

- Solicit applications from undergraduates
- Assemble projects from hosts worldwide
- Coordinate students with projects and hosts
- Send them to foreign labs for two months
- Provide them with stipend, travel & housing
- Brief and debrief them in Gainesville, FL

What you can do

- Identify suitable undergraduates (In the Fall)
 - US residents, studying in US
 - under-represented minorities
 - limited access to research opportunities
 - demonstrated lab experience
- Encourage (and support) them to apply
 - Best before Xmas! (Earlier than other REUs)
- Send to http://www.phys.ufl.edu/ireu

What hosts do

- Offer u-grad projects for selection by September
- Provide students with prior reading material (starting ~February)
- Help to identify and select housing
- Host and mentor students during visit -2 mo
- Provide supportive environment & facilities
- Monitor progress, provide us with feedback (and I apologize for the questionnaires, but after all NSF is the federal government ...)

Highlights

- 2007-Students (5 students total)
 - Danielle Wuchenich is now a graduate student at ANU!
 - Lucienne Merrill did additional GW research at Gingin in Fall 08 and is now a graduate student at UWA!
 - Luis Peron (Undergrad from Puerto Rico) is now a graduate student at UF
- Early feedback from 2008-Students
 - Aaron Spector (UF undergrad) will join UF grad program and plans to finish with a masters and then move to AEI







fitp://www.phys.ufl.edu/ireu/application.html



Q → Google

WELCOME

Home

Application

Funding

Projects

International Hosts

Schedule

Other REU Sites



The IREU Experience

Scientific engagement International contacts Travel opportunities Cultural exposure Meet other students Personal enrichment Develop new projects



International Summer Research Program in Gravitational-Wave Physics: Research Experiences for Undergraduates around the world

APPLICATION PROCEDURE

If you are interested in participating in the UF IREU program, you should send the following:

- (1) Official Transcript
- (2) Curriculum Vitae
- (3) Name and contact information of someone willing to write you a recommendation letter (preferably someone you have worked for in a lab)
- (4) A list of projects you find interesting (from the projects page)
- (5) A person who can act as your mentor in your home institution (if it is the person writing you a recommendation letter, just mention this)
- (6) Address to which a check can be securely sent (not a dorm) in Summer
- (7) Visa status

Requirements (2)-(7) should be sent to vega@phys.ufl.edu.

The transcript (requirement #1) must be addressed to:

Gravitational Physics International REU Program Department of Physics University of Florida P.O. Box 118440 Gainesville, FL 32611-8440

Application Deadline

There is no strict deadline for admission, but the best chance for getting matched to a project is by filing a complete application before Mid-December. However, we continue to review applications until all positions are filled.

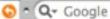






ttp://www.phys.ufl.edu/ireu/funding.html







Gravitational Physics International REU

WELCOME

Home

Application

Funding

Projects

International Hosts

Schedule

Other REU Sites



The IREU Experience

Scientific engagement International contacts Travel opportunities **Cultural exposure** Meet other students Personal enrichment Develop new projects



International Summer Research Program in Gravitational-Wave Physics: Research Experiences for Undergraduates around the world

FUNDING

Details: This is an NSF initiative. Undergraduate participants will receive a \$4,200 stipend, travel health insurance. an allowance for travel to/from Gainesville, FL and to/from their host institution. Housing will be organized by the host institution. It can be a student dormitory or a small apartment. We normally arrange to pay for housing directly.

Eligibility: IREU participants must be undergraduate students and must be citizens or legal permanent residents of the United States or its possessions.







fireu/schedule.html







Gravitational Physics International REU

WELCOME

Home

Application

Funding

Projects

International Hosts

Schedule

Other REU Sites



The IREU Experience

Scientific engagement International contacts Travel opportunities Cultural exposure Meet other students Personal enrichment Develop new projects



International Summer Research Program in Gravitational-Wave Physics: Research Experiences for Undergraduates around the world

SCHEDULE

Mid-September: Start assembling project list. This process usually proceeds throughout the Fall.

Mid-September: Start receiving applications. If previous projects interest you, consider applying even before the project list is complete.

Mid-December: Applications are reviewed. Allocation process commences.

Mid-January: Admitted students are announced. All admitted students are notified via email.

Throughout Spring: Contact with host is established. Reading material is assigned. Visa applied for. Travel and housing arrangements are made.

Mid-May: 3-day Gainesville visit. Program Briefing. Meet other students. Present you understanding of your proposed project.

June-July: Work in lab abroad. Usual duration, 8-10 weeks.

Mid-August: Back to Gainesville. Debriefing. Research presentation and submission of written report. Final payment authorized.

Images from a Summer well spent

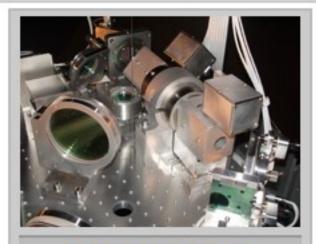
Scientific aspects



Elizabeth works on a scan with the Atomic Force Microscope



Working with the ellipsometer time off from sightseeing



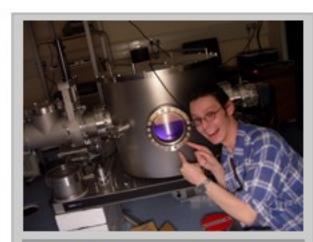
John was working on a Faraday Isolator at Virgo



James Watt's personal steam engine in Glasgow



Andrew made an excursion to see the Virgo detector



Richard shows off his plasma cleaning experiment



Casey installs accelerometers to measure fan noise directly



Cardiff sent an exhibit to the Royal Society Summer Exhibition



Gravity at work in nearby Pisa

Sightseeing opportunities



Jeff really got his eye into ancient Rome



Stephanie against the view from inside the tower in Celle,

Germany



Fast cars are a speciality in <u>Italy</u>