

## **Postdoctoral Fellowship Announcement**

Announcing a National Science Foundation funded postdoctoral fellowship available to an institution to support a postdoc to study learning in informal environments while in residence at the Laser Interferometer Gravitational Wave Observatory's Science Education Center located in Livingston, Louisiana.

LIGO is a research facility with an adjacent small highly interactive science center. LIGO has established close relationships with a number of school districts and offers extended programs for students and teachers, as well as one-time field trips. There is growing interest in the role of learning in informal environments and in the relationship between formal and informal learning. LIGO provides a unique opportunity for a learning scientist to study the ways in which current research science can be leveraged to spark student interest and learning in science. During many afternoons and weekends, the interactive science center can be utilized exclusively for invited groups as part of a research project. Past educational research at LIGO has resulted in numerous presentations as well as one paper: Szechter, L. E., & Carey, E. J. (2009). Gravitating toward science: Parent-child interactions at a gravitational-wave observatory. *Science Education*.

### **Qualifications for the postdoc:**

- PhD in learning sciences or related field
- Association with a current university
- Familiarity with research methods commonly used in informal science settings
- A background or strong interest in physics or engineering
- Excellent writing skills
- Previous experience working with or studying informal science education institutions or organizations is desired, but not essential
- Prior knowledge of the physics of LIGO is desired but not essential

### **About LIGO Labs and the LIGO SEC:**

LIGO is an NSF funded cutting edge research effort looking for gravitational waves coming from astronomical objects. There are two LIGO laboratories, one located in Livingston, Louisiana, and one located in Hanford, Washington. The lab in Livingston, Louisiana also hosts a Science Education Center (SEC) that features an auditorium, classroom and a 5,000 square foot exhibit gallery that features science museum exhibits centering on science related to LIGO. Field trips typically feature an introduction to LIGO, a tour of the facility, a classroom activity, and free time in the exhibit hall. For more information on LIGO and the LIGO SEC please check out: [www.ligo.org](http://www.ligo.org) , [www.ligo-la.caltech.edu](http://www.ligo-la.caltech.edu) and the website [www.einsteinsmessengers.org](http://www.einsteinsmessengers.org) .

As part of the LIGO Science Education Center partnership (LIGO SEC) grant, the Baton Rouge Area Foundation is facilitating the following educational outreach opportunities through LIGO. Aspects of these programs can serve as the subject of study for the postdoctoral fellow.

- 1) Prolonged exposure to LIGO SEC outreach for 3 smaller school systems: This outreach effort will follow a single group of students from each school system who start out as 5<sup>th</sup> graders. When the students are in 5<sup>th</sup> grade, 6<sup>th</sup> grade, 8<sup>th</sup> grade and 9<sup>th</sup> grade, they will be invited to the LIGO facility and provided with field trip experiences. The teachers will be provided with professional development.

- 2) Outreach to two larger school systems for the 9<sup>th</sup> grade: This outreach will involve providing teacher workshops for 9<sup>th</sup> grade science teachers from each system. Then a portion of each student body's 9<sup>th</sup> grade class will attend field trips at LIGO.
- 3) Additional opportunities such as family math and science nights and extended professional development opportunities will be made available for the 5 systems.
- 4) One open day a month geared towards the public on Saturdays.

**About the Postdoctoral Project:**

The PostDoctoral project should either:

- 1) Take a closer look at conceptual development of LIGO-SEC's visitors due to their interactions with LIGO Science Education Center OR
- 2) Seek to automate simple data collection at exhibits so that parameters like holding time can be collected without spending staff time recording such elements.

**Postdoctoral Fellowship award**

*Once the recipient of the Postdoctoral fellow is selected, the award will be made by the Baton Rouge Area Foundation to the postdoctoral scholar's home institution. The postdoc will remain an employee of his/her home institution.* LIGO will provide research and office facilities for the postdoc for the term of the fellowship (typically a year with the possibility of renewal). Projected starting time is Oct. 2013. The postdoctoral award is projected to be around \$40,000 plus off-campus indirect costs & employee benefits awarded to the home institution.

**Applying for the Postdoctoral Fellowship.**

In order to apply for the postdoctoral fellowship first contact:

Joseph A Giaime [giaime@ligo-la.caltech.edu](mailto:giaime@ligo-la.caltech.edu), 225-686-3169

After initial contact is made you will need to submit the following documents:

- 1) A curriculum vitae
- 2) A letter of support from the current university-based faculty member who would agree to supervise your carrying out the project to be funded by this program.
- 3) A one page document tentatively describing the proposed project you would seek to carry out during your tenure at LIGO
- 4) A description of the supervising faculty member's involvement from your home institution

Applications will be considered until awarded. To ensure full consideration, please submit by July 22.

Send these documents to the attention of:

Dr. Joseph Giaime  
[giaime@ligo-la.caltech.edu](mailto:giaime@ligo-la.caltech.edu)  
LIGO Livingston Observatory  
19100 LIGO Lane  
P.O.Box 940  
Livingston, LA 70754