

<http://www.csuci.edu/ira/index.htm>

**Application**  
**Instructionally Related Activities Funds Request**  
**Spring and Fall 2014**

Applications must first be sent to the appropriate program chair. Chairs will then recommend and route them to the Dean's Office for review and authorization. The Dean's Office will then forward them to the IRA Committee for consideration.

**Activity Title: Mathematics Seminars**

Project Sponsor/Staff: Jesse Elliott, x2768; Support Personnel: Jacky Burneo, x8815

Activity/Event Date(s): weekly events throughout Spring and Fall 2014

Date: 9/12/2013

*\*\*Please Note that for Fall Requests the earliest that you will be notified of funding availability will be early June 2013 and for Spring Requests early January 2014.*

**Please check if any of the following apply to your IRA:**

- |   |   |
|---|---|
| <input type="checkbox"/> Equipment Purchase     | <input type="checkbox"/> Field Trip   |
| <input checked="" type="checkbox"/> Event       | <input type="checkbox"/> Participant data collection for public dissemination, i.e. interviews/surveys that result is a journal/poster session/newsletter |
| <input type="checkbox"/> IT Requirements        | <input type="checkbox"/> Risk Management Consultation   |
| <input type="checkbox"/> International Travel   | <input type="checkbox"/> Late Submission  |
| <input type="checkbox"/> Space/OPC Requirements |   |
| <input type="checkbox"/> Infrastructure/Remodel |   |
| <input type="checkbox"/> Other _____            |   |

Previously Funded: YES      Yes, Request # #180, #306; **547**

Does your proposal require IRB (Institutional Review Board) approval: No

Assessment submitted for previously Funded Activity: YES

Academic Program or Center Name and Budget Code: Mathematics, 750

Date of Submission: 9/20/2013

Amount Requested: \$3800

(Should match item 2. E. on page 4)

Estimated Number of Students Participating: ~800, counting repeated participation; average attendance ranges from 20 – 30 with highs near 100, with 8 to 10 talks per semester.

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Spring 2013

**Requirements and Signatures**

Please provide the following in your application:

1. **Brief Activity Description.** Describe the activity and its relationship to the educational objectives of the students' program or major.

"Mathematics Seminar" consists of a weekly series of invited lectures on contemporary mathematics and applications of mathematics to other areas of study and life. Presenters include CSUCI students and faculty as well as a large number of invited speakers per year. Topics are chosen from mathematics education, mathematics research, and interdisciplinary applications of mathematics. Recent presentation topics have included topics as diverse as the Higgs Boson at CERN (our most publicized lecture, drawing nearly 100 people—see the sample flyer at the end of this application), the use of art projects to further students' learning of high school algebra, applications of mathematics to exercise science, engineering for the other 90% (that part of the world's population making less than \$4 per day), two research studies on a) using art, and b) using poetry to enhance students' learning in mathematics classes, and many others. Seminars are publicized and open to the entire campus and to the local community. Typically between 20 and 30 university and community members participate in each seminar (with highs near 100), which translates to roughly 400 participants each semester, about 3/4 of which are students. We request funds to be able to cover costs (lodging, travel, etc.) and pay honoraria to our invited speakers during Spring and Fall 2014.

2. **Relation to IRA to Course Offerings.** All IRAs must be integrally related to the formal instructional offerings of the University and must be associated with scheduled credit courses. Please list all classes that relate to the program proposed.

Students taking MATH 499 are beneficiaries of these funds, as they are required to attend the weekly seminars. However, all CI students are invited to attend, and a broad range of topics attract many participants. Students with an interest in mathematics and in the applications of mathematics to other fields (e.g. to other sciences, including social sciences) attend as interest dictates. Many instructors provide extra credit for students that attend. In addition, students in MATH 492, MATH 497, UNIV 498, and LS 492 attend and even give presentations at some seminars. In particular, we use the seminar for capstone presentations and Master's thesis presentations, which typically occur in the last 1 to 3 weeks of the semester.

3. **Activity Assessment.** Describe the assessment process and measures that the program will use to determine if it has attained its educational goals. **Please note a report will be due at the end of the semester.**

Mathematics Seminar uses attendance and participation at seminars and student evaluations for MATH 499, MATH 492, MATH 497, and UNIV 498, and for LS 492 as appropriate to determine whether the program has attained its educational goals. Students host speakers and many also give presentations themselves. An ongoing CI Learn discussion board site is also

used to receive student feedback on various presenters' topics and delivery. We also use the feedback obtained from distinguished presenters to assess whether we have been good hosts.

- 4. **Activity Budget.** Please enclose a complete detailed budget of the entire Activity **bold** specific items of requested IRA funding. (Page 4)

We use a range of speakers: some travel from out-of-state or out-of-country, others arrive from universities and companies within driving distance, and some are part of the CI community. We request these funds to cover the travel costs of those driving from within Southern California, some part of the travel costs of speakers arriving from farther away, and honoraria for our distinguished speakers (typically \$150 per speaker). However, tenure-track and tenured faculty speaking in seminar do not receive honoraria.

**TOTAL = \$3800 for speakers' honoraria and related costs (travel/lodging/etc) – estimate 16-20 speakers during Spring and Fall 2014.**

- 5. **Sources of Activity Support.** Please list the other sources of funding, and additional support for the activity.

Each semester, some faculty at CI donate their time and effort by giving some of the seminar presentations. (However, it is neither possible nor desirable for only CI faculty to present at the Mathematics Seminar.) CI faculty also conduct the behind-the-scenes work of making the arrangements necessary to provide for a positive experience for our distinguished visitors. CI faculty often buy speakers' dinners out of their own pockets and provide refreshments for all seminar attendees. Students sometimes volunteer also to provide refreshments. Other institutions and associations (e.g. UCSB, CLU, the Southern California-Nevada Section of the Mathematical Association of America) engage in cost-sharing (particularly travel costs) when we share speakers who make one trip to Southern California to speak at multiple events.

- 7. **Acknowledgment.** Project Sponsor and Program Chair acknowledge that they have reviewed and accepted the Conditions and Considerations detailed on page 2.

Signatures and Dates

Jesse I  
Projec

Jesse Elliott

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Sept 20, 2013

Date

Progrc

Iwona Grzegorzyc

\_\_\_\_\_

Sept 20, 13

Date

Dean

Karen Carey

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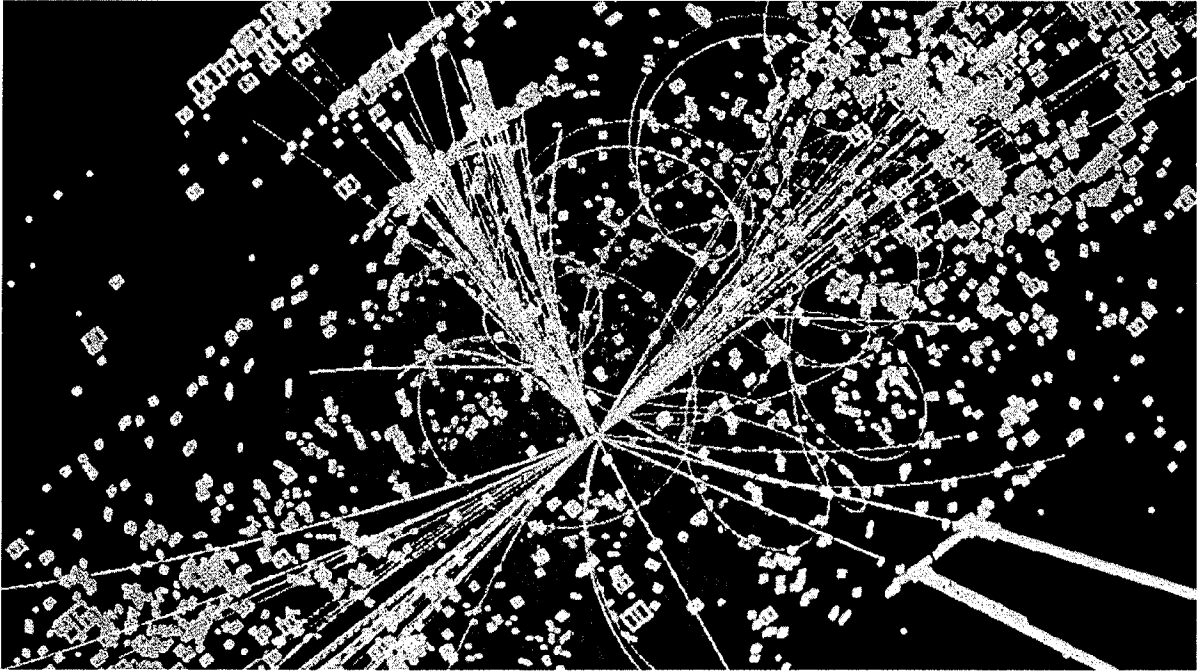
10/1/13

Date



*You are invited to.....*     **Mathematics and Physics Seminar**

*New Particle Discovery*



**Dr. Y. Gao**

CSU Fresno and European Organization for Nuclear Research  
(CERN) Geneva, Switzerland

In July 2012 physicists experimenting at the Large Hadron Collider (LHC) at the European Organization for Nuclear Research (CERN) announced the discovery of a new particle consistent with the mathematically predicted Higgs boson. We will start by introducing High Energy Physics (HEP), CERN and LHC programs. Then we will focus on the new particle discovery, the Fresno State ATLAS program, the ongoing CSU Nuclear and Particle Physics Consortium (NUPAC) effort, and research opportunities at CERN for interested students and faculty.

**Wednesday, September 5<sup>th</sup>, Broome Library 2325**

**Presentation 4:30 to 5:30 pm**

**Question session 6 to 7pm**