

Yale Department of Physics

Yale Physics Newsletter

August 3, 2018

News

Wright Laboratory and the Physics Department at Yale University are hosting a symposium in celebration of the career of Professor Francesco Iachello, titled **SYMMETRIES AND ORDER: Algebraic Methods in Many Body Systems**. The two-day symposium will consist of talks and conversations on topics to which Professor Iachello made significant contributions, spanning the fields broadly categorized as Nuclear Structure, Molecular and Hadronic Structure, Neutrino Physics and Double Beta Decay, and Symmetries and Phase Transitions. There will be ample opportunity to discuss and catch up with your friends and colleagues.

SYMMETRIES AND ORDER: Algebraic Methods in Many Body Systems

Date: October 5-6, 2018 (Friday - Saturday)

Location: Sloan Physics Laboratory, Yale University, New Haven, CT

Conference website:

<https://sites.google.com/yale.edu/symmetriesandorder>

Registration:

Please register via the [registration form](#) to let us know whether you will be attending. The registration deadline is Sept. 4. If you have already let us know you will be attending, there is no need to register again, although do let us know if you have dietary restrictions or any other requests. We will update the [list of participants](#) periodically.

Travel & Lodging:

Please find details on the [conference website under "Location"](#). We have blocked rooms at the New Haven Hotel and Omni and list several hotel recommendations on the page. The rooms are held until September 4, 2018.

Registration & Hotel Deadline: September 4, 2018:

For assistance, please email symmetries@yale.edu or contact Cathy Barabas at +1 (203) 432-6914.

Organizers:

Reina Maruyama (Yale), Mark Caprio (University of Notre Dame), Roelof Bijker (UNAM), Baha Balantekin (University of Wisconsin)

Local Organizing Committee:

Save the Date

Fall term classes start on August 29, 2018. **Please note that Monday classes will meet on Friday, August 31, 2018 due to the Labor Day Holiday.**

Seminars

Friday, August 24 Graduate Student Orientation, SPL 3rd Floor Lounge at 9:00am. Host: Sandra Tranquilli.

Thursday, August 30 Qualifying Exam, Part 1 (9:00am-11:30am) and Part 2 (2:00pm-4:30pm) in SPL 57.

Friday, August 31 Qualifying Exam, Part 3 (9:00am-11:30am) and Part 4 (2:00pm-4:30pm) in SPL 57.

For more seminars see: <http://physics.yale.edu/calendar>

Helen Caines, Rick Casten, Bonnie Fleming, John Harris, Karsten Heeger, Reina Maruyama, David Moore

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APS Bridge Program and National Mentoring Community Conference

We would like to invite you to the [2018 APS Bridge Program and National Mentoring Community Conference](#) at Google HQ and Stanford University in California on November 16-18. The discounted Bridge Member registration rate of \$295 can be accessed using discount code **BPMEMB18**.

This conference will focus on strengthening mentoring relationships, building firm foundations for successful physics student experiences, and providing learning and networking opportunities on other topics related to diversity in physics graduate and undergraduate education. Some session topics include:

- Holistic admissions: Lessons learned from IGEN and Bridge
- Preparing students for careers in the public and private sector
- Building trust in mentor/mentee relationships
- Best practices for mentoring for retention
- Helping mentees develop time management skills
- And more!

In addition to our engaging workshops and plenaries, we will also have a number of formal and informal opportunities for networking, including discussions with national labs and industry representatives, a student poster session, and a networking fair.

This will be an excellent opportunity for you to connect with students, faculty and other physics community members who are passionate about improving graduate education in physics for all.

[Register Now](#)

Registration for this conference will close on October 31, 2018. We will not be accepting any more registrations after this date.

We hope to see you in November!

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Summer Research in Physics!

Lucie Tvrznikova (Graduate Student with Daniel McKinsey): I built a detector called XeBrA at Lawrence Berkeley National Lab. The Xenon Breakdown Apparatus (XeBrA) was built to characterize behavior of electric breakdown in liquid xenon and liquid argon to inform design of the next generation of dark matter detectors - such as LZ - in order to prevent unwanted sparks that could create fake signals or even destroy detector hardware. High voltage is applied across two specially designed Rogowski electrodes and then I record when a spark occurs.

The detector has viewports, so I was able to record bubbles in liquid xenon:

<https://www.youtube.com/watch?v=Zy9r8q1wmYc&t=105s>

This is cool because xenon is really expensive and is usually kept inside expensive cryostats so not many people have actually seen it!

I have also recorded some sparks in liquid argon:

https://drive.google.com/file/d/1CQtgE_ZYTMaVLqFYN1aHgTNLQEWRRERKh/view?usp=sharing

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Meg Urry (Israel Munsen Professor of Physics):

Seventeen undergraduate summer research students in astrophysics attended the first-ever “Granville Academy,” held at Yale on July 9-13 (14 shown in picture). Taught by Louise Edwards, formerly a Lecturer in Astronomy at Yale, now a Professor of Physics at Cal Poly San Luis Obispo, and Meg Urry, Professor of Physics at Yale, with help from Yale Physics graduate students Tonima Ananna, Charles Brown and Lamiya Mowla, the curriculum blended astrophysics tutorials with information about equity and inclusion in science, technology, engineering and math (STEM). The Academy was named in honor of Evelyn Boyd Granville, who obtained her Ph.D. in mathematics from Yale in 1949, only the second African-American woman to receive a Ph.D. in mathematics in the U.S. Her long career in research and teaching, including work in celestial mechanics digital computer techniques for the Apollo program, was recognized in 2000 with the Yale Graduate School Alumni Association’s highest honor, the Wilbur Lucius Cross Medal. On the final day of the Granville Academy, students gave brief presentations about their research projects, then celebrated by watching the movie, “Hidden Figures,” about the black women mathematicians who were so critical to the success of the NASA Space Program.

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Center for Teaching and Learning - Fall 2018 Yale Scientific Teaching Course for Graduate Students & Postdocs

WEDNESDAYS

9 a.m. - 11 a.m.

301 York Street

The CTL invites Yale University graduate students and postdocs to apply for the semester-long course, **B&BS 879: Theory and Practice of Scientific Teaching for Life Scientists**.

The goal of this course is to improve undergraduate science education by training a new generation of scientific teachers to bring the spirit and rigor of research into the undergraduate classroom. Participants in the course will learn evidence-based teaching strategies, including:

- engaging students through active learning
- incorporating inclusive teaching practices
- developing effective assessments

Participants will then apply the knowledge they have learned to developing teaching materials for dissemination to the larger scientific teaching community. The Fall 2018 instructor is Dr. Elizabeth Morse Luoma, STEM Education Program Director at the CTL. Applications are due Wednesday, August 15. Classes will begin on Wednesday, August 29.

[Learn More & Apply](#)

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University Registrar’s Office News - 2018-2019 Course Information Now Available in Yale Course Search

2018-2019 course information is now available for viewing in Yale Course Search (YCS). [Yale Course Search](#) is now the exclusive online application for viewing course information, replacing the Online Course Information (OCI) and Yale Blue Book (YBB) systems. YCS has been implemented as a more user friendly application for searching courses, which includes a responsive design and an easier user interface. For more information about YCS, including helpful tutorials and FAQs, see the [Yale Course Search Resources webpage](#). The features of YCS allow you to perform similar functions as you did in OCI and YBB, such as:

- Search for course information
- Find classroom assignment information when it becomes available
- View final exam information when it becomes available

Coming soon, YCS will be further enhanced to include:

- Historical data going back five years
- The ability to search across all terms
- The ability to link directly to individual courses

For more news please see <http://physics.yale.edu/news>
[Announcements](#)

For further information on any of the items included here or if you would like to contribute to the next newsletter, send email to [Daphne Klemme](#).

[Please click here for updates on the Yale Science Building, including a new logistics plan.](#) The project encompasses the construction of a new state of the art sciences laboratory at the approximate location of the demolished J.W. Gibbs building, a comprehensive renovation of the KBT Plaza, a lecture hall, and a common area at the south end of KBT Plaza.