

Yale Undergraduate Conference for Women in Physics: Conference Report

Yale committee for the Undergraduate Conference for Women in Physics

April 3, 2009

1 Introduction and Goals

The Yale Conference for Undergraduate Women in Physics was held on January 18th and 19th, 2008. The conference, targeted toward undergraduates in the Northeast, was a huge success. It was well attended by both a slate of impressive speakers including Janet Conrad, Mildred Dresselhaus, Elsa Garmire, Howard Georgi, Liz Rhodes, Meg Urry and Wendy Zhang, and many interested attendees. Talks were on current research, about issues for women in physics, and on the application process for graduate school. There was also a career panel, student talks, and a student poster session. The conference ran concurrently with the third annual conference at USC, as well as a first annual conference at the University of Michigan. Our purpose in creating this conference was to provide a supportive atmosphere for young physicists to connect with peers and with successful women in the field. We hope that from this conference, attendees have become confident and knowledgeable about applying to graduate school and be further inspired to pursue a career in physics. The following describes the conference program, participation and impact, logistics of running the conference and plans for the future.

2 The Participants

The conference was attended by 84 undergraduate women and men from 33 universities and colleges ¹. A substantial number of the participants were from four-year undergraduate institutions. The participants attended talks and panels and presented talks and posters. The participants also interacted with the conference speakers and each other during coffee breaks, meals and at the conference hotel.

Conference attendees were housed at a local hotel and travel stipends were provided as requested for travel to the conference and for lodging. Meals were provided during the conference.

¹Universities and Colleges represented: University of Pennsylvania, Sarah Lawrence College, Massachusetts Institute of Technology, Drew University, University of Rochester, Boston University, Yale University, Bridgewater State College, Wheaton College, University of Rhode Island, Dartmouth College, Colby College, Middlebury College, Rowan University, New York University, Bryn Mawr College, Lehigh University, Southern Connecticut State University, George Mason University, Mount Holyoke College, Johns Hopkins University, Barnard College of Columbia University, Tufts University, University of Texas at Austin, Connecticut College, University of New Hampshire, Vassar College, Brown University, Cooper Union, Northeastern University, Brandeis University, Central Connecticut State University, University of Massachusetts, Boston

3 The Program

The Conference program covered a broad range of research talks delivered by prominent scientists in the field. As well, there were several talks on women in physics, a career panel, and a graduate student panel. The program was as follows:

- Friday, January 18
 - 6:00 PM: Welcome Reception and Conversations with Yale Graduate Students
 - 7:30 PM: *Black Holes, Galaxies, and the Evolution of the Universe* Meg Urry, Yale University
- Saturday, January 19
 - 8:45 AM: Breakfast and Registration
 - 9:15 AM: Welcome and Introductions
 - 9:45 AM: *Watching Proteins Fold One at a Time*, Elizabeth Rhoades, Yale University
 - 10:45 AM: Break
 - 11:00 AM: *Harvard after Larry Summers*, Howard Georgi, Harvard University
 - 12:00 PM: Lunch with Yale Faculty Members, Location: Presidents' Room, Woolsey Hall
 - 1:30 PM: *Expanding opportunities for Women in Physics* via videoconference, Mildred Dresselhaus, Massachusetts Institute of Technology
 - 2:30 PM: Break
 - 2:45 PM: *Considering Alternative Options for Careers in Physics*, Elsa Garmire, Thayer School of Engineering, Dartmouth College
 - 3:45 PM: Break
 - 4:00 PM: Careers Panel
 - * Bonnie Fleming, Yale University
 - * Betsy Pugel, Goddard Space Flight Center
 - * Irina Puscasu, ICx Photonics
 - * Jessica Thomas, Nature Nanotechnology
 - 5:20 PM: Dinner, Location: Presidents' Room, Woolsey Hall
 - 6:40 PM: Graduate Student Panel with Dessert, Introduction by Steve Girvin, Yale University, Location: Presidents' Room, Woolsey Hall
- Sunday, January 20
 - 8:45 AM: Breakfast and Poster Setup
 - 9:15 AM: *Hidden in Time: The role of singularities in dripping, bubbling, & splashing*, Wendy Zhang, University of Chicago

- 10:15 AM: Break
- 10:30 AM: Student Research Talks
- 11:30 AM: Student Poster Session and Lunch, Location: LC 211
- 1:00 PM: Lab Tours
- 3:00 PM: Break
- 3:15 PM: *How to Hunt a Wild Neutrino*, Janet Conrad, Columbia University
- 4:15 PM: Closing Remarks and Evaluations

Participants noted that they learned a lot about a broad range of physics research from the research talks. The discussion of women in physics by several speakers was both illuminating and inspiring. Many participants noted that the Career panel and graduate student panel were particularly informative in both opening their eyes to the different options in and outside of academia in physics, as well as the different paths that can be taken to graduate school.

The lunches and dinners were well attended by the speakers and Yale faculty where there was ample opportunity for further discussion.

4 Conference Impact

Participants were asked to fill out a pre- and post-conference survey. Results of these surveys are being compiled by the University of Michigan team for all three conferences and will be made available when complete.

5 Support

The Organizing Committee that planned the conference was comprised of seven Yale undergraduates from a range of classes (Elissa Dunn, Elizabeth Jerison, Allison Kaptur, Rachel Miller-Ziegler, Elise Novitski, Lauren Rosenblum), two graduate students (Eleanor Millman and Christine Nattrass), and a faculty advisor (Bonnie Fleming). The range in class of the undergraduates was intentional so as to allow for institutional history in the organization of next year's conference.

Substantial support from Yale Conference Services as well as from the Physics department were invaluable in planning the conference. The facilities, video conferencing services, and food catering services available through Yale were also extremely helpful in the running of the conference. In addition to the support recieved through this Department of Energy grant, we recieved support from the following sponsors: The National Science Foundation, The Yale provost, the Yale physics department, the Yale Engineering School, the American Physical Society, and the Yale Women's Faculty Forum.

6 Plans for the Future

Our dominant goal is to make the conference available to anyone who wants to participate. Next year, Yale will cast a broader net and try to accommodate more students; other schools will make a similar effort, depending on their facilities. Currently, three schools hold conferences, covering the northeast, midwest, and southwest, roughly. For January 2009, Yale will invite one or more "seed groups" from non-local schools. A seed group consists of three to five students and a faculty member from an institution who will attend the conference. Their goal is to host a conference of their own the following year. The Yale group went to USC as a seed group in 2007 and so can attest to the value of this process. By 2010, we would like to add two conferences, one in the northwest and one in the south, for a total of five. Although 84 attended the conferences, this number is only a small sample of interested students. For the next few years, our focus is expansion.