

Thoughts from Recent UCSB Physics Graduates

“My advisors and mentors created a positive environment for performing research and encouraged me to develop a broad skill set across several disciplines. Their support gave me the confidence I needed to succeed as a physicist, and my interdisciplinary experiences at UCSB have helped me immensely at my current job.”

— *Dr. Lisa Manning, (Ph.D. '08), Princeton University Postdoctoral Fellow*

“My grad life at UCSB was absolutely wonderful... my mentors and peers really helped me grow a lot. I truly treasure the exposure I had to science, the people, the friendships and Nature.”

— *Professor. Smitha Vishveshwara, (Ph.D. '02) University of Illinois at Urbana-Champaign*

“Personally, I was happy to see other women in the graduate program and in leadership positions in the department and I appreciated having a chance to talk with them about how they had gotten there and what their lives were like.”

— *Professor. Courtney Lannert, (Ph.D. '02) Wellesley College*



Women in Physics meeting

Women in Physics: Statistics

In physics, women currently account for approximately 22% of Bachelor's degrees awarded, 18% of PhDs awarded, and 13% of physics faculty at US institutions; 22% of new faculty hires are women. While women are still in the minority, the number of women at higher levels in physics continues to increase. Here at UCSB, we have an active Women in Physics group with the goal of fostering community among women and the department as a whole. We meet regularly to exchange ideas, organize events for graduate students, and meet with visiting women scientists and women speakers. The group also works to recruit and retain female graduate students.

UCSB also has an active chapter of Women in Science and Engineering (WISE), which provides contact with women scientists and engineers across all disciplines, through weekly coffee hours with invited guests (often female faculty) and professional development workshops for graduate and undergraduate students.

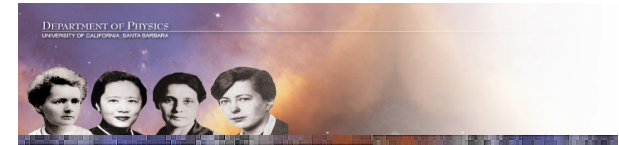


Sponsored by Women in Physics

Physics Department
www.physics.ucsb.edu
Broida Hall
gradapp@physics.ucsb.edu

Women in Physics at UCSB
www.physics.ucsb.edu/~Women
phys-women@physics.ucsb.edu

Women in Science and Engineering
<http://www.wise.ucsb.edu/>
wise@lsmail.ucsb.edu



Women in Physics at the University of California Santa Barbara



Great location, great people

Clockwise from upper left: Physics building (Broida Hall), Faculty member Beth Gwinn, Faculty member Joan-Emma Shea, Graduate Student, Jenna Hagemeyer, Women in Physics meeting, Faculty

Why UCSB?



Aerial view of UCSB campus

Our department is first and foremost an outstanding research institution. It recently ranked first in the country in research impact as measured by citations per paper and per faculty. The many research centers on campus, including the California Nanosystems Institute, the Materials Research and Engineering Laboratory and the Institute for Collaborative Biotechnologies, reflect the lively interplay between faculty and graduate students in physics and in materials science, biology, chemistry and engineering. The Physics Department's Institute for Research at Particle Accelerators has detectors at the Stanford Linear Accelerator Center and conducts research at the Fermi National Accelerator Laboratory, while astrophysics graduate students and faculty have access to the Keck Observatories in Hawaii. Theoretical physics at UCSB brings graduate students into contact with eminent scientists from around the world, through the programs of the Kavli Institute for Theoretical Physics (KITP).



Kavli Institute for Theoretical Physics

With approximately 300 visitors per year, the KITP provides unique opportunities for our graduate students to meet and hear from leaders in Physics. The intellectual community in the Physics Department is welcoming towards female faculty and graduate students alike, and the vice-chair of the department is female. Most of the faculty have

families and understand the need to balance work with personal interests, including those stimulated by the beautiful California coast and mountains that are just outside the Physics building.



Materials Research Laboratory

In addition, the UCSB campus has world-class fabrication and characterization facilities. The Nanofabrication Laboratory provides 12,000 square feet of class 100/1000 cleanroom space filled with lithographic and thin film processing equipment. The ground floor of Elings Hall is dedicated to advanced microscopy and surface characterization tools, supplemented by facilities available at the Materials Research Laboratory.

Spotlight on Faculty



Professor Fyngenson in the lab

Deborah Fyngenson's group works on mechanics and dynamics of macromolecular assemblies. Her group performs experiments using techniques of light microscopy, electron microscopy and micromanipulation, complimented by standard tools from biophysical chemistry and molecular biology.

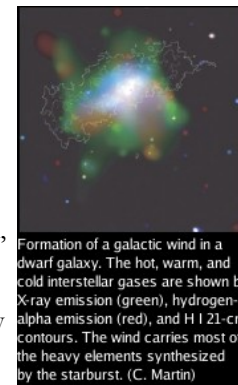
Jean Carlson studies novel nonlinear phenomena in systems far from equilibrium, including the rupture of earthquake faults, forest fires, evolution and extinction, and interconnected networks such as the internet.

Beth Gwinn studies hybrid organic-inorganic structures, magnetism in semiconductors, and quantum Hall physics. Her group uses magneto- and surface spectro-

scopies to investigate how the binding of organic molecules to solid-state materials leads to new electric and magnetic properties at the organic-inorganic interface.

Joan-Emma Shea's research focuses on developing and applying the techniques of statistical and computational physics to the study of biological problems. Current work involves the investigation of cellular processes including in-vivo protein folding and protein aggregation.

Crystal Martin's research focuses on the astrophysics of galaxy formation and evolution, trying to understand in detail why the star formation rate varies widely among galaxies.



Formation of a galactic wind in a dwarf galaxy. The hot, warm, and cold interstellar gases are shown by X-ray emission (green), hydrogen-alpha emission (red), and H I 21-cm contours. The wind carries most of the heavy elements synthesized by the starburst. (C. Martin)

Statistics and Policies

- Number of female graduate students/male students: 23/138
- Number of tenured or tenure-track female/male faculty: 4/40
- Family Leave Policy: UCSB graduate division grants leave for pregnancy or parenting needs during the first 12 months after child's birth/placement in the home, for up to 3 academic quarters.



Physics Department
www.physics.ucsb.edu
Broida Hall
gradapp@physics.ucsb.edu

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www.physics.ucsb.edu/~Women
physics-women@physics.ucsb.edu

Women in Science and Engineering
<http://www.wise.ucsb.edu/>
wise@lsmail.ucsb.edu