Winter Quarter Newsletter

Volume 1

UCI Department of Physics and Astronomy

Student Spotlight

Bela Abolfathi is a sixth year graduate student studying astrophysics (or more specifically, observational cosmology). She works on two ground-based experiments, the Dark Energy Spectroscopic Instrument (DESI) and the Vera Rubin Observatory (formerly known as LSST) which will map the Universe to help us better understand dark energy. Recently, Bela was part of a WIRED video as part of a web series called 5LEVELS. The idea is to have an expert, in this case Sean Carroll, try to explain a particular topic in their field to five people with different levels of familiarity with the topic: a child, a teen, a college student, a graduate student and another expert. Bela hopes that by agreeing to participate in the video she could set a similar example for other women. She said that growing up women pursuing careers in physics wasn't a reality until she took a class taught by a female physics professor during her freshman year of college. The experience of seeing a woman in physics was enough to make Bela believe that she could do it too. Bela said filming the video was a great experience; she learned a lot both about herself and about a really cool topic from one of her idols in science. Read the full post here.

Conference for Undergraduate Women in Physics

•This year UCI was one of the 13 international sites to host the American Physical Society's Conference for Undergraduate Women in Physics (CUWiP)- the UCI session was the largest in CUWiP's history with > 300 participants! The conference was put on by a physics interdisciplinary group of faculty (Chaired by Prof. Mu-Chun Chen and Co-Chaired by Profs. Simona Murgia and Albert Siryaporn), post-docs, grads and undergrads. The 3 day conference was a huge success with a wide variety of programming from undergraduate research presentations and an international keynote address by Prof. Andrea Liu to panel sessions on topics such as Self Care through Adversity and Out in STEM. There were a total of 4 Keynote Addresses (one given by our own faculty, Prof. Aomawa Shields!), 20 panel sessions, 5 student presentation sessions, 2 poster sessions and 1 workshop.Additionally, astro grad students, Katy Rodriguez Wimberly and Arianna Long hosted an ASCEND (The ActionS for Community ExcelleNce & Development) Mini Conference featuring an interactive workshops on Developing & Celebrating Goals and Building Your Mentor Network. While for many of us Local Organizing Committee volunteers, the workload of putting on a conference seemed daunting at times, the reactions from the undergrad participants made all the extra work fully worth while - some participants even said the conference and workshops taught them to believe in themselves!

Above: Attendees of the ASCEND Mini Conference
Right: CUWiP group photo of over 300 attendees and the local organizing committee

UCI Physics and Astronomy Newsletter is brought to you by the Blog Team and is supported by the Department of Physics and Astronomy and the School of Physical Sciences.

UCI School of Physical Sciences

Blog: http://physastroblog.ps.uci.edu UCI Physics and Astronomy
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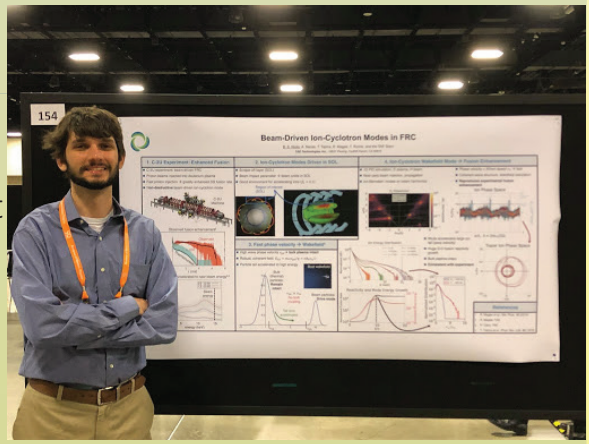
Upcoming Events

• Interested in applying machine learning in your research? The school of physical sciences has started a Machine Learning NEXUS program to help facilitate the incorporation of machine learning into physical sciences research. Keep an eye out for regular seminars and social hours!
• Grad Slam UCI Campus Finals are February 28th.

Department News

• Virginia Trimble gave a talk at AAS entitled "Curtis-Shapley, Bondi, Woltjer, and Me: 100 Years of the Universe and its Contents."
• The physics Fall Intramural Football team (shown in the photo to the right) won the B bracket championship on Monday, January 13th! The team was organized by Scott Locke.
• Spearheaded by Professor Daniel Whiteson, the School of Physical Sciences is starting a quarterly science communication seminar series. The first seminar of this new series was held on January 22nd and featured Astrobites author and a 2019 AAAS Mass Media Fellow Stephanie Hamilton. She discussed strategies for effective science communication particularly when discussing controversial science topics.
• UCI Physics and Astronomy graduate students, Jessica Howard and Rebecca Riley, are 2 of 10 graduate students competing in the UCI Campus Finals of the UC Grad Slam competition on February 28th.

Research



• Scott Nicks of the Toshiki Tajima group successfully defended his thesis on December 16th. His thesis is titled "Novel Avenues of Wakefield Acceleration: Fusion Plasmas and Cancer Therapy." Scott also presented this research at the 61st APS Division of Plasma Physics October 21-25, 2019 (shown right).
• Aaron Barth's group's work on the black hole in NGC 3258 was in the 2019 ALMA Observatory list of top 10 science results in 2019. Read more here.

Resources

• New communications course offered in Spring Quarter! PHYSICS 246: Communication Skills in the Physical Sciences will be taught by Professor Aomawa Shields. Graduate students will learn the fundamentals of effectively communicating research through a variety of written and oral platforms. Topics include writing compelling proposals and journal articles for peer review, and the development of engaging oral, poster, and written presentations of science results and significance to a wide range of audiences.

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