

Yale Department of Physics

Yale Physics Newsletter

September 15, 2017

News

David Poland (Associate Professor of Physics) has been awarded the Arthur Greer Memorial Prize for outstanding scholar publication or research in the natural or social sciences.

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Welcome to new Postdoctoral Associate Shruti Puri. Shruti is a theoretical physicist who works closely with experimentalists to engineer quantum processors that can perform tasks which are unimaginably difficult for classical computers. Her research interests include quantum optics, control of open-quantum systems, quantum error correction, and continuous variable quantum computing. She received her Ph.D. at Stanford in 2014, working with Yoshihisa Yamamoto on quantum optics and quantum information in semiconductor cavity QED systems. For her first postdoctoral position, she worked with Alexandre Blais at the University of Sherbrooke, where she focused on superconducting circuit QED systems. In September, Shruti joined Steve Girvin's group at the Yale Quantum Institute, where she will work on the quantum computing paradigm based on microwave photons in superconducting cavities. She is especially interested in the possibility of building quantum optimizers with these cavities that achieve true quantum speedup.

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Welcome to new Postdoctoral Associate Benjamin Saliwanchik. Dr. Benjamin Saliwanchik is an observational cosmologist whose research has spanned microwave and radio wavelengths, with the goal of using galaxy clusters and large scale structure to constrain cosmological models. He has worked on several CMB and 21cm radio experiments, focusing on hardware development, instrumentation, and calibration. Benjamin obtained his PhD from Case Western Reserve University, where he worked on the South Pole Telescope -- contributing to three generations of that instrument, from SPT-SZ to SPT-3G. In his first postdoctoral position, he was awarded an SKA Fellowship from the National Research Foundation of South Africa to work at the University of KwaZulu-Natal, where he helped develop the Hydrogen Intensity and Real-time Analysis eXperiment (HIRAX) and the Hydrogen Epoch of Reionization Array (HERA).

Continued next page

Save the Date

September 28, 2017 – Yale Quantum Institute and The Franke Program in Science and Humanities present Adele Myers & Emily Coates, Dancers and Choreographers.

Seminars

Monday, September 18 Yale Systems Biology Institute. Kshitiz, Yale University, "The Stag Hunt Game in Cancer: How Cancer Cells Cooperate to Offset Hypoxic Induced Cell Cycle Arrest" and Daniel Moonan, Yale University, "Design and Construction of a Recoded Organism Containing 62 Codons", Yale West Campus Conference Center, Rm. 218 at 12:00pm. Lunch will be served.

Monday, September 18 Yale Physics Club. Michael Murrell, Yale University, "From Active Liquid Crystals to De-wetting Liquid Droplets: Using Mesoscopic Models to Understand the Physical Behaviors of Cells and Tissues", SPL 57 at 3:30pm. Tea served after the talk in SPL Third Floor Lounge. Host: Simon Mochrie.

Monday, September 18 Department of Applied Physics Special Seminar on Semiconductor Devices and Technology. Professor Qiangfei Xia, University of Massachusetts at Amherst, "Unleash the Potential of Some CMOS Materials for Beyond-CMOS technology", BCT 3rd Floor Alcove at 3:30pm. Host: T.P. Ma

Monday, September 18 Department of Molecular Biophysics and Biochemistry Departmental Colloquium. Eugene V. Koonin, National Institutes of Health, "Viruses and CRISPR: major evolutionary implications of metagenomic discoveries", Bass 305 at 4:00pm. Tea at 3:45pm. Host: Dieter Söll.

Tuesday, September 19 Yale Wright Laboratory NPA/WIDG Seminar – Part 1. Milind Diwan, Brookhaven National Laboratory, "Basic Mathematics for Understanding Noisy Waveforms and Frequency Spectra", WLC-108 at 12:00pm. Lunch will be served [RSVP](#) required.

Tuesday, September 19 Yale Center for Astronomy and Astrophysics Seminar. Peter Maksym, Harvard-Smithsonian Center for Astrophysics, "Observational Clues of Black Hole Accretion from the Tidal Disruption of Stars", WTS A-51, at 2:30pm. Coffee/tea and cookies will be served before the seminar at 2 PM in the coffee lounge of Steinbach Hall (52 Hillhouse).

Tuesday, September 19 Particle Theory Seminar. Subham Duttachowdhury, Indian Institute of Science, "Title to be announced", SPL 52 at 3:30pm.

Wednesday, September 20 Yale Physics Professional Development Event. Kristen Zakian, Jim Mechalakos, and Ross Boltyskiy, Memorial Sloan Kettering Cancer Center, "Want to learn about medical physics?", WL 216 at 11:00am. Lunch following the talk, [RSVP](#).

Wednesday, September 20 The Yale Scientific Magazine is excited to be announcing a special Poynter Fellowship talk by Dr. David Grimm (GRD '04) on Wednesday, September 20th from 3-4pm in WLH 201 (Sudler Hall). Dr. David Grimm is currently the Online News Editor of Science, and is an award winning writer and author. His talk is titled "Stop Talking Like a Scientist: Communicating Research to the Public", and will be very helpful for undergraduate and graduate students interested in communicating their research to a general audience. Please [RSVP](#) on our Facebook event page.

Wednesday, September 20 Geology & Geophysics Colloquium. Maxim Bellmer, ETH Zurich, "Title TBA", KGL 123 at 4:00pm.

Thursday, September 21 Yale Wright Laboratory NPA Seminar. Dmitri Kharzeev, Brookhaven National Laboratory, "Probing quantum entanglement in hard hadronic collisions", WL 216 at 1:00pm. Lunch will be served [RSVP](#) required.

Thursday, September 21 Astronomy Colloquium. Ramesh Narayan, Harvard-Smithsonian Center for Astrophysics, "Numerical Simulations of Black Hole Accretion", WTS A-51 at 2:30pm.

Friday, September 22 Special Solid State & Optics Seminar. Prof. Nir Davidson, Weizmann Institute of Science, Israel, "Solving hard computational problems with coupled lasers", BCT Seminar Room at 10:30am. Host: Hui Cao

Friday, September 22 Yale Center for Teaching & Learning. Southern Connecticut State University Scientific Teaching Forum. Faculty, Postdocs, and Graduate Students are invited to attend SCSU's Scientific Teaching Forum on Friday, September 22 from 9:30 a.m. – 2 p.m. Dr. Elizabeth Luoma of Yale's Center for Teaching and Learning will host a Preliminary Workshop Program: "Meta cognitive tools in introductory Biology classroom." Dr. Michelle Smith, University of Maine, is the keynote speaker on Fri. Sept. 22. Learn more and register online via [Eventbrite](#).

Friday, September 22 Yale Wright Laboratory NPA/WIDG Seminar – Part 2. Milind Diwan, Brookhaven National Laboratory, "Basic Mathematics for Understanding Noisy Waveforms and Frequency Spectra", WL 216 at 12:00pm. Lunch will be served [RSVP](#) required.

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

Saliwanchik – Cont. As a Postdoctoral Associate at Yale he is looking forward to continuing his work on 21cm telescopes, including HIRAX and CHIME (the Canadian Hydrogen Intensity Mapping Experiment), with Prof. Laura Newburgh.

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The Department of Energy's Office of Science is now accepting applications for the Office of Science Graduate Student Research (SCGSR) program (**2017 Solicitation 2**). **Applications are due 5:00pm Eastern Time on Thursday, November 16, 2017.**

The SCGSR program provides doctoral dissertation/thesis research opportunities for graduate students at DOE national laboratories. We release two regular solicitations annually, one is around early Spring and the other close to Fall. Details about the program and online application can be found at <https://science.energy.gov/wdts/scgsr/>.

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](mailto: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.

Jobs

Position at Argonne with Orlando Guarana

Job ID: 403184

Job Title: RD1/RD2 Electrical Engineer - Detector R&D

Job Details Link: http://www.anl.gov/careers/apply-job/external-applicants?locale=en-us&cpUrl=http%3A%2F%2Fcareers.peopleclick.com%2Fcareerscp%2Fclient_argonnelab%2Fexternal%2Fen-us%2Fgateway.do%3FfunctionName%3DviewFromLink%26jobPostId%3D5605%26localeCode%3Den-us

The person will work on different detector related R&D project for the synchrotron. In particular, in the beginning will be involved in the development of the readout electronics (based on a ROACH system) for a TES spectrometer for which I have recently received a grant.

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Postdoctoral Scholars at the Kavli Institute for Theoretical Physics starting September 1, 2018. (deadline November 15, 2017 for primary consideration). [Click here](#) for poster.

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KITP Graduate Fellowships at the Kavli Institute for Theoretical Physics for Fall 2018 nominations must be received by February 1, 2018 and for Spring 2018 nominations must be received by September 1, 2018. [Click here](#) for poster.

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The German Academic Exchange Services (DAAD) is pleased to announce that for Summer 2018 we will offer three RISE (Research Internships in Science and Engineering) internship programs, two of which may be of interest: RISE Germany (for undergraduate student) – see <http://www.daad.de/rise/en/rise-germany/> or email: rise@daad.de for further information (registration opens on November 1, 2017, deadline is December 15, 2017) and RISE Professional (for Master's and PhD students and alumni of the RISE Program) – see <http://www.daad.de/rise/en/rise-professional/> or email rise-pro@daad.de for further information (registration opens on November 1, 2017, deadline is December 15, 2017).