



Department of

Physics and Astronomy

WASHINGTON STATE UNIVERSITY

2017-2018

Distinguished Colloquium Series

Dr. Valy Vardeny

Physics & Astronomy, University of Utah

Tuesday, November 14, 4:10 pm

Webster Hall, Room 17



Prof. Z. Valy Vardeny is a Distinguished Professor of Physics at the University of Utah. Among his many research interests are optical, electrical and magnetic properties of organic semiconductors; fabrication of organic optoelectronic (OLED's and solar cells) and spintronics (spin-valve) devices; ultrafast transient spectroscopy of organic semiconductors, nanotubes, and fullerenes; fabrication and properties of dielectric and metallo-dielectric photonic crystals; and 2D plasmonic lattices.

Prof. Vardeny received both B.Sc. and Ph.D degrees from the Technion-Israel Institute of Technology. After serving on the faculty at both Brown University and the Technion, he moved to the University of Utah in 1987. He has received numerous awards, including the Utah Governor's Medal for Science and Technology (2005), the 2008 American Physical Society Frank Isakson Prize for Optical Effects in Solids, and the University of Utah's most prestigious award, the Rosenblatt Prize for Excellence, which recognizes outstanding achievements in all of research, teaching, and administration. He has nearly 600 peer-reviewed publications, including the seminal work on organic spin valves, which has been cited over 1000 times. He has supervised more than 50 Ph.D. students and 25 post-doctoral fellows.

Professor Vardeny holds several patents, consults for Plextronics and Cambridge Display Technologies, and serves as a member of the scientific advisory board at SolarWindow Technologies, Inc.

“Organometal Halide Perovskites; Photovoltaics and beyond”

The field of thin-film photovoltaics has been recently enriched by the introduction of lead halide perovskites as absorber materials, which allow low-cost synthesis of solar cells with efficiencies exceeding 20%. The impact of the crystal structure and composition on the optoelectronic properties of these compounds is the focus of intense research at the present time. I will briefly outline notable achievements to date, describe the unique attributes of these perovskites that has led to their rapid emergence as serious candidates for cheap photovoltaic solar cells, and discuss other potential optoelectronic, and more recently spintronic applications of these compounds.

*Please meet our guest speaker at a reception to follow, 5:00 – 6:30 p.m.
in the foyer on floor G above the lecture hall*

Host: Brian Saam