

Faces of Physics Presents:



Quantum Phases

On-Demand

Dr. Cheng Cen

March 25th, Friday, 7 pm ET

Presented Live on YouTube, Link Below:

<https://youtu.be/lvZ2prftGig>

Bio: Dr. Cheng Cen is an associate professor in the Department of Physics and Astronomy at West Virginia University. She graduated from the Special Class for the Gifted Young program at University of Science and Technology of China in 2004. After receiving the Ph.D. degree in physics from University of Pittsburgh in 2010, she worked in IBM Research until 2012 before joining WVU. Her current research focuses on the nanoelectronic and nanophotonic properties of quantum materials.

Abstract: The advancement of human civilization is marked by signature materials. While the current Si-based information technologies are fast approaching physical limits set by dissipation, density, and speed, quantum materials are poised to become the new generation of materials that will lay the foundation for the emergent “Quantum Age”. While manipulating the quantum phases in these materials would enable active quantum logics analogous to the switching of conventional transistors, the realization of such manipulation has always been difficult due to the lack of energetically favorable phase transition pathways. In this talk, I will discuss several examples of how such challenges can be addressed by combining tailored material heterostructures with novel optical and electrical excitations.

The Faces of Physics Speakers Series highlights the work of researchers from underrepresented groups to promote inclusion and inspire the next generation of scientists to see a place for themselves in the exciting field of physics. The Series is hosted and developed by the Marshall University Chapter of the Society of Physics Students (SPS) and has been funded over the years by the MU SPS Chapter, The American Institute of Physics, and The NASA West Virginia Space Grant Consortium. The Series has run at a pace of one talk per month during the academic years since fall 2020. To stay up to date on information pertaining to the Series, like upcoming speakers, sign up for the mailing list:

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