凝聚态物理前沿论坛第三十四讲

报告题目：**Competing Interactions at the Local Scale: exploring Nature**

报 告 人：**Prof. Despina Louca**

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报告时间：**2014年06月25日（周三）上午09:00**

报告地点：固体所**3**号楼**321**会议室

举办单位：中科院固体物理研究所

报告摘要：

Novel materials of interest today provide unique opportunities to study emergent exotic states of matter that arise from the intricate coupling of the electronic and lattice degrees of freedom, and their implications in the mechanics of phase transitions. Central to this issue is understanding distinct features associated with the coexistence of two (or more) order parameters, the nucleation of different phases in the parent matrix, the formation of structural patterns that break the global symmetry and present even at equilibrium conditions, and spin/charge density waves. They are key components to our understanding of the evolution across phase boundaries, however, they cannot be readily characterized with traditional means used for probing single electron behavior. This is because their behavior is a collective one, in response to strong interactions. To explore such states, scattering techniques are implemented to probe matter at different length and time scales.

报告人简介：

Despina Louca, Professor of Physics, at the University of Virginia. A Fulbright scholar from Cyprus, she received her A.B. degree in physics and biology in 1990, and an M. A. degree in physics in 1992 both from Bryn Mawr College, PA. In 1997, she received her Ph.D. degree from the University of Pennsylvania, PA. She worked at Los Alamos National Laboratory as a postdoctoral research fellow before joining the faculty of the physics department at the University of Virginia in 1999 as an assistant professor. She was promoted to associated professor in 2005 and to full professor in 2011. She was the chair of the Spallation and High Flux Isotope Reactor (SHUG) User Group (2006-2007), and currently is the chair of the NIST user group. She has published more than 80 research papers in Phys. Rev. Lett., Phys. Rev. B and other journals. Her current research focuses on studying the structural and magnetic properties of solids in either crystalline or amorphous states of matter primarily by using neutron and x-ray scattering techniques.