Other - Department of Physics & Astronomy Colloquium

Superconductivity and Magnetism: Enduring Frenemies

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Nicholson Hall 109
October 03, 2013 - 03:30 pm

Abstract:
The interplay of magnetism and superconductivity is an old story with many twists. The latest of these is the discovery superconductivity in Fe-pnictides and chalcogenides. This talk overviews some of the history of the science around this story and presents a discussion of the physical properties of superconductors near magnetism, especially the Fe-based materials, but also ruthenates and some older materials. Some new directions including suppression of magnetism in favor of spin-fluctuations, Fermi surface topology and magnetic reconstruction of the Fermi surface are presented.

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Speaker's Bio:

David Singh is the Group Leader of the Advanced Materials Group in the Materials Science & Technology Division at Oak Ridge National Laboratory. His objective is to push out at the forefront of science and enable others to do the same.

This lecture has refreshments @ 03:10 pm

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