763rd ASRC Seminar/J-PARC MLF Seminar

Date: September 27 (Fri), 11:00~12:00

Location: 2F Large Meeting Room,J-PARC Research bldg.

Speaker: Prof. Pengcheng Dai

(Physics Department, Rice University, USA)

Title: Orbital selective superconductivity in iron-based superconductors

Abstract:

Superconductivity in iron-based superconductors emerges from long-range ordered antiferromagnetic phase with nematic order that breaks four-fold rotational symmetry of the underlying lattice. In spite of considerable work over the past decade, much is unclear concerning the microscopic origin of superconductivity and its relationship with magnetism, nematicity, and orbital order.

In this talk, I will summarize our recent inelastic neutron scattering studies of iron-based superconductors, focusing on studying the relationship between magnetism, nematic order, and superconductivity. We find that orbital selective magnetic excitations and superconductivity are central to a microscopic understanding of these materials.

＜Contact＞

Shin-ichi Shamoto (81-3521)

Advanced Science Research Center

Yukinobu Kawakita (81-3156)

J-PARC Center