

# **A Unified paradigm for iron-based superconductors**

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**I discuss the existence of strikingly identical paradigm applicable to cuprates, iron-pnictides and iron-chalcogenides in understanding magnetism, superconductivity and the interplay between the two. By determining magnetic interactions in parent compounds of high temperature superconductors, one can successfully predict the pairing symmetry in superconducting states. I will discuss recent experimental results that support this simple paradigm. This study suggests that the pairing symmetry is determined by the combination of the local magnetic exchange coupling in real space and the topology of Fermi surface in reciprocal space for both cuprates and iron-based superconductors. High superconducting transition temperatures are also achieved by matching pairing form factors provided by local antiferromagnetic exchanges with Fermi surface topology. This paradigm will serve a guide to search for new high temperature superconductors.**