Title: Superconducting gap symmetry measurements in iron-based superconductors

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Abstract: Newly discovered iron-based superconductors may be the key to understanding how the general mechanism of high-temperature superconductivity is possible. One way to gain insight into how this phenomenon works is to experimentally probe the superconducting gap, which contains information about the electronic interactions that give rise to this state. Two experimentally measurable quantities that are sensitive to the superconducting gap structure are the London penetration depth and the thermal conductivity. During my talk, I will discuss recent data taken on several different members of the family of iron-based superconductors from London penetration depth and thermal conductivity measurements. Based on the results of these measurements, I will summarize what can be said about the superconducting gap, and hence the electronic interactions responsible for superconductivity, in these materials.