



Contribution ID: 246

Type: Talk

## **【622】 Identifying detrimental effects for multiband superconductivity –Application to Sr<sub>2</sub>RuO<sub>4</sub>**

*Thursday 24 August 2017 11:15 (15 minutes)*

We propose a general scheme to probe the compatibility of arbitrary pairing states with a given normal state Hamiltonian by the introduction of a concept called “superconducting fitness”. This quantity gives a direct measure of the suppression of the superconducting critical temperature in the presence of key symmetry-breaking fields, even in complex multi-band systems. In the light of this new concept we analyze the multiband superconductor Sr<sub>2</sub>RuO<sub>4</sub> and propose a new mechanism for the suppression of superconductivity, which we call inter-orbital effect, as a possible explanation for the unusual limiting feature observed in the upper critical field in this system.

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**Session Classification:** Correlated-Electron Physics in Transition-Metal Oxides

**Track Classification:** Correlated-Electron Physics in Transition-Metal Oxides