

Stanford



Ian Fisher

Director, Geballe Laboratory for Advanced Materials, Professor of Applied Physics and, by courtesy, of Materials Science and Engineering

Bio

BIO

Our research focuses on the study of quantum materials with unconventional magnetic & electronic ground states & phase transitions. Emphasis on design and discovery of new materials. Recent focus on use of strain as a probe of, and tuning parameter for, a variety of electronic states. Interests include unconventional superconductivity, quantum phase transitions, nematicity, multipolar order, instabilities of low-dimensional materials and quantum magnetism.

ACADEMIC APPOINTMENTS

- Professor, Applied Physics
- Professor (By courtesy), Materials Science and Engineering
- Principal Investigator, Stanford Institute for Materials and Energy Sciences

ADMINISTRATIVE APPOINTMENTS

- Director, Geballe Laboratory for Advanced Materials, (2013- present)
- Deputy Director, Geballe Laboratory for Advanced Materials, (2008-2013)

LINKS

- <http://web.stanford.edu/group/fisher/>: <http://web.stanford.edu/group/fisher/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our research focuses on the study of quantum materials with unconventional magnetic & electronic ground states & phase transitions. Emphasis on design and discovery of new materials. Recent focus on use of strain as a probe of, and tuning parameter for, a variety of electronic states. Interests include unconventional superconductivity, quantum phase transitions, nematicity, multipolar order, instabilities of low-dimensional materials and quantum magnetism.

Publications

PUBLICATIONS

- **Disorder-induced suppression of charge density wave order: STM study of Pd-intercalated ErTe₃** *PHYSICAL REVIEW B*
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- **Dynamical Slowing-Down in an Ultrafast Photoinduced Phase Transition** *PHYSICAL REVIEW LETTERS*
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- **Imaging anisotropic vortex dynamics in FeSe** *PHYSICAL REVIEW B*
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- **Evidence for topological defects in a photoinduced phase transition** *NATURE PHYSICS*
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- **Anomalous Te-125 Nuclear Spin Relaxation Coincident with Charge Kondo Behavior in Superconducting Pb_{1-x}Tl_xTe** *JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN*
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