Onur Erten

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Employment

January 2018- Present: Assistant Professor
Department of Physics, Arizona State University, Tempe, AZ, USA.

September 2016 - December 2017: Postdoctoral Associate
Max Planck Institute for The Physics of Complex Systems, Dresden, Germany.

September 2013 - August 2016: Postdoctoral Associate
Center for Materials Theory, Department of Physics and Astronomy, Rutgers University, NJ, USA.

Education

2013: Ph.D. Degree
The Ohio State University, Department of Physics, Columbus, OH, USA.
Advisor: Mohit Randeria

2008: B.S. Degree
Bilkent University, Department of Physics, Ankara, Turkey.

Research Interests

My research interests lie in the field of theoretical condensed matter physics: strongly correlated electron systems, quantum magnetism, superconductivity and topological phases in heavy fermions and transition metal oxides.

Fellowships and Awards

2016-2017: Visitor fellowship
Postdoctoral fellowship at Max Planck Institute for the Physics for the Physics of Complex Systems.

2009-2013: Graduate fellow
Graduate Fellow of Center for Emergent Materials, NSF Material Research Science and Engineering Center (MRSEC) at The Ohio State University.

June-August 2007: Summer Student
CERN, European Laboratory for Particle Physics, Geneva, Switzerland.
"Reconstruction of conversion vertices of Pixel detector in ATLAS Experiment."
Advisor: Andreas Korn.

June-July 2006: Summer Internship
Lund University, Lund, Sweden
"Spectroscopic analysis of Co-54 isotope."
Advisor: Dirk Rudolph.

Publications

16) "*Why rare-earth ferromagnets are so rare: insights from the p-wave Kondo model*", S. Ahamed, R. Moessner, O. Erten, Phys. Rev. B **98**, 054420 (2018).

15) "*Effect of Applied Orthorhombic Lattice Distortion on the Antiferromagnetic Phase of $CeAuSb_2$*", J. Park, H. Sakai, O. Erten, A. Mackenzie, C. Hicks, Phys. Rev. B **97**, 024411 (2018).

14) "*Direct visualization of coexisting channels of interaction in CeSb*" S. Jang, R. Kealhofer, C. John, S. Doyle, J. Hong, J.-H. Shim, Q. Si, O. Erten, J. D. Denlinger, J. G. Analytis, arXiv:1712.05817 (2017).

13) "*Topological p+ip excitonic insulator with parity anomaly*", R. Wang, O. Erten, B. Wang, D. Y. Xing, arXiv:1705.06421 (2017).

12) "*Skyrme insulators: insulators at the brink of superconductivity*", O. Erten, P.-Y. Chang, P. Coleman, A. Tsvelik, Phys. Rev. Lett. **119**, 057603 (2017).

11) "*Möbius Kondo Insulators*", P.-Y. Chang, O. Erten, P. Coleman, Nature Physics, **13**, 794 (2017).

10) "*Kondo Breakdown and Quantum Oscillations in SmB_6*", O. Erten, P. Ghaemi, P. Coleman, Phys. Rev. Lett. **116**, 046403 (2016).

9) "*Kondo Breakdown in Topological Kondo Insulators*", V. Alexandrov, P. Coleman, O. Erten, Phys. Rev. Lett. **114**, 177202 (2015).

8) "*Molecular Pairing and Fully-Gapped Superconductivity in Yb doped $CeCoIn_5$*", O. Erten, R. Flint, P. Coleman, Phys. Rev. Lett. **114**, 027002 (2015).

7) "*Enhanced Stability of Skyrmions in Two-Dimensional Chiral Magnets with Rashba Spin-Orbit Coupling*", S. Banerjee, J. Rowland, O. Erten, M. Randeria, Phys. Rev. X **4** 031045, (2014).

6) "*Ferromagnetic Exchange, Spin-orbit Coupling and Spiral Magnetism at the $LaAlO_3/SrTiO_3$ Interface*", S. Banerjee, O. Erten, M. Randeria, Nature Physics **9**, 626 (2013).

5) "*Theory of High Tc Ferrimagnetism in a Multiorbital Mott Insulator*", O. N. Meetei, O. Erten, M. Randeria, N. Trivedi Phys. Rev. Lett. **110**, 087203 (2013).

4) "*Theory of Half-metallic Double Perovskites. II. Effective Spin Hamiltonian and Disorder Effects*", O. Erten, O. N. Meetei, A. Mukherjee, M. Randeria, N. Trivedi, P. Woodward Phys. Rev. B **87**, 165104 (2013).

3) "*Theory of Half-metallic Double Perovskites. I. Double Exchange Mechanism*", O. N. Meetei, O. Erten, A. Mukherjee, M. Randeria, N. Trivedi, P. Woodward Phys. Rev. B **87**, 165104 (2013).

2) "*Theory of Half-metallic Ferrimagnetism in Double Perovskites*", O. Erten, O. N. Meetei, A. Mukherjee, M. Randeria, N. Trivedi, P. Woodward Phys. Rev. Lett. **107**, 257201 (2011).

1) "*Isospin and deformation studies in the odd-odd N=Z nucleus 54Co*", D. Rudolph, L.-L. Andersson, R. Bengtsson, J. Ekman, O. Erten, C. Fahlander *et al.*, Phys. Rev. C **82**, 054309 (2010).

Teaching Experience

2018 - Spring Semester: Instructor for Phy 315 - Quantum Mechanics II at Arizona State University.

2008 - Fall Semester: Teaching assistant for Phy 2301 - Intermediate Mechanics II; Mathematical Physics at Ohio State University.

2007-2008: Teaching assistant for Phy 101 - Introduction to Physics at Bilkent University.