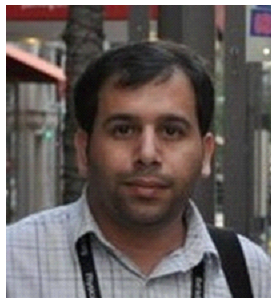


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EDUCATION

Aug.2007-Apr. 2013 PhD, Physics	Missouri University of Science & Technology Advisor: Dr. T. Vojta, Thesis Title: Phase Transitions in Disordered Systems	Rolla, MO, USA
Aug.2004-Aug.2006 M.Sc., Physics	Jordan University of Science & Technology Advisor: Dr. A. Obeidat, Thesis Title: Nucleation Rates of Methanol and Ethanol Using SAFT and PC-SAFT EOSs	Irbid, Jordan
Aug.1998-Aug.2002 B.Sc., Physics	Jordan University of Science & Technology Applied Physics	Irbid, Jordan

POSITIONS

Jun.2014-Present Assist. Prof., Physics	King Fahd University of Petroleum & Minerals Field: Quantum and Classical Condensed Matter	Dhahran, Saudi Arabia
May.2013-Dec.2013 Post-Doc, Physics	Missouri University of Science & Technology Advisor: Dr. G. Wilemski, Field: Nanophysics of Aerosol Particles	Rolla, MO, USA

TEACHING EXPERIENCE

Jun.2014-Present	King Fahd University of Petroleum & Minerals Assistance Professor: <i>UnderGrad.</i> Phys. 101, Therm. Phys.; <i>Grad.</i> Phase Trans. & Critical Phenom.	Dhahran, Saudi Arabia
Feb.2014-Jun. 2014	Jordan University of Science & Technology Part-time Lecturer: <i>Grad.</i> (Stat. Mech. 761), <i>UnderGrad.</i> (Comp. Phys. 303), 103	Irbid, Jordan
Aug.2008-May.2011	Missouri University of Science & Technology TA: Lab-Phys. 23 & 24	Rolla, MO, USA
Sep.2005-Jun.2006	Jordan University of Science & Technology TA: Lab-Phys. 107	Irbid, Jordan

RESEARCH EXPERIENCE

Current Research Fields	King Fahd University of Petroleum & Minerals - Quantum Many-Particle Systems - Ultra-Cold atoms and Optical Lattice	Dhaharn, SA
Sep.2010-Present Advisor Fields	Missouri University of Science & Technology Prof. T. Vojta - Quantum and Classical Phase Transitions in Disordered Systems - Superfluid-Mott-insulator quantum phase transition in optical lattice	Rolla, MO, USA vojtat@mst.edu
Jan.2008-Present Advisor Fields	Missouri University of Science & Technology Prof. G. Wilemski - Investigating the Nanophysics of Aerosol Particles Using Density Functional Theory - Molecular Dynamics of Aqueous Organic Nanodroplets Using Gromacs Package - Scaling Behavior and Gradient Theory of Nucleation Rates	Rolla, MO, USA wilemski@mst.edu
Sep.2004-Aug.2006 Advisor Fields	Jordan University of Science & Technology Dr. Abdalla Obeidat - Numerical Methods of Solving Classical and Non-Classical Nucleation Rates	Irbid, Jordan aobeidat@mst.edu

GRANTS

Jun. 2015-Jun. 2016 -Junior Faculty Grant SA 50,000

COMPUTATIONAL SKILLS

Simulations -Classical Monte Carlo Simulations Several Algorithms
- Quantum Monte Carlo Simulations Basics
- Numerical Renormalization Group Theory SDRG
- Molecular Dynamic Simulations Gromacs Package

Computations - Finite Element Analysis Course
- Finite Difference Method DFT and GT

COMPUTER SKILLS

Operating Systems Linux, Mac OS X, Windows

Programming Fortran (MPI), Matlab, C++, Mathematica, Latex, html

Network Building High Performance Computing (HPC) Lab, Configure servers and installing Linux applications on clusters and servers.

PROFESSIONAL SOCIETIES

American Physical Society

PRIZES

2012 19th Annual Laird D. Scheerer Prize MS&T

PUBLICATIONS

- Refereed Research Articles**
11. A. Obeidat, **F. Hrahsheh**, G. Wilemski: *Scattering Form Factors for Russian Doll Aerosol Droplet Models*, *J. Phys. Chem. B*, (2015).
 10. H. Barghathi, **F. Hrahsheh**, José A. Hoyos, Rajesh Narayanan and T. Vojta: *Strong-randomness phenomena in quantum Ashkin-Teller models*, *Physica Scripta* **2015** T165 (2015).
 9. **F. Hrahsheh**, José A. Hoyos, Rajesh Narayanan and T. Vojta: *Strong-randomness infinite-coupling phase in a random quantum spin chain*, *Phys. Rev. B* **89**, 014401 (2014).
 8. **F. Hrahsheh** and T. Vojta: *Disordered bosons in one dimension: from weak to strong randomness criticality*, *Phys. Rev. Lett.* **109**, 265303 (2012).
 7. **F. Hrahsheh**, and T. Vojta: *Anomalous elasticity in a disordered layered XY model*, *Phys. Scr.* **2012**, 014074 (2012).
 6. **F. Hrahsheh**, J. Hoyos and T. Vojta: *Rounding of a first-order quantum phase transition to a strong-coupling critical point*, *Phys. Rev. B* **86**, 214204 (2012).
 5. L. Demkó, S. Bordács, T. Vojta, D. Nozadze, **F. Hrahsheh**, C. Svoboda, B. Dóra, H. Yamada, M. Kawasaki, Y. Tokura and I. Kézsmárki: *Disorder promotes ferromagnetism: Rounding of the quantum phase transition in $Sr_{1-x}Ca_xRuO_3$* , *Phys. Rev. Lett.* **108**, 185701 (2012).
 4. C. Svoboda, D. Nozadze, **F. Hrahsheh** and T. Vojta: *Disorder correlations at smeared phase transitions*, *Europhys. Lett.* **97**, 20007 (2012).
 3. **F. Hrahsheh**, H. Barghathi and T. Vojta: *Infinite- randomness criticality in a randomly layered Heisenberg magnet*, *Phys. Rev. B* **84**, 184202 (2011).
 2. **F. Hrahsheh**, D. Nozadze and T. Vojta: *Composition-tuned smeared quantum phase transitions*, *Phys. Rev. B* **83**, 224402 (2011).
 1. A. Obeidat, M. Gharaibeh, H. Ghanem, **F. Hrahsheh**, N. Al-Zoubi, G. Wilemski: *Nucleation Rates of Methanol Using the SAFT-0 Equation of State*, *ChemPhysChem* **11**, 3987 (2010).

Proceedings

2. **F. Hrahsheh**, H. Barghathi, P. Mohan, R. Narayanan and T. Vojta: *Evidence for power-law Griffiths singularities in a layered Heisenberg magnet.*, Proceedings of the International Conference on Strongly Correlated Electron Systems 2010, *J. Phys. Conf. Series*, **273**, 012004 (2011)
1. David Nozadze, Christopher Svoboda, **F. Hrahsheh**, Thomas Vojta: *Modification of smeared phase transitions by spatial disorder correlations.* Proceedings of the XVII Training Course in the Physics of Strongly Correlated Systems 2012, [arXiv:1212.5962](https://arxiv.org/abs/1212.5962)

Conference Contributions

Talks

11. Thomas Vojta, Hatem Barghathi, **F. Hrahsheh**, Jose Hoyos, and Raj Narayanan, *Strong-randomness phenomena in quantum Ashkin-Teller models*, APS March Meeting, San Antonio, Texas (2015)
10. Gerald Wilemski, **F. Hrahsheh**, *Nanodroplets of immiscible fluid pairs adopt nonspherical shapes*, APS March Meeting, San Antonio, Texas (2015)
9. **F. Hrahsheh** and T. Vojta, *Disordered bosons in one dimension: from weak to strong randomness criticality*, APS March Meeting, Baltimore (21 Mar 2013)
8. G. Wilemski and **F. Hrahsheh**, *Fluctuating confinement of water in aqueous organic nanodroplets*, APS March Meeting, Baltimore (21 Mar 2013)
7. A. Obeidat, **F. Hrahsheh**, G. Wilemski, Harshad Pathak, and Barbara Wyslouzil, *Interpreting SAXS spectra of non-spherical nonane-water nanodroplets using a new particle form factor*, APS March Meeting, Baltimore (19 Mar 2013)
6. G. Wilemski, **F. Hrahsheh**, *Molecular dynamics of aqueous-organic binary and ternary nanodroplets with miscibility gaps*, 31st Annual Conference of the American Association for Aerosol Research, Minneapolis, MN, 10 October 2012.
5. G. Wilemski, **F. Hrahsheh**, *Molecular dynamics simulations of aqueous-organic binary and ternary nanodroplets*, Invited talk, University of British Columbia, Vancouver, Canada, 28 August 2012.
4. D. Nozadze, **F. Hrahsheh**, C. Svoboda and T. Vojta, *Composition-tuned smeared phase transitions*, 2012 Summer School on Quantum Monte Carlo: Theory and Applications, Urbana (23 Jul 2012)
3. **F. Hrahsheh** and T. Vojta, *Novel critical point in the random quantum Ashkin-Teller model*, APS March Meeting, Boston (02 Mar 2012)
2. D. Nozadze, **F. Hrahsheh**, C. Svoboda and T. Vojta, *Composition-tuned smeared phase transitions*, APS March Meeting, Boston (02 Mar 2012)
1. G. Wilemski and **F. Hrahsheh**, *Molecular dynamics of binary and ternary nanodroplets with a miscibility gap*, APS March Meeting, Boston (Mar 2012)

Posters

4. B. Wyslouzil, H. Pathak, **F. Hrahsheh** and G. Wilemski, *Nonspherical structure of aqueous organic nanodroplets*, APS March Meeting, Boston (Mar 2012)
3. **F. Hrahsheh** and T. Vojta, *Power-law Griffiths singularities in a randomly layered Heisenberg magnet*, APS March Meeting, Dallas (Mar 2011)
2. G. Wilemski, **F. Hrahsheh** and A. Obeidat, *Scaling of Nonclassical Nucleation Rates of Methanol*, APS March Meeting, Dallas (Mar 2011)
1. P. Mohan, R. Narayanan, **F. Hrahsheh**, H. Barghathi and T. Vojta, *Infinite randomness and quantum Griffiths effects in a classical system: the randomly layered Heisenberg magnet*, 2010 International Conference on Strongly Correlated Electron Systems, Santa Fe (30 Jun 2010)

REFERENCES

Dr. Thomas Vojta	1315 N. Pine Street, Rolla, MO 65409-06403, USA	(573) 341-4793	vojtat@mst.edu
Dr. Gerald Wilemski	1315 N. Pine Street, Rolla, MO 65409-06403, USA	(573) 341-4409	wilemski@mst.edu
Dr. Abdalla Obeidat	Physics Dept., Jordan Univ. of Sc. & Tech., JO	00962798092150	aobeidat@just.edu.jo
Dr. Paul Parris	1315 N. Pine Street, Rolla, MO 65409-06403, USA	(573) 341-4790	parris@mst.edu