Eitan Eidelstein

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Education

2002-2011	Ph.D., Physics Department, The Hebrew University. Thesis subject: 'Theoretical investigation of strong electronic correlations in low-dimensional systems', under the supervision of Avraham Schiller (of blessed memory).
1998-2002	B. Sc., in Mathematics, Computer-Science and Physics, The Hebrew University.

Employment

2011-present	Researcher, NRCN. Research subjects: Quantum simulations from ab-initio calculations (DFT) to continuous-time quantum monte carlo simulations (CTQMC and Inchworm).
2005-2008	Instructor, third-year undergraduate laboratory, Department of Physics, The Hebrew University of Jerusalem.
2004-2005	Instructor, Mechanics & Special Relativity and Electricity & Magnetism, Department of Physics, The Hebrew University of Jerusalem.
2002-2004	Instructor, second-year undergraduate laboratory, Department of Physics, The Hebrew University of Jerusalem.

Awards and Honors

2017	Excellent research prize, NRCN.

Academic Activities

2018-2021	PI - Pazy Foundation research grant: "Multiorbital Interactions in Strongly Correlated Solids".
2013-2017	Co-PI in Pazy Foundation research grant: "Alloy thermodynamics at high pressures from first-principles calculations".

Organization of conferences

2018	Co-Chair of the workshop "Strongly Correlated Materials: Experiments and Computation", with : Cohen Guy (TAU), Lichtenstein Alexander (University of Hamburg) and Shick Alexander (Inst. of Phys., Czech Academy of Sci.). Supported by Pazy foundation, CECAM, and Tel Aviv University, with 13 invited speakers from abroad (USA, Czech Republic, Germany, Russia, Netherlands) and another 11 from institutes in Israel (NRCN, TAU, HUJI, TECH, BIU) with about 50 participants in total. Tel Aviv University, April 2018.

Publications List – Eitan Eidelstein

Peer reviewed journals

1. S. Moukouri and **E. Eidelstein**, 'Density-matrix renormalization-group study of coupled Luttinger liquids', Phys. Rev. B **82**, 165132 (2010).
2. **E. Eidelstein**, S. Moukouri and A. Schiller, 'Quantum phase transitions, frustration, and the Fermi surface in the Kondo lattice model', Phys. Rev. B **84**, 014413 (2011).
3. S. Moukouri and **E. Eidelstein**, 'Mott transition in quasi-one-dimensional systems', Phys. Rev. B **84**, 193103 (2011).
4. **E. Eidelstein**, A. Schiller, F. Gutte and F.B. Andres, 'Coherent control of correlated nanodevices: A hybrid time-dependent numerical renormalization-group approach to periodic switching', Phys. Rev. B **85**,075118 (2012).
5. S. Moukouri and **E. Eidelstein**, 'Universality class of the Mott transition in two dimensions', Phys. Rev. B **86**, 155112 (2012).
6. **E. Eidelstein**, D. Goberman, and A. Schiller , 'Cossover from adiabatic to antiadiabatic phonon-assisted tunneling in single-molecule transitors', Phys. Rev. B **87**, 075319 (2013).
7. F. Guttge, F.B. Anders, U. Schollowock, **E. Eidelstein**, and A. Schiller ,'Hybrid NRG-DMRG approach to real-time dynamics of quantum impurity systems', Phys. Rev. B **87**, 115115 (2013).
8. U.Argaman, **E. Eidelstein**, O. Levy and G. Makov, "Themodynamic properties of titanium from *ab initio* calculations", Matter. Res. Express **2,** 016505 (2015).

From August 2015:

9. U. Argaman, **E. Eidelstein**, O. Levy, and G. Makov, "Ab initio study of the phononic origin of negative thermal expansion", Phys. Rev. B **94**, 174305 (2016).
10. N. Eidelstein, T. Shrot, **E. Eidelstein**, L. Aronshtam, "Controlling Sub-Tournaments: Easy Or Hard Problem? Theoretical vs Practical Analysis.", Annals of Mathematics and Artificial Intelligence (2019) **86**, 257.
11. **E. Eidelstein**, S. Barzilai, S. Curtarolo, and O. Levy, "First principles investigation of cold curves of metals", Isr. J. Chem. **60**(8-9), 897 (2020).
12. **E. Eidelstein**, E. Gull, and G. Cohen, "Inchworm Monte Carlo for multi-orbital Quantum Impurity Models", Phys. Rev. Lett. **124**, 206405 (2020).