PUBLICATION LIST K. Levin

**Areas Of Past Research:**

- Magnetism and Alloys
- Superfluid helium – 3
- Magnetic Superconductors
- Heavy Fermion Metals
- Coexistent BCS CDW Superconductors
- Spin Glasses
- Disorder And Localization

**Current Interests:**

1. Connections between High Tc Superconductors and Magic Angle Graphene
2. BCS – BEC In Fermi Gases and Solids
3. Non-equilibrium Dynamics in Ultracold Superfluids
4. Conserving Theories Of Transport In Highly Correlated Super – conductors/ fluids
5. Topological Superconductors, Superfluids


222. "Dynamic preparation of an atomic condensate in a Hofstadter band", Han Fu, Andreas Glatz, Fnu Setiawan, Kai-Xuan Yao, Zhandong Zhang, Cheng Chin and K. Levin (ArXiv 2107.11547) in proof stage


219. "Jet Substructure in Fireworks Emission from Non-Uniform Bose Einstein


199. Unified Treatment of Fermi pockets and arcs scenarios for the cuprates: Sum rule consistent response functions of the pseudogap Peter Scherpelz, Adam Rancon, Yan He and K. Levin PRB 90, 060506(R) (2014)


195. Establishing Conservation Laws in Pair Correlated Many body theories: T matrix Approaches, Yan He and K. Levin,


192 The Compressibility in Strongly Correlated Superconductors and Superfluids: From BCS to BEC Hao Guo, Yan He, Chih-Chun Chien and K. Levin PRA 88, 043644 (2013).


185. "General Pairing Theory for Condensed and Non-condensed pairs of a


177. Establishing the Presence of Coherence in Atomic Fermi Superfluids: Spin Flip and Spin-Preserving Bragg Scattering at Finite Temperatures, Hao Guo, Chih-Chun Chien and K. Levin


175. Comparison of Gap Extraction Methods Based on STM and ARPES Experiments in the Cuprates Dan Wulin, Chih-Chun Chien, Dirk Morr and K. Levin (preprint)


160. "First and Second Sound Modes at Finite Temperature in Trapped Fermi Gases: From BCS to BEC" Yan He, Qijin Chen, Chih-Chun Chien and K. Levin Phys. Rev. A 76, 051602 (2007) (Rapid Communications)


157. "What Can Ultracold Fermi Gases Teach Us About High Tc Superconductors and Vice Versa?" K. Levin and Qijin Chen cond-mat/0611104 (Invited Talk-- M2S Conference)

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112. "Numerical Studies of the S-Wave Pseudogap State and Related Tc: Application of


49. "Theory of Antiferromagnetic Superconductors" (Invited Talk), Sixth International Taniguchi Symposium #52, Springer Verlag.


42. "Phenomenological Theories of Liquid 3He," K. Levin and O. T. Valls, Physics Reports, #1, 98 (August, 1983).


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15. "Absence of Migdal Theorem for Paramagnons and Its Implications for Superfluid
He3," J. A. Hertz, K. Levin and M. T. Beal-Monod, Solid State Comm. 18, 803 (1976);
see also "The Importance of Vertex Corrections in Paramagnon Theories," K. Levin, J. A.
Hertz and M. T. Beal-Monod, Conf. on Magnetism and Magnetic Materials, AIP Conf.

14. "Direction of Paired Spins in the Al Phase of He3: A Test of the Paramagnon- In-

13. "Incompatibility of BCS Pairing and the Peierls Distortion in One-Dimensional-

12. "Incompatibility of BCS Pairing and the Peierls Distortion in One-Dimensional

11. "Incompatibility of BCS Pairing and the Peierls Distortion in Linear Chain Sys-

10. "Contribution of Giant Spin Clusters to the Resistivity, Neutron Scattering Cross
Section and Specific Heat in Alloys: Application to Ni-Cu," K. Levin and D. L. Mills,

9. "Temperature and Spatial Dependence of the Magnetization Near a Surface of a
(1973).

8. "Simple Model for the Electronic Density of States Near Transition-Metal Surfaces:
Application to Ferromagnetic Ni," K. Levin, A. Liebsch and K. H. Bennemann, Phys.


6. "Temperature Dependence of Local Magnetic Moments in Paramagnetic Metals:
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5. "Calculation of the Spin Susceptibility of Disordered Binary Alloys: Application to
6, 1865 (1972).

