

Aaron Finck

Postdoctoral Scholar

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, DEPT. OF PHYSICS
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Employment

- Postdoctoral researcher in Prof. Dale Van Harlingen's group, University of Illinois at Urbana-Champaign, October 2011 to present.

Education

- Ph.D. in Physics with advisor Prof. James Eisenstein, California Institute of Technology, June 2005 to September 2011.
- Bachelor of Science in Physics, Massachusetts Institute of Technology, September 2001 to May 2005.

Research Interests

- Studying systems of strongly correlated electrons using electronic transport measurements, with an emphasis on tunneling and phase-sensitive transport.
- Topological states of matter, such as the quantum Hall effect and topological insulators.

Publications

7. "Anomalous modulation of a zero-bias peak in a hybrid nanowire-superconductor device," A. D. K. Finck, D. J. Van Harlingen, P. K. Mohseni, K. Jung, and X. Li, *Phys. Rev. Lett.* **110**, 126406 (2013). [PRL](#)
6. "Exciton Transport in a Bilayer Quantum Hall Superfluid," J. P. Eisenstein, A. D. K. Finck, D. Nandi, L. N. Pfeiffer, and K. W. West, Proceedings of the 20th International Conference on High Magnetic Fields in Semiconductor Physics, Chamonix, 2012. [arXiv](#)
5. "Exciton Condensation and Perfect Coulomb Drag," D. Nandi, A. D. K. Finck, J. P. Eisenstein, L. N. Pfeiffer, and K. W. West, *Nature* **488**, 481 (2012). [Nature](#)
4. "Exciton Transport and Andreev Reflection in a Bilayer Quantum Hall System," A. D. K. Finck, J. P. Eisenstein, L. N. Pfeiffer, and K. W. West, *Phys. Rev. Lett.* **106**, 236807 (2011). [PRL](#)
3. "Quantum Hall Exciton Condensation at Full Spin Polarization," A. D. K. Finck, J. P. Eisenstein, L. N. Pfeiffer, and K. W. West, *Phys. Rev. Lett.* **104**, 016801 (2010). [PRL](#)
2. "Charge imbalance and bilayer two-dimensional electron systems at $\nu_T = 1$," A. R. Champagne, A. D. K. Finck, J. P. Eisenstein, L. N. Pfeiffer, and K. W. West, *Phys. Rev. B* **78**, 205310 (2008). [PRB](#)
1. "Area dependence of interlayer tunneling in strongly correlated bilayer two-dimensional electron systems at $\nu_T = 1$," A. D. K. Finck, A. R. Champagne, J. P. Eisenstein, L. N. Pfeiffer, and K. W. West, *Phys. Rev. B* **78**, 075302 (2008). [PRB](#)

Fellowships and Honors

- Millikan Fellowship, California Institute of Technology, 2005-2006.

- Phi Beta Kappa, from 2005.
- Sigma Pi Sigma physics honor society, from 2005.

Invited Talks and Seminars

- "Exciton Condensation and Transport in a Bilayer Quantum Hall System," seminar at University of Illinois at Urbana-Champaign, Purdue University, University of California Berkeley, University of California San Diego, University of California Santa Barbara, University of California Riverside, University of Maryland College Park, and Columbia University, 2011.

Contributed Talks and Posters

7. "Hints of hybridizing Majorana fermions in a nanowire coupled to superconducting leads," APS March Meeting, Baltimore, MD, 2013.
6. "Exciton Transport and Andreev Reflection in a Bilayer Quantum Hall System," Emergent Properties of Quantum Hall Systems 4, Beijing, China, 2011.
5. "Exciton Transport and Andreev Reflection in a Bilayer Quantum Hall System," Center for Exotic Quantum Systems seminar, California Institute of Technology, Pasadena, CA, 2011.
4. "Exciton Transport and Andreev Reflection in a Bilayer Quantum Hall System," APS March Meeting, Dallas, TX, 2011.
3. "Quantum Hall Exciton Condensation at Full Spin Polarization," Quantum Hall Effect at 30 Years, St. Paul, MN, 2010
2. "Quantum Hall Exciton Condensation at Full Spin Polarization," APS March Meeting, Portland, OR, 2010.
1. "Area and perimeter dependence of tunneling in a bilayer 2D electron system in the $\nu_T = 1$ quantum Hall state," APS March Meeting, New Orleans, LA, 2008.