

Robin Leslie Smith

Education

- * **Cornell University:** Candidate for Ph.D. in Physics (2011)
- * **Cambridge University:** Postgraduate theoretical physics lectures in Part III Math Tripos (2004)
- * **Swarthmore College:** Honors B.A. with a Major in Physics and a Minor in Mathematics (2003)
- * **West Chester East High School:** Graduated Valedictorian (1999)

Research Experience

- * **Cornell University** (5.2006-): Fluorescence techniques for characterizing phase behavior of model membranes with G. Feigenson (3.2008-) and W.W. Webb (2006-8)
- * **AT&T Labs** (Summer 2005): Cross polarization modulation in optical systems with S.L. Woodward
- * **Los Alamos National Laboratory** (Summer 2004): Empirical charge redistribution modeling for water potentials in biophysical systems with S. Valone and S.R. Atlas
- * **Ecole Normale Supérieure de Cachan, France** (10.2003-6.2004): Nitrogen-related color centers in diamond nanocrystals as a single photon source for quantum cryptography with J.F. Roch, F. Treussart
- * **CERN** (Summer 2003): Inclusive lambda polarization in a constituent scattering model with H.A. Neal
- * **Swarthmore College** (Summers 2001,2): Ultrafast optical dephasing with C. Grossman correlating fluorescence lifetimes of single organic dye molecules with dephasing times in polymer thin films
- * **Swarthmore College** (Summer 2000): Resonance light scattering studies of organic dye aggregation with P. Collings and R. Pasternack

Awards and Honors

- * **National Defense Science and Engineering Graduate (NDSEG) Fellow** (2006-9)
- * **AT&T Laboratories Fellowship Program, ALFP Graduate Fellow** (2005-6, 2009-11)
- * **Phi Beta Kappa Scholarship** and **Mott Fellowship** for Cambridge University graduate study (2004)
- * **Fulbright Advanced Student Grant** for experimental quantum optics research in France (2003-4)
- * **Swarthmore College Extraordinary Service Award** for 'excellent work in physics, outstanding ability to conduct research, and contributions to other students via leadership in a variety of service roles' (2003)
- * **Sigma Xi Research Honor Society** (2002)

Leadership/Outreach Experience

- * **Expanding Your Horizons:** Science conferences at Cornell University for 250 middle school girls. Conference chair (2007-), finance chair (2006-7), volunteer coordinator (2005-6)
- * **Cornell Physics Graduate Society (PGS):** President (2006), executive committee advisor (2005-)
- * **Cornell Graduate Women in Physics (GWP):** Founding vice-president (2005-6)
- * **Swarthmore Women in Astronomy and Physics (SWAP):** Founder (2002-3)

Employment History

- * **Physics Tutor and Grader:** Cornell University (2006-) and Swarthmore College (2000-3)
- * **Astro/Physics Clinic, Swarthmore College:** Clinician and co-director (2002-3)

Conference Presentations and Publications

- * F.A. Heberle, J. Wu, S.L. Goh, J. Zhao, R.L. Smith, G.W. Feigenson. FRET reveals nanoscopic phase separation in DSPC/POPC/Cholesterol. KECK Biomembrane Symposium (2008).
- * E.R. Farkas, R.L. Smith, T. Baumgart, W.W. Webb. Probing Chain-Order in Model Membranes via Fluorescence Polarization using Two-Photon Microscopy. Biophysical Society Meeting Abstracts. *Biophysical Journal*, Supplement, Abstract 2009-Pos (2007).
- * Mary R. Phillips, Sheryl L. Woodward, R. L. Smith. Cross-Polarization Modulation: Theory and Measurement in Subcarrier-Modulated WDM Systems. *IEEE Journal of Lightwave Technology* **24**, 4089 (2006).
- * R.L. Smith, S.M. Valone, and S.R. Atlas. An Empirical Charge Redistribution Model for Water Potentials in Biophysical Systems. Bulletin of APS March Meeting, V50, A39.6, 138 (2005).
- * Robin Smith. Photon Echo and Single-Molecule Fluorescence Measurements of Organic Dyes in Thin Polymer Films. Senior Honors Thesis. Swarthmore College (2003).
- * Robin Smith, Carl Grossman, François Treussart, Jean-François Roch. Photon Echo and Single Molecule Fluorescence Measurements of Organic Dyes. Bulletin of APS March Meeting, V48, P11.4, 852 (2003).