

Undergraduate Research in Optics and Engineering at the University of Rochester (REU)

(UNDER CONSTRUCTION)

Senior (B.S.) Theses by Undergraduates supervised by Institute of Optics Faculty since 1994

1. Daniel Jeannotte, "External Cavity with Litrow-Mounted Diffraction Grating", advisor - N. Bigelow, 1994. (Physics Senior Thesis, 1994).
2. Mark Su, "The Dynamics of a Periodically Kicked Pendulum", advisor - N. Bigelow, 1995. (Physics Senior Thesis, 1995).
3. D. S. Rifkin, "The Localization of a Fluorescent Source in a Turbid Medium", advisor - T. Foster, (Physics Senior Thesis, 1995). (winner of Stoddard Prize, 1995).
4. S. Chen, "Confocal Fluorescence Microscopy of Multicell Tumor Spheroids", advisor - T. Foster, (Optics Senior Thesis, 1995). (winner of the Daniel Ward Healy, Jr. Memorial Award, 1995).
5. Matthew Dobbins, "Frequency Stabilization of a Helium-Neon Laser", advisor - N. Bigelow **, 1996. (Physics Senior Thesis, 1996). (Stoddard Prize Honorable Mention, 1996).
6. James Ruffo, "Population Transfer in a Three Level Atom", advisor - J. Eberly ** 1996. (Physics Senior Thesis, 1996). (Stoddard Prize Honorable Mention, 1996).
7. Ananth Chikkatur, "Construction and Characterization of a Magneto-Optical Trap (MOT)", advisor - N. Bigelow *, 1997. (Physics Senior Thesis, 1997). (winner of the Stoddard Prize, 1997).
8. William Marleau, Optical Spectroscopy in Highly Scattering Systems@, advisor - T. Foster, 1998. (Optics Senior Thesis, 1998).
9. Alexis Spillman, Fluorescence Spectroscopy in Scattering and Absorbing Media, advisor - T. Foster, 2000. (Optics Senior Thesis).
10. Matthew Moffa, "Student Lab in Digital Speckle-Pattern Interferometry", advisor - N. Bigelow, 2001. (Physics Senior Thesis, 2001).
11. Brian P. Padworny "Creation of an Undergraduate Lab to Measure In Plane Vibration Using Digital Pattern Interferometry", advisor - N. Bigelow, 2001. (Physics Senior Thesis, 2001).

List of BS Theses Prior to 1994 (in reverse chronological order)

1. Anne K. Sutherland, "Magnetic Resonance Angiography", advisor - T. Foster, 1993. (Physics Senior Thesis, 1993). (winner of the Stoddard Prize, 1993).
2. Erez Yaakobi, "The Theory of Magnetic Resonance Imaging", advisor - T. Foster, (Physics Senior Thesis, 1991).
3. Kevin Leung, "An Atom with Two Coupled Continua in a Strong Laser Field", advisor - J. H. Eberly, 1989 (Physics Senior Thesis, 1989). (winner of the Stoddard Prize Honorable Mention, 1989)
4. R. Wentworth, "Interactions of Stochastically Polarized Laser Light with Atoms", advisor - J. H. Eberly, 1980.

Rev. A23, 2525 (1981). (Physics Senior Thesis, 1980). (winner of the Stoddard Prize, 1980, APS National Awar Finalist 1978)

5. T. A. Nguyen, "The Reaction of a Two-Level Atom to an Amplitude-Noisy Laser", advisor - J. H. Eberly, 1979. (Physics Senior Thesis, 1979).
6. N.C. Wong, "Effects of Laser Fluctuations in Three-Level-Atom Multiphoton Absorption", advisor - J. H. Eberly, 1977. (Physics Senior Thesis, 1977).