

Toby E. Schneider

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EDUCATION

Massachusetts Institute of Technology and Woods Hole Oceanographic Institution, Cambridge, MA / Woods Hole, MA

Joint Program in Oceanography and Applied Ocean Sciences and Engineering
Ph.D. in Mechanical / Ocean Engineering, expected 2012

Williams College, Williamstown, MA

B.A. in Physics with Honors, Magna Cum Laude, 2007

RESEARCH EXPERIENCE

Massachusetts Institute of Technology, Laboratory for Autonomous Marine Sensing Systems (2007-present): Adaptive oceanographic sampling using autonomous underwater vehicles (AUVs) and autonomous surface craft (ASCs). Algorithms for target tracking using clusters of autonomous ocean craft. Realtime and historical visualization of autonomous ocean craft and data using Google Earth and open source web software. (H. Schmidt).

Williams College, Undergraduate Honors Research in Physics (2006-2007):

Precision diode laser spectroscopy of thallium towards the measurement of time reversal-violating but parity-conserving (TOPE) forces. Honors thesis: *Precision Phase Shift Spectroscopy in Thallium*. (P. K. Majumder).

Williams College, Undergraduate Summer Research in Physics (2005):

Investigations of picosecond soliton pulses in an all fiber laser (J. Strait).

Connecticut Agricultural Experiment Station, Summer Research Assistant in the Department of Plant Pathology and Ecology (2004):

Quantifying aerial dispersion of maize (*Zea mays*) pollen towards a model of temporal and spatial separation necessary for complete isolation of genetically modified (GM) maize. (D. E. Aylor).

WORK EXPERIENCE

Research Assistant, Massachusetts Institute of Technology, Laboratory for Autonomous Marine Sensing Systems (2008-present)

Technology Manager, Williams College Media Labs (2004-2007)

Teaching Assistant, Williams College Physics Department, Physics 141 (Fall 2004).

Student Media Consultant, Williams College Media Labs (2003-2004)

Connecticut Certified Umpire for the Greater New Haven
Baseball Umpires' Association (2003-present [on leave 2007-present])

**TECHNICAL
SKILLS**

Computer skills:

Familiarity with languages: C, C++, Java, National Instruments
LabVIEW, PHP, MySQL, HTML, Mathematica, MATLAB, Assembly (PIC
microcontroller, MC68000).

Software: Linux, Windows, Adobe Creative Suite

Acquaintance with machining and electronics skills, gained through model
rocketry and research related projects.

**SELECTED
AWARDS**

Presidential Fellowship, MIT, 2007

Phi Beta Kappa Member, Williams College, 2007-present

Sigma Xi Student Member, Williams College, 2007-present