

## Biographical Sketch: John Trowbridge

### Professional Preparation:

- University of Washington, Civil Engineering, Bachelor of Science, 1977
- Massachusetts Institute of Technology, Civil Engineering, Master of Science, 1979
- Massachusetts Institute of Technology and Woods Hole Oceanographic Institution, Oceanographic Engineering, Doctor of Science, 1983

### Appointments:

- 2006-present: Director, Center for Ocean, Seafloor and Marine Observing Systems (COSMOS), Woods Hole Oceanographic Institution
- 1987-present: Assistant, Associate, and Senior Scientist, Applied Ocean Physics and Engineering, Woods Hole Oceanographic Institution
- 1983-1987: Assistant Professor, Civil Engineering, University of Delaware

### Publications:

- **Most closely related to the proposed project:**
  - Trowbridge, J. H., W. R. Geyer, M. M. Bowen, and A. J. Williams, 1999. Near-bottom turbulence measurements in a partially mixed estuary: turbulent energy balance, velocity structure, and along-channel momentum balance. *Journal of Physical Oceanography*, 29, 3056-3072.
  - Shaw, W. J., J. H. Trowbridge, and A. J. Williams, 2001. Budgets of turbulent kinetic energy and scalar variance in the continental shelf bottom boundary layer. *Journal of Geophysical Research*, 106, 9551-9564.
  - Trowbridge, J. H. and S. Elgar, 2001. Turbulence measurements in the surf zone. *Journal of Physical Oceanography*, 31, 2403-2417.
  - Trowbridge, J. H. and S. Elgar, 2003. Spatial scales of stress-carrying nearshore turbulence. *Journal of Physical Oceanography*, 33, 1122-1128.
  - Gerbi, G. P., J. H. Trowbridge, J. B. Edson, A. J. Plueddemann, E. A. Terray, and J. J. Fredericks, 2008. Direct covariance measurements of momentum and heat transfer across the air-sea interface. *Journal of Physical Oceanography*, 38, 1054-1072.
- **Other significant publications:**
  - Shaw, W. J. and J. H. Trowbridge, 2001. The direct estimation of near-bottom turbulent fluxes in the presence of energetic wave motions. *Journal of Atmospheric and Oceanic Technology*, 18: 1540-1557.
  - Hill, P. S., G. Voulgaris and J. H. Trowbridge, 2001. Controls on flocculation size in a continental shelf bottom boundary layer. *Journal of Geophysical Research* 106: 9543-9550.
  - Fries, S. J. and J. H. Trowbridge, 2003. Flume observations of enhanced fine particle deposition to permeable sediment beds. *Limnology and Oceanography*, 48:802-812.
  - Trowbridge, J. and Y. Agrawal, 2004. A two-spot sensor for measurement of dissipation by means of laser-Doppler velocimetry. *Journal of Atmospheric and Oceanic Technology*, 21: 1104-1111.
  - Feddersen, F., J. H. Trowbridge, and A. J. Williams, 2007. Vertical structure of dissipation in the nearshore. *Journal of Physical Oceanography*, 37: 1764-1776.

### **Synergistic Activities:**

- MARGINS steering committee, 1999-2000
- Educational Coordinator, WHOI/MIT program in Applied Ocean Science & Engineering, 2002-2004
- Chief Scientist, Martha's Vineyard Coastal Observatory, 2004-2005
- Chair, Coastal Subcommittee, ORION/OOI Science and Technology Advisory Committee, 2005-2007
- Executive Committee, Northeastern Regional Association of Coastal Ocean Observing Systems, 2007-2008

### **Collaborators and Other Affiliations:**

- **Collaborators and Co-Editors:**

Y. Agrawal, Sequoia Scientific, Incorporated; P. Bogden, Gulf of Maine Ocean Observing System; E. Boss, University of Maine; J. Campbell, University of New Hampshire; T. Crawford, deceased; J. Crescenti, FPL Energy, Incorporated; J. Edson, University of Connecticut; S. Elgar, Woods Hole Oceanographic Institution; F. Feddersen, Scripps Institution of Oceanography; T. Farrar, Woods Hole Oceanographic Institution; N. Frew, Woods Hole Oceanographic Institution; J. Fries, US Environmental Protection Agency; G. Gerbi, Woods Hole Oceanographic Institution; W. Geyer, Woods Hole Oceanographic Institution; A. Hanson, University of Rhode Island; J. Hare, National Marine Fisheries Service; C. Helmis, University of Athens; P. Hill, Dalhousie University; T. Hristov, Johns Hopkins University; H. Jonsson, CIRPAS; D. Khelif, University of California Irvine; M. Li, University of Maryland; A. Jessup, University of Washington Applied Physics Laboratory; L. Mahrt, Oregon State University; W. McGillis, Lamont-Doherty Earth Observatory; T. Milligan, Bedford Institute of Oceanography; J. O'Donnell, University of Connecticut; N. Pettigrew, University of Maine; A. Plueddemann, Woods Hole Oceanographic Institution; E. Richert, University of Southern Maine; B. Rothschild, University of Massachusetts Dartmouth; L. Shen, Johns Hopkins University; E. Skyllingstad, Oregon State University; P. Smith, Bedford Institute of Oceanography; T. Stanton, Naval Postgraduate School; P. Sullivan, National Center for Atmospheric Research; J. Sun, National Center for Atmospheric Research; D. Vickers, Oregon State University; Q. Wang, Naval Postgraduate School; S. Wang, Naval Research Laboratory; R. Weller, Woods Hole Oceanographic Institution; J. Wilkin, Rutgers University; A. Williams, Woods Hole Oceanographic Institution; D. Yue, Massachusetts Institute of Technology; C. Zappa, Lamont-Doherty Earth Observatory

- **Graduate Advisors and Postdoctoral Sponsors:**

- E. Adams, Massachusetts Institute of Technology, Master of Science Advisor
- O. Madsen, Massachusetts Institute of Technology, Doctor of Science Advisor

- **Thesis Advisor and Postgraduate-Scholar Sponsor:**

- **Doctoral thesis advisees and present affiliations:** J. Fries, US Environmental Protection Agency; G. Gerbi, Rutgers University; W. Shaw, Naval Postgraduate School
- **Postgraduate scholars supervised and present affiliations (past five years):** F. Feddersen, Scripps Institution of Oceanography; T. Kukulka, Woods Hole Oceanographic Institution; N. Scott, University of Florida
- **Totals:** 5 MS students, 3 doctoral students, 6 postdoctoral scholars