ARI W. EPSTEIN

146 Raymond Street
Cambridge, MA 02140

(617) 868-2384
awe@alum.mit.edu

EDUCATION

Massachusetts Institute of Technology/Woods Hole Oceanographic Institution
Ph.D. in Physical Oceanography, 1995. ONR/Secretary of the Navy Fellow in Oceanography, 1989-1992. Dissertation Title: *Physical Processes and Zooplankton Distribution in the Great South Channel: Observational and Numerical Studies.*

Sea Education Association
Sea Semester, 1987. Three-month intensive introductory program in oceanography and seamanship: six weeks on land followed by six weeks aboard the research schooner *R/V Westward*.

Harvard College
A.B. cum laude in History and Science, 1984. Areas of Specialization: Physics; History and Philosophy of Modern Physics. John Harvard Scholar; Harvard College Scholar. Thesis: *Albert Einstein's complementary points of view: the Bohr-Einstein dispute and its relevance to relativity theory and Machian philosophy*.

EMPLOYMENT: TEACHING AND RESEARCH

MIT: Lecturer, Terrascope/Department of Civil and Environmental Engineering (CEE) *2002-Present*

- Develop and teach classes in an innovative, team-oriented, project-based freshman learning community focused on environmental problem-solving and communication.
- Co-developed and co-teach project-based Introduction to Design class for CEE sophomores.
- Conduct and publish research on educational innovation in project-based settings.
- Coordinate assessment of program and participate in guiding program's evolution.
- Supervise upperclassmen in independent research on topics related to sustainability and education.
- Develop education and outreach programs integrated with fundamental research done by MIT faculty.

University of Connecticut: Visiting Scholar *2005*
Co-developed and co-taught innovative, project-based, cross-disciplinary core subject for incoming graduate students in a new Integrative Geosciences graduate program. Advised faculty and administration on project-based learning and its implementation. Facilitated handoff and continuity of curriculum and methods to resident program faculty.

Emerson College, Babson College, Lesley University: Adjunct Faculty *2001-2003*
Courses taught: Natural Disasters and Earth Science; Space Science (emphasizing the search for life elsewhere in the universe); Astronomy.

Bowdoin College: Visiting Assistant Professor, Department of Physics and Astronomy *1996-1999*
Taught at all levels of the Physics curriculum. Courses: Advanced Mechanics, Electromagnetic Theory (upper-level courses); Physical Oceanography (intermediate-level course); Physics of the Twentieth Century, Contemporary Astronomy (for non-majors); Writing About Science (First-year, writing-intensive seminar). Advised student Honors research projects.

EMPLOYMENT: OUTREACH AND INFORMAL SCIENCE EDUCATION

MIT/Terrascope Youth Radio: Director *2008-Present*
Founded and direct innovative youth-media program, operated in partnership with Cambridge Youth Programs and funded by the National Science Foundation, in which local urban teens, mentored by MIT undergraduates, produce and broadcast audio material on environmental topics. Oversee all aspects of program operation.

Harvard-Smithsonian Center for Astrophysics/Science Media Group: *2001-2003*
Science Content Developer/Writer Developed video workshops based on research into how children learn science, to be broadcast by the Annenberg/Corporation for Public Broadcasting project and for use in graduate teacher-training programs and in-service K-12 teacher education. Wrote and edited scripts, selected interview footage, outlined scope and sequence of workshops, contributed to printed curriculum guides.

SCIENTIFIC AMERICAN *Explorations* magazine: Editor *1999-2001*
Developed and maintained editorial direction of a new, hands-on science magazine for families (circulation: 200,000). Oversaw entire editorial/art content of magazine. Hired and supervised start-up staff. Managed departmental budget; led interactions with other departments (production, ad sales, circulation).

Turnstone Publishing: Content Advisor *1997-1998*
Advised small publishing company in the development of textbooks and activity kits for K-12 science classrooms. Areas of expertise: Physical Science, Ocean Science, Space Science.

New England Aquarium: Visiting Associate Scientist/Visiting Scholar *1995-2001*
Developed new exhibits and programs with strong scientific content, to provide deeper learning experiences for visitors. Assembled and led development teams for exhibits on such subjects as: the physics, biology and economics of the Georges Bank ecosystem and fishery; satellite-based oceanography's contributions to knowledge of ocean currents and global climate.

SCIENTIFIC AMERICAN magazine: Member, Board of Editors *1984-1988*
Edited articles and designed illustrations in close collaboration with scientist-authors. Reported and wrote news stories for "Science and the Citizen" section. Attended conferences, visited research institutions and followed journals to gather ideas for articles. Solicited articles. Evaluated and selected articles for publication.

SERVICE

- **Member, Board of Trustees, Institute for Learning Innovation (2001-2008)**
- **Panelist (Education and Outreach), National Science Foundation CAREER program (2003)**
- **Member, Technical Advisory Panel, National Ocean Sciences Bowl (2005)**
- **Panelist, National Ocean Scholar Program (2006)**
- **Panelist, NOAA Bay Watershed Education and Training Program (2006-present)**
- **Member, Steering Committee, "Sailors Speak," USS Constitution Museum (2008)**
- **Key Communicator, Cambridge Public School District (2008)**
- **Content Advisor, WGBH/Design Squad "Invent It, Build It" curriculum guide (2009)**
- **Judge, MIT IDEAS Competition and Global Challenge (2009-present)**
- **Member, Program Committee, Union College Symposium on Engineering & Liberal Education (2011)**