

# S A N D R A S S W E N S O N

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## **EDUCATION**

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**Ed.D in Science Education, Department of Math, Science and Technology  
Columbia University Teachers College**

New York, New York

*Dissertation Title: Undergraduate Non-science Majors' Descriptions and Interpretations of Scientific Data Visualizations*

February 2010

**Master of Education, Department of Communications, Computing & Technology in  
Education**

**Columbia University Teachers College**

New York, New York

May 1989

**Bachelor of Science, Natural Science/Secondary Science Education  
Northeastern University, Dean's Honor List**

Boston, Massachusetts

May 1983

## **SCHOLARSHIP**

**Dean S. Edmonds Scholarship**

Columbia University Teachers College

Department of Math, Science and Technology

## **PROFESSIONAL EXPERIENCE**

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**JOHN JAY COLLEGE OF CRIMINAL JUSTICE, CITY UNIVERSITY OF NEW YORK**

New York, NY

Tenured Lecturer/Academic Advisor

- Lecturer: Natural Science and Environmental Science
  - Developed new curriculum for Environmental Science lecture course and co-authored new curriculum for Natural Science Lecture course;
  - Developed new laboratory curriculum;
  - Coordinator of Environmental Science and Natural Science curriculum and Adjunct scheduling. Course Coordinator of 15 lab Instructors and 5 Lecturers.
  - Implementing new pedagogical strategies and training adjuncts toward the same.
- Academic Advisor / Department of Sciences
  - Designed, in conjunction with faculty, academic advisement booklet, which is distributed to all Forensic Science students.
  - Collaborate with science faculty to deliver the Freshmen Forensic Science Orientation each fall semester.

- Advise Forensic Science students toward developing a program plan. Participated in four-semester pilot study on academic advisement for sophomores, which resulted in a permanent plan the department.
- Advise incoming transfer students on their program plan.
- Associate Director: Peer Mentoring Program (2005-2007)
  - Assisted in hiring new mentors and tutors for the Peer Mentoring Program.
  - Trained Peer Mentors in fundamental pedagogy of tutoring and mentoring.

### **RAMAPO COLLEGE OF NEW JERSEY**

Mahwah, NJ  
1999- 2005

Adjunct Faculty in Master of Science Program in Educational Technology.

- Taught courses in pedagogy as related to technology and educational website design.
- Collaborated on content design of a web-based environmental science module targeted for high school science and social science curricula. Program funded by NSF.

### **PUBLICATIONS**

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He, Y., Swenson, S., Lents, N., 2012, Online Video Tutorials Increase Learning of Difficult Concepts in An Undergraduate Analytical Chemistry Course. The Journal of Chemical Education. Manuscript ID: ed-2011-00685p.R2

Swenson, S., and Kastens, K., 2011, Student interpretation of a global elevation map: What it is, how it was made, and what it is useful for, in Feig, A.D., and Stokes, A., eds., Qualitative Inquiry in Geoscience Education Research: Geological Society of America Special Paper 474, p. 189–211, doi:10.1130/2011.2474(13).

Earth Exploration Toolbook: Exploring Seafloor Topography  
<http://serc.carleton.edu/eet/seafloor/index.html>  
2004-2006

White, Mary Alice, *et al* (1989) Where Do Seventeen Year Olds Get Their Information – From School or Television? The History Teacher, v. 22, (3) p. 329-332

Glen Rock Technology Plan, Technology Task Force, Glen Rock Public Schools, NJ 1996

### **GRANTS & GRANT AFFILIATIONS**

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**The National Science Foundation** grant award of \$150,101 to The Research Foundation of CUNY, John Jay Col. of Criminal Justice for the project entitled "A Multi-tiered Approach to Undergraduate Science Learning in an Urban Public College," is under the direction of PI: Sandra S. Swenson & Co-PI: Yi He. This award is effective December 1, 2013 and expires November 30, 2015.

#### **Educational Consultant U.S. Department of Education Title V Development Grant,**

John Jay College, City University of New York, New York, NY  
2005 to 2011

- Coordinated science mentors and tutors for the Math and Science Resource Center 2005 - 2007
- Designed booklet, Strategies for Success, for Forensic Science academic advisement 2008

- PI: Survey of Resources Used by Forensic Science Students; surveyed forensic science students to assess what support services they are using. Results to be analyzed by grant evaluator.

**Recipient of John Jay Student Technology Fee**

October 2009

- \$ 2,063.00 awarded for the implementation of SmartBoard Technology to be used in the Natural Science and Environmental Science classroom.

**Curriculum designer of web-based Earth Science module utilizing GeoMapApp,**

A Geology Mapping Applications program.

Lamont-Doherty Earth Observatory of Columbia University

2003 - 2005

- Affiliated with Ridge 2000 (Grant funded by the National Science Foundation) and Carleton College: Earth Exploration Toolbook: Exploring Seafloor Topography  
<http://serc.carleton.edu/eet/seafloor/index.html>
- Designed educational website for teachers to utilize GeoMapApp.

**Project Coordinator: National Science Foundation Grant**

Ramapo College of New Jersey

Mahwah, NJ

September 2000 - 2003

- Development and implementation of a web-based high school environmental science program: TIES (Targeted Investigations in Environmental Science), funded by the National Science Foundation - <http://www.rst2.edu/ties/>
- Coordinated High School Teacher outreach
- Conducted 3 week summer workshops for teachers in the use of TIES for three-year grant period

**New Jersey Women's History Website Training Project, 2000 - 2003**

Grant provided by New Jersey Historical Commission, Department of State

- Web Design Coordinator for Women's Project of New Jersey, 1998 – 2002  
<http://www.scc.rutgers.edu/njwomenshistory/index.htm>
- Coordinated teacher outreach and pilot testing

**The Hermitage Educational Website, Education Policy Committee, 1999**

Grant provided by New Jersey Historical Commission, Department of State

**PRESENTATIONS**

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**Society of Toxicology, 2018, Problems and Promises with Collaborative Learning in the Field in an Urban Public College**, S. Swenson, Y. He, & H. Boyd; John Jay College of Criminal Justice, The City University of New York

**National Association for Research in Science Teaching (NARST), Orlando, Florida April 3 - 6, 2011.** Poster Presentation: Undergraduate non-science majors' descriptions and interpretations of a scientific data visualization.

**Teaching Climate Change from the Geologic Record**

University of Wyoming -Laramie, Wyoming, August 10 – 11,

Poster presentation: Undergraduate non-science majors' interpretation of a topography/bathymetry data map.

**National Institute of Technology in Liberal Education (NITLE)**

Bard College October 11th - 13th, 2008

Presented doctoral research at a conference on visualizations in the sciences. Member of plenary session: *Invoking Visualization for Scientific Pedagogy*

**Enriching The Academic Experience of College Science Students**

University of Michigan - Ann Arbor, May 17th - 19th, 2006

Presented interdisciplinary website to science faculty. The website, [Visionlearning](http://www.visionlearning.com) (www.visionlearning.com), is a comprehensive website that allows science educators to customize unique content and assessment using the MyClassroom system.

Workshop entitled: *Teacher-Friendly Customization of Science Curriculum Website*

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**MEMBERSHIPS AND SERVICE**

National Association of GeoScience Teachers (NAGT)

National Association for Research in Science Teaching (NARST)

- Peer Reviewer

American Association for the Advancement of Science (AAAS)

American Geological Society (AGS)