CURRICULUM VITAE

DOMENICO GRASSO

Office of the Chancellor
University of Michigan-Dearborn
Dearborn, MI 48126
grasso@umich.edu

EDUCATION

Ph.D.	University of Michigan, *Environmental Engineering*, 1987
M.S.C.E.	Purdue University, *Civil Engineering*, 1979
B.Sc.	Worcester Polytechnic Institute, *Civil Engineering*, 1977

PROFESSIONAL EXPERIENCE

2018- present	Chancellor	U of Michigan-Dearborn
2013 – 2017	Provost	U of Delaware
2009 – 2013	Vice President for Research & Dean, Graduate College	U of Vermont
2005 – 2009	Dean, College of Engineering & Mathematical Sciences	U of Vermont
2000 – 2005	Rosemary Bradford Hewlett Professor & Founding Director Picker Engineering Program	Smith College
1998 – 2000	Head of Department Civil & Environmental Engineering	U of Connecticut
1993 – 1998	Director, Environmental Engineering Program	U of Connecticut
1989 – 2000	Professor Associate Professor Assistant Professor Civil and Environmental Engineering Chemical Engineering	U of Connecticut
Fall 1996	Visiting Scholar	UC – Berkeley
Summer 1990	Battelle Research Fellow	U.S. Army Toxic and Hazardous Material Agency
Summer 1989	Invited Technical Expert	United Nations Industrial Development Organization
1987 – 1988	Assistant Professor	Stevens Institute of Technology
1983 – 1987	Research Associate	U of Michigan

1985 – 1987	Teaching Fellow	U of Michigan
1979 – 1988	Commissioned Officer	United States Army
	Active Duty Assignment (1979-1983): Environmental Engineering Project Officer, U.S. Amy Environmental Hygiene Agency, Rank-Captain Reserve Assignment (1983-1988): Various assignments 1987-1988 Commander, Headquarters and Headquarters Company, 353rd Civil Affairs Command, Special Operations Forces, Rank-Major	
1977 – 1979	Research Assistant	Purdue University

RESEARCH INTERESTS

Colloidal and interfacial processes, environmental physicochemical processes, environmental policy, engineering education, liberal arts and engineering.

BOARD & PANEL DUTIES (SELECTED)

Chair, National Academies Committee on Grand Challenges in Environmental Science and Engineering (2016 – 2019)

Chair, President's Council, Olin College (2010 – 2020)

Advisory Board Member, Liberal Arts and Engineering, MIT (2014- present)

Blue Ribbon Panel, Assessment of National Oceanic and Atmospheric Administration Scientific Integrity Policies and Procedures As Applied to the 2015 Dr. Thomas Karl, et al. *Science* Paper: "Possible Artifacts of Data Biases in the Recent Global Surface Warming Hiatus." July 2018– submitted to US Secretary of Commerce

Vermont Governor's Advisory Board on Engineering and the Environment, 2007- 2013 (appointed by Governor Douglas)

Chair, NEASC Reaccreditation Review Panel – Woods Hole Oceanographic Institution (2016)

Lake Champlain Chamber of Commerce Board of Directors (2009 –2013)

Science Advisory Board, U.S. Environmental Protection Agency - (Appointed by the Administrator - initially by Hon. Carol Browner, reappointed by Gov. Christine Todd Whitman, 1998 - 2005). Major Assignments:

- *Vice Chair*
- *Chair, Committee on Valuing Ecosystem Services*
- *Chair, Environmental Engineering Committee*

Academic Team Leader NEASC Accreditation Review - Dartmouth College (2010)

President & Board of Directors (1998-2002) *Association of Environmental Engineering & Science Professors*

Member (2000-2005) *National Academy of Engineering Action Forum on Diversity in the Engineering Workforce*

Advisory Board Member (2001-2010) *Center for Hazardous Substances in the Urban Environment, Johns Hopkins University*

Advisory Board Member (2003-2013) *Center for Environmental Science and Technology, University of Notre Dame*

Strategic Planning Panel Member (2003) *School of Engineering, Princeton University*

COMMENTARIES, LETTERS, AND ESSAYS (SELECTED)

1. "All Polluters Must Pay," *Environmental Engineering Science*, **19** (3), 2002 (with D. Riley).
2. "Engineering a Liberal Education," *Prism*, **12** (3), November 2002.
3. "The Value of Diversity," Letter to the *New York Times*, January 20, 2004, Late Edition - Final, Section A, Column 4, Page 18.
4. "Engineering and the Human Spirit," *American Scientist***, 92**:206-209, 2004.
5. "The Value of Things to Come," *Science*, **305**:1568-1569, 2004.
6. "Is It Time to Shut Down Engineering Colleges?" *Inside Higher Education*, 23 September 2005.
7. "Holistic Engineering," *Chronicle of Higher Education*, 16 March 2007 (with D. Martinelli).
8. "Dead Poets and Engineers," *IEEE Technology and Society*, **27**:8-9, 2008.
9. "Moving to the Smart Grid, "*Issues in Science and Technology* **17** (4), 2011.
10. "Sustainable Economic Development in the Face of Climate Change in Latin America: A Path Forward," *Environmental Engineering Science* **29** (8), 2012.
11. "Build Today for the Infrastructure of Tomorrow," Philadelphia Inquirer, September 11, 2016, (with Sheila Tobias).
12. "Engineers' Deafening Silence on Climate Change," ASEE Prism 29 (7), 60-60, 2020.

EDITORSHIPS

Editor-in-Chief (1997- 2019), *Environmental Engineering Science*
Theme Editor (1998-2002), *Encyclopedia of Life Support Systems*, UNESCO Associate Editor (2002-2006), *Reviews in Environmental Science and Biotechnology*

PRIVATE PRACTICE

SELECTED LIST OF CLIENTS

Boehringer Ingelheim Pharmaceuticals, Ridgefield, Connecticut Booz-Allen & Hamilton, Bethesda, Maryland
Camp, Dresser, and McKee, Inc., Chicago, Illinois
Clayton Environmental Corp., Southfield, Michigan
Damon S. Williams Associates, Phoenix, Arizona
ENVIRON Corp., Princeton, NJ
Groundwater Technology, Inc. Edison, NJ
Jackson, Harris & Burlingame, Attorneys, Danielson, Connecticut
Lenard Engineering, Storrs, Connecticut
Norton Co., Wayne, New Jersey

PROFESSIONAL LICENSURE & CERTIFICATION

Professional Engineer (quondam), State of Texas, State of Connecticut
Diplomate Environmental Engineer, American Academy of Environmental Engineering (Certified by eminence)

HONORS AND AWARDS (SELECTED)

U.S. Army ROTC Scholarship Award, 1974-1977
Daniel Hutchins Trophy for Excellence in Civil Engineering, WPI, 1977
First Place Award for Research Paper, 31st Eastern Colleges Science Conference, 1977 Tau Beta Pi (Engineering)
University Fellowship, The University of Michigan, 1983
General Electric Foundation Graduate Student Award, 1985
AWWA Academic Achievement Award - Doctoral Dissertation, 1988
NATO-CCMS Fellowship, 1994-1997
Fellow, Connecticut Academy for Education in Mathematics, Science, and Technology (elected 1999)
Offered position of *Chair & Full Professor (with Tenure)*, Department of Earth & Environmental Engineering, Columbia University 1999 (declined)
Named a "Pioneer in Disinfection," Water Environment Federation, 2000
Robert H. Goddard Alumni Award for Outstanding Professional Achievement, WPI, June 2007.
Taiwan Distinguished Environmental Lectures, 2009.
Benton Distinguished Lecture, University of Florida, 2011.
President's Medal for Academic Achievement, John Cabot University, Rome Italy, 2016.
Keynote Speaker, *American Academy of Environmental Engineers and Scientists* Annual Awards Ceremony, National Press Club, 2016.
Association for Environmental Health and Sciences Foundation Career Achievement Award
Fellow, AEESP

COURSES TAUGHT (SELECTED)

UNDERGRADUATE
Mass & Energy Balances (Smith)
Chemical and Environmental Reaction Engineering (Smith)
Ancient Inventions (Smith & UVM)
The Origins of Wealth (UVM)
Introduction to Engineering UCONN)
Water Quality Engineering (UCONN)

GRADUATE
Environmental Biochemical Processes (UCONN)
Environmental Engineering Chemistry (UCONN)

Environmental Physicochemical Processes (UCONN)

INVITED SEMINARS/COLLOQUIA (SELECTED)

1. "Mathematical Modeling of Aqueous-Phase Ozone Decomposition Kinetics," Department of Civil & Environmental Engineering, MIT, Cambridge, MA, 1 November 1989.

2. "Non-DLVO Interactions in Aqueous Systems," Department of Civil & Environmental Engineering, UC-Berkeley, 8 November 1996.

3. "Engineering and the Liberal Arts," Union College, 28 April 1998.

4. "Applications of Colloid and Surface Chemistry to Environmental Systems," Department of Earth &Environmental Engineering, Materials Science & Engineering, Columbia University, 11 May 1998.

5. "A Conceptual Overview of Bio (colloid) Movement in Porous Media," Department of Environmental Science & Engineering, Rice University, 24 November 1998.

6. "Biocolloid Behavior in Porous Systems," Department of Chemical Engineering, Yale University, October 12, 2000.

7. "The Seductive Equation and Engineering Thought," Rosemary Bradford Hewlett Professorship Inaugural Lecture, Smith College, 29 March 2001.

8. "Environmental Modeling: Caveat Emptor" Department of Mathematics, Amherst College, 25 April, 2001

9. "Engineering, The Liberal Arts and the Environment," Resources for the Future, Washington, DC, 16 May 2001.

10. "The Two Cultures and the Price of Everything and the Value of Nothing: Implications for the Environment and Engineering," Duke University, Durham, NC, 19 March 2006.

11. "Getting From Here to There: Moving to a Hydrogen Economy," Woodrow Wilson International Center for Scholars, Washington, DC, 21 April 2016.

PATENTS

1. "Method and Apparatus for Removing Gas-Phase Organics," U.S. Patent Number 5,198,000, 30 March 1993 (with G. Hoag)

2. "Method and Apparatus for Purifying Contaminated Gases" Australian Patent Number 22651/92, October 1995, (with G. Hoag)

PUBLICATIONS (Citations >4.3K; *h*-index = 33; *i*10-index = 60; Google Scholar Profile)

PEER REVIEWED JOURNAL PUBLICATIONS (SELECTED FROM >80 JOURNAL ARTICLES)

1. "Impact of Ozonation on the Stability of Montmorillonite Suspensions," *Journal of Colloid and Interface Science*, **153** (1), 1992 (with P. Chheda and C. van Oss).

2. "Surface Thermodynamics of Ozone-Induced Particle Destabilization," *Langmuir* , **10** (4), 1994 (with P. Chheda).

3. "Chemoautotrophic Biogas Purification for Methane Enrichment," *Chemical Engineering Journal,* **58** (1), 1995 (with K. Strevett and R. Vieth).

4. "Uncoupling Mass Transfer of Gaseous Substrates in Microbial Systems," *Chemical Engineering Journal,* **59** (2), 1995 (with K. Strevett and R. Fisher).

5. "Colloid Generation During Batch Leaching Tests: Mechanics of Disaggregation," *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **135**, 193, 1998 (with J. Bergendahl).

6. "Impact of Electrolytes on Dispersion and Lewis Acid/Base Interactions," *Journal of Colloid and Interface Science*, **200**, 172, 1998 (with M. Butkus).

7. "Quantitative Prediction of Colloid Detachment in Model Porous Media: Thermodynamics,"*AIChE Journal*, **45** (3), 1999 (with J. Bergendahl).

8. "Degradation and Detoxification of the Wood Preservatives Creosote and Pentachlorophenol in Water by the Photo-Fenton Reaction," *Water Research*, **33** (5), 1999 (with P. Engwall and J.J. Pignatello).

9. "Quantitative Prediction of Colloid Detachment in Model Porous Media: Hydrodynamics," *Chemical Engineering Science*, **55** (9), 2000 (with J. Bergendahl).

10. "Mobilization of Organic Matter and Enhancement of Polycyclic Aromatic Hydrocarbon Desorption from a Weathered Manufactured Gas Plant Soil by Metal Ion Complexing Agents," *Chemosphere*, **43** (8), 2001 (with Y. Yang, D. Ratté, B. Smets, and J. Pignatello).

11. "Effect of Nickel and Cadmium on Nitrification Inhibition," *Environmental Science & Technology*, **36** (14), 2002 (with Z. Hu, K. Chandran, and B. Smets).

12. "Impact of Metal Sorption and Internalization on Nitrification Inhibition," *Environmental Science & Technology*, **37** (4), 2003 (with Z. Hu, K. Chandran, and B. Smets).

13. "Nitrification Inhibition by Ethylenediamine-Based Chelating Agents," *Environmental Engineering Science*, **20** (3), 2003 (with Z. Hu, K. Chandran, and B. Smets).

14. "Mechanistic Basis for Particle Detachment from Granular Media," *Environmental Science & Technology*, **37** (10), 2003 (with J. Bergendahl).

15. "Macro- and Nanoscale Observations of Adhesive Behavior for Several E. coli Strains (O157:H7 and Environmental Isolates) on Mineral Surfaces," *Environmental Science & Technology*, **39 (**17), 2005 (with H.-H Yang, J. B Morrow, and B. F. Smets).

16. "Advancing ecohydrology in the 21st century: A convergence of opportunities," *Ecohydrology*, **13** (4), e2208 (with AJ Guswa, D Tetzlaff, JS Selker, DE Carlyle-Moses, EW Boyer, M Bruen, et al.) 2020.

17. "Peak grain forecasts for the US High Plains amid withering waters," *PNAS* **117** (42), 26145-26150 (with A Mrad, GG Katul, DF Levia, AJ Guswa, EW Boyer, M Bruen, et al.) 2020.

18. "Homogenization of the terrestrial water cycle," *Nature Geoscience*, **13** (10), 656-658 (with DF Levia, IF Creed, DM Hannah, K Nanko, EW Boyer, DE Carlyle-Moses, et al.) 2020.

BOOKS, MONOGRAPHS, AND CHAPTERS (SELECTED)

1. "Environment Programme - United Nations Industrial Development Organization," presented to the General Assembly, United Nations, Vienna, Austria, August 1989 (co-author).

2. *Hazardous Waste Site Remediation: Source Control*, CRC/Lewis Publishers, 1993.

3. *"*Hazardous Waste," Chapter 12, *Knowledge for Sustainable Development*, UNESCO 2002. (with D. Kahn, M. Kaseva and K. Mbuligwe)

4. "Chemical Oxygen Demand," *Encyclopedia of Analytical Science, 2nd edition*, P. J. Worsfold, Townshend and C. F. Poole, eds., Elsevier, Oxford Elsevier, 2005 (with Z. Hu).

5. *Holistic Engineering Education: Beyond Technology*, Springer, 2009 (with M.B. Burkins).

6. Water and Global Development Goals: The Role of Engineering and Social Science in Meeting International Policy Outcomes Encyclopedia of Water: Science, Technology, and Society, 1-10, 2019, (with Saleem Ali)

CONFERENCE PRESENTATIONS AND PROCEEDINGS AND TECHNICAL REPORTS (SELECTED FROM >100)

1. "Biodegradation of Nitroglycerin via Cometabolism," *American Institute of Chemical Engineers Annual Meeting*, Minneapolis, MN, 9-12 August 1992 (with H. Pesari).

2. "A Critical Review of In-Situ Air Sparging and Bioremediation Technologies – A Proposal," NATO-CCMS Pilot Study: Evaluation of Demonstrated and emerging Technologies for the Treatment and Cleanup of Contaminated Land and Groundwater (Phase II), Oxford University, Oxford, UK, 14-21 September 1994.

3. "Thermodynamics and Hydrodynamics of Colloid Detachment in a Model Porous Media" *AIChE Annual Meeting*, 31 October –5 November, 1999, Dallas, TX (with J. Bergendahl)

4. "Soil Organic Matter Mobilization and Enhanced PAH Desorption Using Chelating Agents," *American Chemical Society 75th Colloid and Surface Science Symposium*, American Chemical Society, Carnegie-Mellon University, Pittsburgh, PA, 10-13 June 2001 (with K. Subramaniam, B. Smets, J. Pignatello).

5. "Chelating Agent Enhanced Desorption of PAH Compounds," *76th Colloid and Surface Science Symposium*, American Chemical Society, University of Michigan, Ann Arbor, MI, 23-26 June (with C. Stepp, K. Subramaniam, B. Smets, J. Pignatello).

6. "Dimensional Analysis of Particle Detachment form Granular Media" (poster), *76th Colloid and Surface Science Symposium*, American Chemical Society, University of Michigan, Ann Arbor, MI, 23-26 June (with J. Bergendahl).

7. "Fundamentally-based dimensionless numbers for predicting particle detachment from porous media" in The American Chemical Society Conference 226: U481-U481 091-ENVR Part 1, SEP 2003 (with J. Bergendahl).

8. "Teaching Teachers to Teach Engineering," Proceedings, American Society of Engineering Education Annual Conference, June 20-23, 2004, Salt Lake City, UT. (with G. Ellis, B Andam, S. Etheridge, T. Gralinski)

9. "Role of Cellular Appendages in Adhesion and Transport of Pseudomonas aeruginosa PAO1 in Porous Media" (poster) *78th Colloid and Surface Science Symposium*, American Chemical Society, Yale University, New Haven, CT 20-23 June 2004 (with R. Stratton, J. Morrow, B. Smets).

10. "Proteinaceous Surface Appendage Contribution to *Pseudomonas aeruginosa* PAO1 Surface Properties and Adhesive Ability" *European Geosciences Union General Assembly*, Vienna, Austria, April 24-29, 2007. (with, J. B Morrow, and B. F. Smets).

THESES/DISSERTATIONS SUPERVISED

Doctor of Philosophy (Environmental Engineering)

1. Chheda, P., [B.S., M.S., Chemistry; M.S. Environmental Engineering, Indian Institute of Technology, Bombay], "Surface Thermodynamics of Ozone-Induced Particle Destabilization Using Sodium Montmorillonite," Doctoral Dissertation, 1994. – Present Position: Research Assistant Professor, University of Connecticut.

2. Strevett, K., [B.S., Microbiology; B.S. Civil Engineering, Michigan State University], "Chemoautotrophic Biogas Purification for Methane Enrichment: Mechanism, Kinetics, and Economics" Doctoral Dissertation, 1995. – Present Position: Associate Professor, University of Oklahoma – NSF CAREER Award.

3. Hu, Hsien-Lun, [B.S. National Central University, Taiwan], "Inhibition of Nickel Precipitation by Gluconate: Kinetic Considerations," Doctoral Dissertation, 1996 - Present Position: Associate Professor, National Taiwan University [with N. Nikolaidis].

4. Butkus, M. [B.S. U.S. Merchant Marine Academy, M.S. Environmental Engineering, University of Connecticut], "Sorption of Phosphate to a Ferric Hydroxide Matrix," Doctoral Dissertation, 1997. – Present Position: Associate Professor, U.S. Military Academy, West Point.

5. Brakewood, Liv [B.S., Civil Engineering, Cornell, M.S. Chemical Engineering, UC-Berkeley], "Floating Spatial Domain Averaging," Doctoral Dissertation, 2000. - Present Position: Associate Professor, Washington State University.

6. Hu, Zhiqiang [B.S., M.S., Zhejiang (Agricultural) University, M.S. University of Connecticut], Nitrification Inhibition by Heavy Metals and Chelating Agents," Doctoral Dissertation, 2002. Present Position: Assistant Professor, University of Missouri.

7. Morrow, Jayne [B.S. Montana State University, M.S. University of Connecticut], "Role of Macro and Nanoscale Interactions in Bacterial Attachment to Heterogeneous Surfaces," Doctoral Dissertation, 2005 Present Position: Executive Director, National Science & Technology Council, OSTP, The White House [with B. Smets].

8. Yang, Hsiao-Hui [B.A. National Taiwan University], "The Effect of Environmental Stress on Cell Surface Properties and their Relation to Microbial Adhesion in Feedlot E. coli Isolates," ," Doctoral Dissertation, 2005 Present Position: Research Associate, Harvard Medical School [with B. Smets].

Doctor of Philosophy (Chemical Engineering)

9. Bergendahl, J. [B.S., Mechanical Engineering, M.S., Environmental Engineering, University of Connecticut], "Modeling the Mechanics of Colloid Detachment in Environmental Systems," Doctoral Dissertation, 1999. – Present Position: Associate Professor, Worcester Polytechnic Institute.

Master of Science (Environmental Engineering)

1. Chelkowska, K., [B.S., Chemical Engineering, University of Warsaw, Poland], "Numerical Simulations of Early Aqueous-Phase Ozone Decomposition Progeny Speciation," Master's Thesis, 1989.

2. Morico, K., [B.S. Biochemistry, Fairfield University], "Evaluation of Oxidation Techniques for Amelioration of Taste and Odor Characteristic in Potable Water," Master's Thesis, 1990.

3. Koch, N., [B.S., Chemical Engineering, Arizona State University], "Alternative Oxidants for the Reduction of Disinfection By-Products," Master' Thesis, 1991.

4. Pesari, H., [B.S., Civil Engineering, Osmania University, India], "Biodegradation of an Inhibitory Non-Growth Substrate - Nitroglycerin," Master's Thesis, 1993.

5. Garg, R., [B.S., Civil Engineering, Indian Institute of Technology, Delhi], "Physicochemical Treatment of Explosives Contaminated Soils - Impact of Nucleophilic Substitution Reactions on Contaminant Mobility," Master's Thesis, 1993.

6. Chen, P., [B.S., M.S., Biology, Wuhan University, China], "Thermodynamics and Kinetics of Gas Phase Organic Contaminant Partitioning," Master's Thesis, 1993.

7. Carrington, J., [B.S., Civil Engineering, U.S. Military Academy], "Nitrocellulose Particle Stability: Coagulation Thermodynamics," Master's Thesis, 1993.

8. Dudek, H., [B.S., Civil Engineering, University of Connecticut], "Mass Transfer Characteristics of Absorption/Desorption of Chlorinated Compounds in Nonpolar Media," Master's Thesis 1994.

9. LaFrance, P. [B.S., Civil Engineering, University of Portland), "Trajectory Modeling of Non-Brownian Particle Flotation Using an Extended DLVO Approach," Master's Thesis 1994.

10. Flood, K. (B.S., Civil Engineering, Northeastern University), "Efficacy of Alternative Disinfectants on the Inactivation of Parvovirus," Master's Thesis 1995.

11. Hill, R. (B.S., Chemical Engineering, Georgia Institute of Technology), "Silicate Inhibition of Struvite Precipitation," Master's Thesis 1996.

12. Sperry, K. (B.S., Civil Engineering, University of New Hampshire), "Critical Issues in In-situ Bioremediation and Air Sparging," Master's Thesis 1997.

13. Engwall, M. (B.S., Civil Engineering, Worcester Polytechnic Institute), "Photo-Assisted Fenton's Oxidation of Creosote," Master's Thesis, 1997.

14. Ratté, D. (B.S., Civil Engineering, University of Maryland), "Polycyclic Aromatic Hydrocarbon Remediation: Bioavailability Enhancement," Master's Thesis, 1999.

Master of Science (Chemical Engineering)

15. O'Sullivan, D. (B.S., Chemical Engineering, University of Connecticut), "The Effects of Soil Washing on the Surficial Characteristics of a Heavy-Metal Contaminated Sand: Chemistry and Modeling," Master's Thesis 1995.

16. Jha, S. (B.S., Chemical Engineering, Indian Institute of Technology), "Oxidation of *p*-Arsanilic Acid," Master's Thesis 1996.

Postdoctoral Researchers

1. Dr. P. Chheda [Ph.D., Environmental Engineering, The University of Connecticut] 1994-1995.

2. Dr. S. Odueyungbo [Ph.D., Chemical Engineering, Imperial College, University of London (UK)] 1994-1996.

3. Dr. Yuhui Yang [Ph.D., Chemistry, Wuhan University, China, Post-Doc, Chemical Engineering, Cambridge University (UK)] 1997-1999.

4. Dr. Ahmadali Tabatabai [Ph.D., Chemical Engineering, University of Oklahoma], 1999.

5. Dr. Kavitha Subramaniam [Ph.D., Environmental Engineering, Georgia Institute of Technology], 2000-2002.

6. Dr. Kartik Chandran [Ph.D., Environmental Engineering, The University of Connecticut] 1999- 2002 – MacArthur Foundation "Genius" Award

7. Dr. Steve Zheng, [Ph.D. Environmental Engineering, Clarkson University], 2001-2002.

Visiting Scholars

1. Professor Guzine Ibrahim El Diwani, Chemical Engineering, National Research Center, Cairo, Egypt, United Nations Fellow, 1990.

2. Professor Lech Dzienis, Civil Engineering, Technical University of Bialystok, Bialystok, Poland, 1991.

3. Professor Narva Narkis, Environmental & Water Resources Engineering, Technion, Haifa, Israel, 1994-5.

4. Ms. Lesley L. Skandarian, New Britain High School, Partners in Science Project, Summer, 1997 & 1998.

5. Professor Richard Phillips, Chair, Engineering Department, Harvey Mudd College, Claremont, CA, 2001.

6. Professor Kurt Patterson, Civil & Environmental Engineering, Michigan Technological University, Houghton, MI, 2001

EXTERNAL FUNDING

- *Research Support (>20 awards totaling >$3M)*