

DANIEL B. OERTHER, PhD, PE, BCEE

CURRENT APPOINTMENTS

Foreign Affairs Officer

Office of the Secretary, U.S. Department of State, Washington, D.C.

Jefferson Science Fellow

National Academies of the United States, Washington, DC

John A. and Susan Mathes Endowed Chair of Environmental Health Engineering

Missouri University of Science and Technology, Rolla, Missouri, USA

Professor

Department of Civil, Architectural, and Environmental Engineering, Missouri University of Science and Technology, Rolla, Missouri, USA

Adjunct Professor of Biology

Department of Biological Sciences, Missouri S&T

Adjunct Professor of Biotechnology

Department of Biotechnology, Kasturba College of Medicine, Manipal University, India

Adjunct Professor of Environmental Science

Department of Environmental Science, ISTAR, Sardar Patel University, Gujarat, India

Faculty Consultant

Faculty of Engineering, Future University Egypt, Cairo

President and Co-Founder

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LICENSURE

Professional Engineer

Ohio PE License Number 69266; Illinois EIT License Number 061-026304

CERTIFICATION

Board Certified Environmental Engineer (formerly DEE)

American Academy of Environmental Engineers, Member Number 05-10013

CONTACT INFORMATION

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Rolla, MO 65409 USA

EDUCATION

1995	BA	Biological Sciences	Northwestern University, Evanston, IL
1995	BS	Environmental Engineering	Northwestern University, Evanston, IL
1998	MS	Environmental Engineering	University of Illinois, Urbana-Champaign
2002	PhD	Environmental Engineering	University of Illinois, Urbana-Champaign
2003		Microbial Diversity Program	Marine Biology Lab, Woods Hole, MA
2006-8		Graduate Study in Public Health	The Johns Hopkins University, MD
2011-3		Graduate Study in Public Admin	Indiana University, Bloomington, IN

PROFESSIONAL EXPERIENCE

Primary appointments

- 1995 – 1999; Graduate Research Assistant; Department of Civil and Environmental Engineering, College of Engineering, University of Illinois, Urbana-Champaign, IL; Lutgarde Raskin, Ph.D., Advisor
- 2000 – 2004; Assistant Professor (tenure track); Department of Civil and Environmental Engineering, College of Engineering, University of Cincinnati, OH
- 2005 – 2007; Associate Professor (with tenure); Department of Civil and Environmental Engineering, College of Engineering, University of Cincinnati, OH
- 2008 – 2009; Professor (with tenure); Department of Civil and Environmental Engineering, College of Engineering, University of Cincinnati, OH
- 2010 – present; Professor (with tenure); Department of Civil, Architectural, and Environmental Engineering, Missouri University of Science and Technology, Rolla, MO
- 2014 – present; Foreign Affairs Officer/Science and Technology Policy Advisor; Office of the Secretary/Global Food Security, U.S. Department of State, Washington, D.C.

Secondary Appointments

- 1998 (3 months); Visiting Scholar; Department of Molecular Ecology, Max Planck Institute for Marine Microbiology; Germany; Rudolf Amann, Ph.D., Advisor
- 2003 (3 months); Visiting Scholar; Microbial Diversity Course, Marine Biological Laboratory, Woods Hole, Mass; Caroline Harwood, Ph.D., and Alfred Sporman, Ph.D., Advisors
- 2003 – 2005; Adjunct Assistant Professor; Department of Biological Sciences, McMicken College of Arts and Sciences, University of Cincinnati, OH
- 2004 – 2005; Chair; Institutional Biosafety Committee, University of Cincinnati, OH
- 2004 – 2009; Affiliate; Center for Environmental Studies, McMicken College of Arts and Sciences, University of Cincinnati, OH
- 2006 (6 months); Visiting Lecturer and Fulbright Nehru Fellow; Department of Civil Engineering, School of Mechanics, Indian Institute of Science, Bangalore, India
- 2006 (6 months); Visiting Lecturer and Fulbright Pai Fellow; Department of Biotechnology, Kasturba Medical College, Manipal, India

- 2006 – 2007; Inaugural Master Engineering Educator; College of Engineering, University of Cincinnati, OH
- 2006 – 2007; Adjunct Associate Professor; Department of Biological Sciences, McMicken College of Arts and Sciences, University of Cincinnati, OH
- 2007 – 2009; Founding Director; Ohio Center of Excellence for Sustainable Urban Environments, University of Cincinnati, OH
- 2007 – present; Adjunct Professor; Department of Biotechnology, School of Biotechnology, Manipal University, India
- 2008 – 2009; Head; Department of Civil and Environmental Engineering, College of Engineering, University of Cincinnati, OH
- 2008 – 2009; Adjunct Professor; Department of Biological Sciences, McMicken College of Arts and Sciences, University of Cincinnati, OH
- 2008 – 2009; Executive Committee; Nanobiomedical Center, University of Cincinnati, OH
- 2008 – present; Adjunct Professor; Department of Environmental Sciences, ISTAR, Sardar Patel University, India
- 2010 – 2012; Director; Environmental Research Center, Missouri University of Science and Technology, Rolla, MO
- 2010 – present; John A. and Susan Mathes Endowed Chair (extended in 2014); Missouri University of Science and Technology, Rolla, MO
- 2010 – present; Adjunct Professor (courtesy appointment); Department of Biology, Missouri University of Science and Technology, Rolla, MO
- 2011 – present; Faculty Consultant, Future University Egypt, New Cairo, Egypt
- 2011 – present; President and Co-Founder; Chooseintentionallyliving.com, Rolla, MO
- 2012 (6 months); Visiting Lecturer and Fulbright ALCOA Chair; Institute of Science and Technology of Water, Federal University of Western Para, Santarem, Brazil
- 2012 – 2013; Adjunct Professor; Federal University of Western Para, Santarem, Brazil
- 2014 – present; Jefferson Science Fellow; National Academies of the United States, Washington, DC

HONORS AND SCHOLARLY AWARDS

- 1989 Eagle Scout, Boy Scouts of America
- 1994 University Undergraduate Research Award, Northwestern University, Evanston, IL
- 1997 Inaugural Richard S. and Mary E. Engelbrecht Fellowship, Department of Civil and Environmental Engineering, University of Illinois, Urbana-Champaign, IL
- 1998 Mavis Memorial Fund Scholarship for Teaching, University of Illinois, Urbana-Champaign, IL
- 1998 Dissertation Travel Fellowship, University of Illinois, Urbana-Champaign, IL
- 1999 First Place, James M. Montgomery Consulting Engineers Master's Thesis Award, Association of Environmental Engineering and Science Professors
- 2001 Transatlantic Biotechnology Fellowship (with Peter G. Stroot), US-EC Task Force on Biotechnology Research
- 2002 Neil Wandmacher Teaching Award for Young Faculty, College of Engineering, University of Cincinnati, OH

- 2002 Brian H. Rowe/Textron, Inc. Scholarship (with Pete Wilkie), University of Newcastle and University of Cincinnati
- 2002 Transatlantic Biotechnology Fellowship (with Amy Polaczyk), US-EC Task Force on Biotechnology Research
- 2003 CAREER Award, National Science Foundation
- 2003 Rindsberg Fellowship for Teaching (with Pascal Saikaly), University of Cincinnati
- 2003 Office of Naval Research Fellowship
- 2003 Ohio Young Engineer of the Year, National Society of Professional Engineers.
- 2003 Best Research Paper – Environmental Engineering Division, American Society of Engineering Educators (one winner from among 25+ papers)
- 2003 Named to Cincinnati Magazine’s “Creative Class” as, “one of 75 young, passionate people shaping Cincinnati’s future.”
- 2004 Principles and Practice of Engineering, Environmental Engineering PE Exam, Highest score, State of Ohio
- 2004 WEFTEC Best Poster (with Robert Smith), “Biodiversity in Activated Sludge through Bioaugmentation: Incorporating Nitrifiers from Treatment of High-Strength, Elevated-Temperature Recycle Streams.” (one of 8 winners from among 250+ posters)
- 2004 Rindsberg Fellowship for Teaching (with Pascal Saikaly), University of Cincinnati
- 2004 Rindsberg Fellowship for Teaching (with Robert Smith), University of Cincinnati
- 2004 Outstanding Educator, Association of Environmental Engineering and Science Professors
- 2005 ExCEED New Faculty Excellence in Teaching Award, American Society of Civil Engineers
- 2005 Ohio Engineering Educator of the Year, National Society of Professional Engineers
- 2005 Invited Participant for the 3rd Annual National Academies Keck Futures Initiative Conference, “The Genomic Revolution: Implications for Treatment and Control of Infectious Disease” (one of 100 invited faculty)
- 2005 Rindsberg Fellowship for Teaching (with Robert Smith), University of Cincinnati
- 2005 Elected membership in the Ohio Academy of Sciences (\$12,000 stipend enhancement)
- 2005 Invited to deliver Borchardt Memorial Lecture, Department of Civil and Environmental Engineering, University of Michigan, East Lansing, MI, February 24, 2005
- 2005 1st Place Student Paper Competition (with Kai Zhang), Ohio Water Environment Association
- 2005 Grant-in-aid of Research (with Robert Smith), Sigma Xi
- 2006 Fulbright-Nehru Visiting Scholar, U.S. Department of State, Indian Institute of Science, Bangalore, India
- 2006 Fulbright-Pai Endowed Professorship, Manipal Academy of Higher Education, India
- 2006 Ivanhoe Foundation grants Fellowship (with Ting Lu), for deserving MS students from developing countries

- 2006 1st Place Student Paper Competition (with Ting Lu), Ohio Water Environment Association
- 2006 Master Engineering Educator, College of Engineering, University of Cincinnati, OH (one of eight inaugural faculty selected for this bi-annual award)
- 2006 Inaugural IPWR Fellow, Institute for Public Health and Water Research
- 2006 1st Place Student Poster Competition (with Regina Lamendella), American Society for Microbiology-Allegheny Branch Meeting
- 2006 Rindsberg Fellowship for Teaching (with Kai Zhang), University of Cincinnati
- 2007 Invited to present UC's Project STEP at the National Science Foundation 2008 Budget Open House and Exhibition, NSF Headquarters, Arlington, VA, Feb. 5, 2007
- 2007 NSF-sponsored Invited Participant, New Zealand Society for Sustainability Engineering and Science 2nd International Conference, Auckland, New Zealand, February, 2007. (one of 20 invited participants from the USA)
- 2007 Invited to deliver the Bruce Podwal Memorial Lecture, Department of Civil Engineering, City College of New York, NY, March 27, 2007
- 2007 Research Award for Young Faculty, College of Engineering, University of Cincinnati, OH
- 2007 Fellow, Academy of Fellows for Teaching and Learning, University of Cincinnati, OH (one of twenty-two inaugural faculty selected to this honor)
- 2007 Rindsberg Fellowship for Teaching (with Regina Lamendella), University of Cincinnati
- 2007 Rindsberg Fellowship for Teaching (with Ting Lu), University of Cincinnati
- 2007 Distinguished Service Award for Outstanding Service as the Liaison between the Association and WEF, Association of Environmental Engineering and Science Professors
- 2007 UC|21 President's Excellence Award, University of Cincinnati, OH
- 2008 Chair of the 130th Annual Meeting of the Ohio Society of Professional Engineers, May 16-17, 2008, Cincinnati, OH
- 2008 Rafiki Award for Service, Village Life Outreach Project, Cincinnati, OH
- 2008 Rindsberg Fellowship for Teaching (with Regina Lamendella), University of Cincinnati
- 2008 Rindsberg Fellowship for Teaching (with Ting Lu), University of Cincinnati
- 2008 Graduate Research Fellowship (with Dan Divelbiss), National Science Foundation
- 2009 1st Place Student Paper Competition (with Rob Smith), Ohio Water Environment Association
- 2009 Excellence in Environmental Engineering Award (with Village Life Outreach Project), Honor Award in University Research, Engineer-in-charge for Improved Water Quality in Northwest Tanzania, American Academy of Environmental Engineers
- 2009 Student Activities and Leadership Development, faculty advisor to the student group of the year (Engineers Without Borders), University of Cincinnati, OH
- 2009 Ivanhoe Foundation grants Fellowship (with Shreya Ghosh), for deserving MS students from developing countries

- 2009 Graduate Research Fellowship (with Andrew Schriener), National Science Foundation
- 2010 Inaugural Recipient, Next Generation Leadership Award, LEGECY and the Northern Kentucky Chamber of Commerce as the top professional under 40 years of age in the category, “Engineering, Construction, and Design” for community impact, leadership, and professional achievement.
- 2010 North American Regional Project Innovation Honor Award for Improved Water Quality in Northwest Tanzania (with Village Life Outreach Project), International Water Association
- 2010 John A. and Susan Mathes Chair of Environmental Engineering, Missouri University of Science and Technology, Rolla, MO
- 2010 Distinguished Service Award for Outstanding Service as Chief Information Officer and Member of the Board of Directors, Association of Environmental Engineering and Science Professors
- 2010 Named a Community Builder, the Phelps County Community Partnership, Rolla, Missouri, USA
- 2011 National Prize for Creative Integration of Practice and Education in the Academy, Roche Health Center (with Michael Zaretsky), Engineering faculty mentor to student architectural team at the University of Cincinnati, OH, National Council of Architectural Registration Boards
- 2011 Honorary Lifetime Membership, Sigma Theta Tau International the Honor Society of Nursing
- 2011 Inducted into the Order of the Golden Shillelagh, Missouri University of Science and Technology, Rolla, Missouri, USA
- 2011 Invited Participant for the 3rd Annual National Academy of Engineering, “Frontiers of Engineering Education Symposium” (one of 60 faculty with less than 15 years of experience invited to participate)
- 2012 Second Place Poster Winner (with Lee Voth-Gaeddert and Montana Puckett), Arts and Humanities Division, Missouri S&T Undergraduate Research Conference
- 2012 Elected membership in the Missouri Academy of Sciences
- 2012 Invited Participant, University of Missouri President’s Leadership Development Program, Columbia, MO (one of thirty faculty selected to this honor)
- 2012 Global Collaborative Practice Award (with Michael Zaretsky), Roche Health Center, Engineering faculty mentor to student architectural team at the University of Cincinnati, OH, American Collegiate Schools of Architecture
- 2012 Missouri Life Sciences Week 2nd Place Poster Competition (with Shreya Ghosh), “Responses of gut microbiota to sterculic oil supplemented diet in lean and obese mice.” (2nd place among 300+ presentations)
- 2012 Inaugural Fulbright-ALCOA Distinguished Chair in the Environmental Sciences and Engineering, U.S. Department of State, Brazil
- 2013 Third Place Oral Winner (with Alex Korf), Sciences Division, Missouri S&T Undergraduate Research Conference
- 2013 Invited Participant, Virtual Community of Practice, ASEE-NSF-NAE joint project

- 2013 Invited Faculty Instructor, Missouri London Program, Missouri Consortium for International Programs and Studies (the first engineering course offered as part of this program since its inception in 1982)
- 2013 First Place Winner (with Missouri S&T), Celebrating Sustainability Video Contest by popular voting, Planet Forward
- 2013 Make a Difference Award from the STEM Academy of the Society of American Military Engineers, Rolla Student Chapter and Fort Leonard Wood Professional Chapter
- 2013 Joe Mooney Distinguished Student Award (with Katelyn Denby) for outstanding officer in a student organization at Missouri S&T
- 2013 First place Winner (with Missouri S&T), Climate Leadership Awards, Second Nature
- 2013 First Place Winner, Value of Certification Video Contest, American Academy of Environmental Engineers and Scientists
- 2013 Invited Participant, Leadership Phelps County program administered by University of Missouri Extension
- 2014 First Place Winner, Graduate Student Poster Forum (with Andrew Schriner), University of Cincinnati (out of 130 posters)
- 2014 Jefferson Science Fellow, National Academies USA, and U.S. Department of State
- 2014 Chancellor's Fellowship (with Lee Voth-Gaeddert), Missouri University of Science and Technology
- 2014 Excellence in Environmental Engineering Education (E4) Award, American Academy of Environmental Engineers and Scientists (AAEES) and the Association of Environmental Engineering and Science Professors (AEESP)
- 2014 Global Engineering Education Exchange (E3) (with Lee Voth-Gaeddert), Institute of International Education and Technical Institute of Bandung, Indonesia
- 2014 The Schowalter Foundation, Inc (with Lee Voth-Gaeddert), funds to develop a health assessment tool in Guatemala
- 2015 NCAA Postgraduate Scholarship Program (with Lee Voth-Gaeddert), awarded to a "student-athlete who excels academically and athletically (one of 29 national awards)
- 2015 Dentel Award for Global Outreach, for, "life-long professional and personal commitment to bettering the lives of humans throughout the world," Association of Environmental Engineering and Science Professors (AEESP)
- 2015 Meritorious Honor Award, "for leadership and attention to detail...in helping to launch...COAST," the Office of the Honorable John F. Kerry, Secretary of State, United States Department of State
- 2015 Chancellor's Fellowship (with Lee Voth-Gaeddert), Missouri University of Science and Technology
- 2015 Student Research Showcase First Place Graduate Engineering (with Lee Voth-Gaeddert), Sigma Xi
- 2015 Invited Participant for the 13th Annual National Academies Keck Futures Initiative Conference, "Art and Science, Engineering, and Medicine Frontier Collaborations: Ideation, Translation & Realization" (one of 77 invited faculty)

PEER REVIEWED PUBLICATIONS

1996

1. Alm, E.W., **Oerther, D.B.**, Larsen, N., Stahl, D.A., and Raskin, L., 1996, "The Oligonucleotide Probe Database," *Applied and Environmental Microbiology*, 62:3557-3559.

1997

2. **Oerther, D.B.**, 1997, "Review of the Watershed Protection Approach for Water Management in the United States: Focusing upon the State of Illinois," *Proc. Ford Foundation Seminar on Water Quality Management*, p. 1-24.
3. Danalewich, J.R., **Oerther, D.B.**, and Raskin, L., 1997, "Microbial Population Dynamics During Start-Up of Sequencing Batch Reactors for Biological Phosphorus Removal," *Proc. WEFTEC Session 1* pp. 313-324.

1998

4. **Oerther, D.B.**, Danalewich, J., Dulekgurgen, E., Leveque, E., Freedman, D.L., and Raskin, L., 1998, "Bioaugmentation of Sequencing Batch Reactors for Biological Phosphorus Removal: Comparative rRNA Sequence Analysis and Hybridization with Oligonucleotide Probes," *Water Science and Technology*, 37(4-5):469-473.
5. de los Reyes III, F., **Oerther, D.B.**, de los Reyes, M.F., Hernandez, M. and Raskin, L., 1998, "Characterization of Filamentous Foaming in Activated Sludge Systems Using Oligonucleotide Hybridization Probes and Antibody Probes," *Water Science and Technology*, 37(4-5):485-493.
6. **Oerther, D.B.**, Danalewich, J.R., and Raskin, L., 1998, "Biological Nutrient Removal From Food Processing Wastewater," *Proc. National Corn Growers and Corn Refiners Association, 8th Biannual Corn Utilization and Technology Conference*, St. Louis, MO, Jun. 1-3, 1998, p.13-18.
7. **Oerther, D.B.**, 1998, Application of Molecular Tools for the Analysis of Biological Foaming in Activated Sludge, University of Illinois at Urbana-Champaign, 98p.

1999

8. **Oerther, D.B.**, de los Reyes III, F., and Raskin, L., 1999, "Interfacing Phylogenetic Oligonucleotide Probe Hybridizations with Representations of Microbial Populations and Specific Growth Rates in Mathematical Models of Activated Sludge Processes," *Water Science and Technology*, 39(1):11-20.
9. **Oerther, D.B.**, de los Reyes III, F., Hernandez, M., and Raskin, L., 1999, "Simultaneous Application of Oligonucleotide Probes and an Antibody Stain for *In Situ* Detection of *Gordona* spp.," *FEMS Microbiology Ecology*, 29:129-136.

2000

10. **Oerther, D.B.**, Pernthaler, J., Schramm, A., Amann, R., and Raskin, L., 2000, "Monitoring Precursor 16S rRNA of *Acinetobacter* spp. In Activated Sludge Wastewater Treatment Systems," *Applied and Environmental Microbiology*, 66:2154-2165.

2001

11. **Oerther, D.B.**, and Raskin, L., 2001, "In Situ Growth Activity of Acinetobacteria Species with Variable Exposure to Electron Donor and Electron Acceptor," *Proc. WEFTEC Session 11-20* pp. 732-739.
12. Stroot, P.G., Hoessle, A.R., and **Oerther, D.B.**, 2001, "Microbial Succession in Activated Sludge: Ecological Principles Link Community Diversity and Operating Performance," *Proc. WEFTEC Session 11-20* pp. 772-779.
13. **Oerther, D.B.** and de los Reyes III, F., 2001, "Molecular Methods in Biological Systems," *Water Environment Research*, 73(5):116-150.
14. **Oerther, D.B.**, de los Reyes III, F., de los Reyes, M.F., and Raskin, L., 2001, "Quantifying Filamentous Microorganisms in Activated Sludge Before, During, and After an Incident of Foaming by Oligonucleotide Probe Hybridizations and Antibody Staining," *Water Research*, 35:3325-3336.

2002

15. Frigon, D.O., **Oerther, D.B.**, Morgenroth, E., and Raskin, L.R., 2002, "Oligonucleotide Probe Hybridization and Modeling Results Suggest that Populations Consuming Readily Degradable Substrates in Plug-Flow Reactors have high Cellular RNA Levels," *Water Science and Technology*, 45(6):115-126.
16. Frigon, D.O., Arnaiz, E., **Oerther, D.B.**, and Raskin L., 2002, "Who Eats What? Classifying Microbial Populations Based on Diurnal Profiles of rRNA Levels," *Water Science and Technology*, 46(1-2):1-9.
17. **Oerther, D.B.**, van Loosdrecht, M. C. M., and Raskin, L., 2002, "Quantifying the Impact of Wastewater Micronutrient Composition on the *In Situ* Growth Activity of *Acinetobacter* spp.," *Water Science and Technology*, 46(1-2):443-447.
18. **Oerther, D.B.**, Jeyanayagam, S., and Husband, J., 2002, "FISHing for Fingerprints in BNR Systems!," *Water Environment and Technology*, 14:22-27, ISSN 1044-9493.
19. **Oerther, D.B.**, and de los Reyes III, F., 2002, "Molecular Methods in Biological Systems," *Water Environment Research*, 74(4):71-105.
20. **Oerther, D.B.**, 2002, "Introducing Molecular Biology to Environmental Engineers Through Development of a New Course," *CEE: Chemical Engineering Education*, 36(4):258-263.
21. Saikaly, P.E., Stroot, P.G., Butler, R., and **Oerther, D.B.**, 2002, "A Novel Model of Activated Sludge using Monod Kinetics to Describe the Competition of Microbial Populations on Growth Limiting Substrates," *Proc. WEFTEC Session 21-30* pp. 90-101, DOI: 10.2175/193864702784247873.
22. **Oerther, D.B.**, Stroot, P.G., Butler, R., Gelman, S., Beydilli, I., Dudley, S., and Simpson, J.M., 2002, "Impact of Influent Microorganisms upon Poor Solids Separation in the

- Quiescent Zone of an Industrial Wastewater Treatment System,” *Proc. WEFTEC Session 41-50* pp. 104-11.
23. Stroot, P.G., and **Oerther, D.B.**, 2002, “How Many Bacteria have Ribosome Genesis that is Sensitive to Wastewater?” *Proc. WEFTEC Session 51-60* pp. 641-652, DOI: 10.2175/193864702784164082.
 24. Polaczyk, A.L., Bindu, H., Papautsky, I., Kinkle, B., and **Oerther, D.B.**, 2002, “Development of Culture-based Biological Microelectro-Mechanical Systems (BioMEMS) for Measuring Nocardioforms in Wastewater Treatment,” *Proc. WEFTEC Session 51-60* pp. 669-678.
 25. Eluru, H.B., Jing, G., Polaczyk, A., Kinkle, B., **Oerther, D.B.**, and Papautsky, I., 2002, “Fabrication of Culture-Based Biochips for Detecting Microorganisms in Environmental Samples,” *IEEE Engineering in Medicine and Biology*, doi: 10.1109/IEMBS.2002.1106603, 2:1688-1689.
 26. Eluru, H., Polaczyk, A., Kinkle, B., **Oerther, D.B.**, and Papautsky, I., 2002, “Culture-based Biochips for Detecting Nocardioforms in Environmental Samples,” *Northeast Bioengineering*, doi: 10.1109/MMB.2002.1002303, p 152-155.
 27. **Oerther, D.B.**, 2002, “Principles of Biology in Environmental Engineering: Molecular Biology-based Identification of Microorganisms,” *Proc. American Society for Engineering Education*, p 3649-3655.
 28. **Oerther, D.B.**, 2002, Using Molecular Signature Methods to Measure the In Situ Physiology of Acinetobacter spp. in Enhanced Biological Phosphorous Removal Activated Sludge, University of Illinois Urbana-Champaign, 238p.

2003

29. Stroot, P.G. and **Oerther, D.B.**, 2003, “Elevated Precursor 16S rRNA Levels Suggest the Presence of Growth Inhibitors in Wastewater,” *Water Science and Technology*, 47(11):241-250.
30. de los Reyes III, F., **Oerther, D.B.**, and Angenent, L., 2003, “Molecular Methods in Biological Systems,” *Water Environment Research*, 75(CD-ROM supplement):65-139.
31. Saikaly, P., E., **Oerther, D.B.**, 2003, “Modeling Bacterial Competition in Activated Sludge Using Non-Linear Dynamics and Monod Kinetics,” *IASTED Modeling and Simulation*, ISBN 0-88986-372-5, pp. 203-208.
32. **Oerther, D.B.**, 2003, “NSF CCLI: Development a Molecular Biology Lab Course in Environmental Engineering and Science,” *Proc. American Society for Engineering Education*, pp. 1841-1846.
33. **Oerther, D.B.**, Dionysiou, D.D., and Sorial, G., 2003, “Preventing the Initiation of Biofouling of Membrane Bioreactors in Wastewater Treatment,” Ohio Water Resources Center Annual Report USGS Project Number: 2002OH11B, water.usgs.gov/wrri/AnnualReports/2002/FY2002_OH_Annual_Report.pdf
34. **Oerther, D.B.**, Jeyanayagam, S., de los Reyes, F., Noguera, D., Angenent, L., and Emrick, J., WEFTE2003 Workshop #W115: FISHing in Activated Sludge Handbook, Water Environment Federation, 47 pages, 1st Edition October 2003.
35. **Oerther, D.B.**, and Iyer, N., 2003, “Paenabacillus-like Spp., and Sludge Bulking,” *Proc. WEFTEC Session 11-20* pp. 750-758, 10.2175/193864703784755805.

36. Stroot, P.G., and **Oerther, D.B.**, 2003, "A New Molecular Respirometry Method for Identifying Bacteria and Determining Their Growth States in Mixed Cultures," *Proc. WEFTEC Session 51-60* pp. 628-635, DOI: 10.2175/193864703784640956.
37. **Oerther, D.B.**, 2003, "Integrating Biological Principles in Environmental Engineering Education: Summary Results of a Three-Year Pilot Study," *Proc. American Society for Engineering Education*, p 1847-1854.

2004

38. **Oerther, D.B.**, and Love, N.L., 2004, "The Value of Applying Molecular Biology Tools in Environmental Engineering: Academic and Industry Perspective in the U.S.A.," *Reviews in Environmental Science and Bio/Technology*, 2:1-8.
39. Saikaly, P., and **Oerther, D.B.**, 2004, "Bacterial Competition in Activated Sludge: Theoretical Impact of Varying Solids Retention Time on Diversity," *Microbial Ecology*, 48(2):274-284.
40. Zhang, K., Choi, H., Sorial, G.A., Dionysiou, D., and **Oerther, D.B.**, 2004, "Examining the Initiation of Biofouling in Membrane Bioreactors Treating Pulp and Paper Wastewater," *Proc. WEFTEC Session 11-20* pp. 717-730.
41. Saikaly, P.E., Stroot, P.G., and **Oerther, D.B.**, 2004, "Using Ecology to Mitigate Toxic Shock Loads in Activated Sludge," *Proc. WEFTEC Session 31-40* pp. 725-738.
42. Smith, R.C., and **Oerther, D.B.**, 2004, "Biodiversity in Activated Sludge Through Bio-Augmentation: Incorporating Nitrifiers from Treatment of High-Strength, Elevated Temperature Recycle Streams," *Proc. WEFTEC Session 31-40* pp. 761-771.
43. Head, M.A., Oleszkiewicz, J.A., and **Oerther, D.B.**, 2004, "Tracking Imported Nitrifying Biomass in Cold Sequencing Batch Reactors Using FISH," *Proc. WEFTEC Session 61-70* pp. 78-91.
44. Jing, G., Hollis, G., Polaczyk, A., Eluru, H.B., Kinkle, B., Mast, D., **Oerther, D.B.**, and Papautsky, I., 2004, "Developing Rapid Detection of Mycobacteria Using Microwaves," *The Analyst*, 129(10):963-969.
45. **Oerther, D.B.**, Jeyanayagam, S., de los Reyes, F., Noguera, D., Angenent, L., and Emrick, J., *WEFTE2004 Workshop: FISHing in Activated Sludge Handbook*, Water Environment Federation, 53 pages, 2nd Edition October 2004.
46. de los Reyes III, F., **Oerther, D.B.**, and Angenent, L., 2004, "Molecular Methods in Biological Systems," *Water Environment Research*, 76(6):605-667.
47. **Oerther, D.B.**, Jeyanayagam, S., and Husband, J., 2004, "New Tools for the Trade: Molecular biology, microelectrodes, and lab-on-a-chip devices can help environmental professionals better manage complex treatment systems," *Water Environment and Technology*, 16(9):42-44,47.
48. Jing, G., **Oerther, D.B.**, Papautsky, I., 2004, "Culture-Based Biochip for Environmental Monitoring," *International Society for Optical Engineering*, 5345:68-77.
49. Choi, H., Zhang, K., Dionysiou, D.D., **Oerther, D.B.**, and Sorial, G.A., 2004, "Membrane filtration performance with activated sludge of CSTR and PFR for the treatment of paper mill wastewater," International Water Association, *Proc of the Water Environment Membrane Technology Conference*, Seoul, South Korea, June 7-10, 2004, ISBN: 9781843394907, p. 809-816.

50. Wu, M.Y., Suryanarayanan, K., van Ooij, W., and **Oerther, D.B.**, “Silver Doped Silane Coatings to Control Microbiologically Induced Corrosion,” International Water Association, *Proc. Biofilm2004*, Las Vegas, NV, October 24-26, 2004, 4 pages.

2005

51. Choi, H., Zhang, K., Dionysiou, D.D., **Oerther, D.B.**, Sorial, G.A., 2005, “Influence of Cross-Flow Velocity on Membrane Performance During Filtration of Biological Suspension,” *Journal of Membrane Science*, 248:189-199.
52. **Oerther, D.B.**, et al., 2005, “Final Report: Phosphorus Recovery from Sewage,” USEPA Project Number: SU831817.
53. Zhang, K., Choi, H., Sorial, G.A., Dionysiou, D., and **Oerther, D.B.**, 2005, “Examining the Initiation of Biofouling in Membrane Bioreactors Treating Paper Wastewater,” *Proc. WEFTEC Session 21-30* pp. 2147-2162.
54. Smith, R., and **Oerther, D.B.**, 2005, “Kinetic and Molecular Characterization of a Laboratory-scale Side-stream Reactor System,” *Proc. WEFTEC Session 41-50* pp. 3849-3863.
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358. poster; abstract Bick, T., Schriener, A., and **Oerther, D.B.**, “Improving Microtask Platforms with the Intent of Alleviating Poverty,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 1 page, CD-ROM.
359. poster; abstract Brem, E., Schriener, A., and **Oerther, D.B.**, “Eliminating Extreme Poverty Through Microwork,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 1 page, CD-ROM.
360. poster; abstract Goodwin, T., Voth-Gaeddert, L., and **Oerther, D.B.**, “Determining the Effectiveness of Bio-sand Filtration to Remove Coliforms from Drinking Water Along the Tapajos River in Para, Brazil,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 1 page, CD-ROM.
361. poster; abstract Schrank, A., Voth-Gaeddert, L., and **Oerther, D.B.**, “Utilization of Survey Questions and Responses to Evaluate Sanitation Concerns in Santarem, Para, Brazil,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 1 page, CD-ROM.
362. poster; abstract Gibson, M., Ghosh, S., and **Oerther, D.B.**, “Got Microbes? Finding the Link Between Diet and Obesity,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 1 page, CD-ROM.
363. poster; abstract Sestak, M., Voth-Gaeddert, L., and **Oerther, D.B.**, “Utilizing Decision Support Tools to Provide Clean Water,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 1 page, CD-ROM.
364. poster; abstract Wallace, D., and **Oerther, D.B.**, “Validating Smartphone Applications,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 1 page, CD-ROM.
365. oral; paper Korf, A., and **Oerther, D.B.**, “Analyzing Critical Drinking Water Parameters in Rural India,” Missouri University of Science and Technology 9th Undergraduate Research Conference, Rolla, MO, April 3, 2013, 8 pages, CD-ROM.
366. oral; abstract **Oerther, D.B.**, 2013, “Modified Mastery Learning,” AEESP2013 Environmental Engineers and Scientists of 2050: Education, Research, and Practice, July 13 -17, 2013, Golden, CO, 2 page abstract.

367. oral; abstract **Oerther, D.B.**, 2013, “Transdisciplinary instruction in the MDGs,” AEESP2013 Environmental Engineers and Scientists of 2050: Education, Research, and Practice, July 13 -17, 2013, Golden, CO, 2 page abstract.
368. oral; abstract Schriener, A.W., Briggs, L.J., Puckett, M.J., **Oerther, D.B.**, Morrison, G., 2013, “Using Human Computation and Good Streetview to Assess Window-opening Frequency and Catalyze Sustainable Economic Growth,” AEESP2013 Environmental Engineers and Scientists of 2050: Education, Research, and Practice, July 13 -17, 2013, Golden, CO, 2 page abstract.
369. poster; abstract Ghosh, S., and **Oerther, D.B.**, 2013, “Exploring the Interaction of Diet and Environmental Determinants of the Obesity Epidemic,” AEESP2013 Environmental Engineers and Scientists of 2050: Education, Research, and Practice, July 13 -17, 2013, Golden, CO, 2 page abstract.
370. poster; abstract Oerther, S., and **Oerther, D.B.**, 2013, “Innovations that Improve Lives: Minds in Action,” STTI 42nd Biennial Convention, November 16 – 20, 2013, Indianapolis, IN, 2 page abstract.
371. poster; abstract Oerther, S., Manjrekar, P., and **Oerther, D.B.**, 2013, “Maternal Health Perceptions and Practices: Results from a Discovery Study in Western India,” STTI 42nd Biennial Convention, November 16 – 20, 2013, Indianapolis, IN, 2 page abstract.

2014

372. poster; abstract Schriener, A., Oerther, D.B., and Uber, J., “Why Crowdsourcing-Based Work Will Eliminate Global Poverty,” 15th Annual Graduate Poster Forum, University of Cincinnati, Feb. 28, 2014, p.62.
373. poster; abstract Schnoebelen, D., Voth-Gaeddert, L., and **Oerther, D.B.**, “Improving Ability to Transfer Water Effectively and Inexpensively in African Villages,” Missouri University of Science and Technology 10th Undergraduate Research Conference, Rolla, MO, April 16, 2014, 1 page, CD-ROM.
374. poster; abstract Beck, K., Voth-Gaeddert, L., and **Oerther, D.B.**, “Improving the Standard of Living for Indian Women by Creating a Sustainable Option for Water Transport,” Missouri University of Science and Technology 10th Undergraduate Research Conference, Rolla, MO, April 16, 2014, 1 page, CD-ROM.
375. poster; abstract Dowd, N., Voth-Gaeddert, L., and **Oerther, D.B.**, “Affective Domain Knowledge Relating to Biosand Filters,” Missouri University of Science and Technology 10th Undergraduate Research Conference, Rolla, MO, April 16, 2014, 1 page, CD-ROM.
376. poster; abstract Wallace, D., Voth-Gaeddert, L., and **Oerther, D.B.**, “Teaching Kids to Give a Crap,” Missouri University of Science and Technology 10th Undergraduate Research Conference, Rolla, MO, April 16, 2014, 1 page, CD-ROM.
377. oral; paper Denby, K., and **Oerther, D.B.**, “An Assessment of Rolla’s Food System and Nutrition Needs,” Missouri University of Science and Technology 10th Undergraduate Research Conference, Rolla, MO, April 16, 2014, 1 page, CD-ROM.
378. poster; abstract Petersen, D., Anderson, V., Anderson, B., and **Oerther, D.B.**, “Maslow Missed the Mark: Relationships (and Giving) Are The Basic Need That

Defines Development,” Humanitarian Technology: Science, Systems, and Global Impact, May 13-15, 2014, Boston, MA, 1 page abstract.

379. oral; abstract Petersen, D., Anderson, V., Anderson, B., Voth-Gaeddert, L., and **Oerther, D.B.**, 2014, “Poverty of Relationship Can Also Be Overcome With Technology: The Sharing Economy,” IEEE Global Humanitarian Technology Conference, October 10-13, 2014, Silicon Valley, CA, 1 page abstract.
380. oral; abstract **Oerther, D.B.**, Voth-Gaeddert, “Understanding the Partner Community: the Triple Bottom Line of People, Prosperity and Planet,” 2014 National Conference of Engineers Without Borders USA, November 2, 2014, Washington, DC, 1 page abstract.

2015

381. poster; abstract Voth-Gaeddert, L., and **Oerther, D.B.**, 2015, “From Simple to Complex to Chaotic; What Level is Right for You?” HumTech2015, May 12-15, 2015, Boston, MA, 1 page abstract.
382. oral; abstract Voth-Gaeddert, L., and **Oerther, D.B.**, 2015, “Environmental Health and Household Demographics Impacting Diarrhea and Child Stunting in a Complex System,” American Chemical Society, Proceedings of the Annual Meeting, Division of Environmental Chemistry, Boston, MA, Aug. 16-20, 2015, CD-ROM, 1 page.
383. oral; abstract Voth-Gaeddert, L., Maxadoni Kamil, I., Roosmini, D., and **Oerther, D.B.**, 2015, “Identifying The Long Term And Short Term Feedback Loops Impacting National Child Health Levels In Guatemala; An Application Of System Dynamics Modeling,” 5th Environmental Technology and Management Conference, “Green Technology Towards Sustainable Development,” November 23-24, 2015, Bandung, Indonesia, CD-ROM, 1 page.

INVITED LECTURES AND KEYNOTE ORAL PRESENTATIONS

1996

384. **Oerther, D.B.**, “Non-Culture Techniques for the Identification of Microorganisms.” Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, IL, April 24, 1996.

1997

385. **Oerther, D.B.**, “Adapting Molecular Microbial Ecology to Study Biological Problems in Environmental Engineering.” Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, IL, May 22, 1997.
386. **Oerther, D.B.**, “Review of the Watershed Protection Approach for Water Management in the United States: Focusing upon the State of Illinois,” Proceedings of the Ford Foundation Seminar on Water Quality Management, Ford Foundation, Dec. 11, 1997.

1998

387. Mau, M., Crawford, J., Zheng, D., de los Reyes, F., **Oerther, D.B.**, Danalewich, J., Thompson, G., and Raskin, L., "Microbial Ecology of Wastewater Treatment and Agricultural Soil Systems," The Environmental Council, Environmental Horizons, Urbana, IL, Apr. 21, 1998.

1999

388. **Oerther, D.B.**, "Molecular Microbial Ecology of Complex Ecosystems." Department of Animal Sciences, University of Illinois at Urbana-Champaign, Urbana, IL, April 20, 1999.
389. **Oerther, D.B.**, "Identification, Enumeration, and Activity: Molecular Signature Methods in Microbial Ecology." Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, IL, May 20, 1999.
390. **Oerther, D.B.**, "A Tale of Two Microorganisms in Activated Sludge Wastewater Treatment Systems: *Gordonia* and *Acinetobacter*." Department of Biology, Southeastern Louisiana University, LA, October 14, 1999.
391. **Oerther, D.B.**, "Inside the Black Box: Molecular Tools for Wastewater Engineers." Malcolm Pirnie, Inc., Corporate Headquarters, White Plains, NY, December 17, 1999.

2000

392. **Oerther, D.B.**, "*Gordonia* spp. and *Acinetobacter* spp. in Activated Sludge Wastewater Treatment Systems," Department of Civil and Environmental Engineering, University of Cincinnati, Cincinnati, OH, January 25, 2000.
393. **Oerther, D.B.**, "*Gordonia* spp. and *Acinetobacter* spp. in Activated Sludge Wastewater Treatment Systems," Department of Civil and Environmental Engineering, University of Minnesota, Twin-Cities, Minneapolis – St. Paul, MN, February 17, 2000.
394. **Oerther, D.B.**, "Microbial "Life Strategies" in Wastewater Treatment Systems." Department of Microbiology, Central Michigan University, MI, March 23, 2000.
395. **Oerther, D.B.**, Angenent, L.T., and Raskin, L., "Biological Treatment of Food Processing Waste Streams," The Environmental Council, Environmental Horizons 2000, Urbana, IL, Mar. 27, 2000.
396. **Oerther, D.B.**, "*Gordonia* spp. and *Acinetobacter* spp. in Activated Sludge Wastewater Treatment Systems," Department of Civil and Environmental Engineering, Texas A&M University, College Station, TX, June 2, 2000.

2001

397. **Oerther, D.B.**, "Molecular Fingerprinting – Creative Tool for Extracting Hidden Capacity from a BNR Facility," The Future is Now Symposium, Malcolm Pirnie, Inc., New Haven, CT, March 30, 2001.

398. **Oerther, D.B.**, “Dynamic Growth Model of Activated Sludge Wastewater Treatment: rRNA Processing as a Rate Limiting Step,” Dynamic Modeling Seminar Series, University of Illinois, Urbana, IL, April 26, 2001.

2002

399. **Oerther, D.B.**, “Ribosome Genesis: A Model for Molecular Biology-Based Respirometry in Activated Sludge,” University of Manitoba, Winnipeg, Manitoba, Canada, June 21, 2002.
400. **Oerther, D.B.**, “The Future of Process Monitoring in Environmental Engineering: Molecular Biology, Microelectrodes, and Lab-on-a-Chip,” Malcolm Pirnie, Inc., Central Region Headquarters, Columbus, OH, October 22, 2002.
401. **Oerther, D.B.**, “Emerging Technology for Characterizing Metabolically Active Degradative Microbial Populations,” Superfund Basic Research Program Emerging Technologies for Information Transfer, Tucson, AZ, November 6, 2002.
402. **Oerther, D.B.**, “Reconciliation: How Sewage Engineers Might Integrate Current Modeling Efforts with 16S rRNA Measures of Microbial Diversity,” International Workshop on Frontiers in Engineering Biology: Applications of Theoretical Ecology to the Study of Engineering Biological Processes, Department of Civil Engineering, University of Kansas, KS, December 13, 2002.
403. **Oerther, D.B.**, and Jeyanayagam, S., “FISHing for Fingerprints in BNR Systems!,” Ohio Water Environment Association, Annual Meeting, Columbus, OH, June 26, 2002.
404. **Oerther, D.B.**, “Results from a NSF-sponsored Workshop to Explore the Value of Applying Molecular Biology Tools in Environmental Engineering,” Association of Environmental Engineering and Science Professors and the American Academy of Environmental Engineers, Integrated Environmental Teaching, Research, and Practice: Linking Engineering and Science to Address Complex Problems, August 11, 2002.

2003

405. Saikaly, P., and **Oerther, D.B.**, 2003, “Modelling Bacterial Competition in Activated Sludge Using Non-Linear Dynamics and Monod Kinetics,” The International Association of Science and Technology Development (IASTED), Modelling and Simulation Conference MS2003, Palm Springs, CA, Feb. 25, 2003.
406. **Oerther, D.B.**, “Water Quality Biotechnology at UC,” College of Engineering Advisory Board, University of Cincinnati, Cincinnati, OH, January 21, 2003.
407. **Oerther, D.B.**, “Toward a Unified Ecological Theory Describing the Control of Microbial Community Composition in Activated Sludge,” Department of Civil and Environmental Engineering, North Carolina State University, NC, March 17, 2003.
408. **Oerther, D.B.**, “Troubleshooting Industrial Biological Wastewater Treatment,” ICRO-UNESCO / ICGEB-NSF Sponsored Workshop Microbial Identification in Clinical and Environmental Settings, Kenitra Morocco, April 14, 2003.
409. **Oerther, D.B.**, “Teaching Molecular Biology to Students in Civil and Environmental Engineering,” Civil and Environmental Engineering Advisory Board, University of Cincinnati, Cincinnati, OH, April 28, 2003.

410. **Oerther, D.B.**, “Molecular Microbial Ecology of Sewage Treatment: Identification, Diversity, and Modeling,” Department of Biological Sciences, University of Cincinnati, Cincinnati, OH, June 2, 2003.
411. **Oerther, D.B.**, “Using Modern Environmental Biotechnology to Identify Important Bacteria Populations in Industrial Waste Treatment Processes,” Department of Chemical Engineering, Illinois Institute of Technology, Chicago, IL, September 24, 2003.
412. **Oerther, D.B.**, “Sensing the Environment: Molecular Biology Procedures and Microfluidic Devices,” Department of Civil Engineering, The Ohio State University, Columbus, OH, October 6, 2003.
413. **Oerther, D.B.**, “Novel Nitrifying Bacteria in Marine Aquaculture,” Department of Civil and Environmental Engineering, University of Cincinnati, Cincinnati, OH, November 7, 2003.
414. **Oerther, D.B.**, “Application of Molecular Biology Tools to Improve Bioprocess Engineering,” Department of Civil Engineering, City College of New York, New York City, NY, November 14, 2003.
415. **Oerther, D.B.**, “In Situ Growth Rates and Biodiversity in Engineered Bioprocesses,” Department of Earth and Environmental Engineering, Columbia University, November 21, 2003.

2004

416. **Oerther, D.B.**, “Sensing the Environment: Molecular Biology Procedures and Microfluidic Devices,” School of Civil Engineering, Purdue University, Lafayette, IN, January 26, 2004.
417. **Oerther, D.B.**, “Sensing the Environment: Molecular Biology Procedures and Microfluidic Devices,” Department of Earth and Environmental Engineering, Columbia University, New York City, NY, February 27, 2004.
418. **Oerther, D.B.**, “Microbial Diversity in Engineered Bioprocesses,” Department of Civil and Environmental Engineering, University of Iowa, Iowa City, IA, March 26, 2004.
419. **Oerther, D.B.**, “Environmental Biotechnology 101: How do microbes clean up contaminated soil?,” Superfund Basic Research Program, University of Cincinnati, Cincinnati, OH, September 3, 2004.
420. **Oerther, D.B.**, “21st Century Environmental Biotechnology: A Case Study of *Paenibacillus polymyxa*,” Department of Chemical and Materials Science Engineering, University of Cincinnati, Cincinnati, OH, November 18, 2004.
421. **Oerther, D.B.**, “Environmental Biotechnology 101: How do microbes clean contaminated soils?,” Superfund Basic Research Program Emerging Technologies for Information Transfer, Seattle, WA, November 4, 2004.
422. **Oerther, D.B.**, “16S rRNA: Molecular Methods in Environmental Systems,” NSF CCLI Investigator’s Meeting, Alexandria, VA, Apr. 17, 2004.

2005

423. **Oerther, D.B.**, “FISHing in Activated Sludge,” New York Water Environment Association, New York, NY, February 8, 2005.

424. **Oerther, D.B.**, “Molecular Evidence for a Novel Lineage of Ammonia Oxidizing Bacteria in a Marine Aquaculture Wastewater Treatment System,” 4th Activated Sludge Population Dynamics Meeting, International Water Association, Gold Coast, Australia, July 19, 2005.
425. **Oerther, D.B.**, “Teaching Molecular Biology in Environmental Engineering,” 2005 AEESP Research and Education Frontiers Conference, Association of Environmental Engineering and Science Professors, Potsdam, NY, July 25, 2005.
426. **Oerther, D.B.**, “21st Century Environmental Biotechnology: A Case Study of *Paenibacillus polymyxa*,” Department of Chemical and Environmental Engineering, University of Toledo, Toledo, OH, January 21, 2005.
427. **Oerther, D.B.**, “Environmental Biotechnology 101,” Department of Ecology and Evolution, Brown University, Providence, RI, February 7, 2005.
428. **Oerther, D.B.**, “FISHing in Activated Sludge,” New York Water Environment Association, New York, NY, February 8, 2005.
429. **Oerther, D.B.**, “Application of Molecular Biology Tools for Wastewater and Drinking Water Systems,” Borchardt Memorial Lecture, Department of Civil and Environmental Engineering, University of Michigan, East Lansing, MI, February 24, 2005.
430. **Oerther, D.B.**, “21st Century Environmental Biotechnology: A Case Study of *Paenibacillus polymyxa*,” Department of Civil and Environmental Engineering, University of Wisconsin, Madison, WI, April 4, 2005.
431. **Oerther, D.B.**, “FISHing in Activated Sludge,” Central States Water Environment Association, Madison, WI, April 5, 2005.
432. **Oerther, D.B.**, “Environmental Biotechnology: Integrating Molecular Microbial Ecology and Environmental Engineering,” Department of Environmental Health, University of Cincinnati, Cincinnati, OH, April 13, 2005.
433. **Oerther, D.B.**, “Beyond Stamp Collecting: Diversity as the Conceptual Starting Point for Global Optimization of Bioprocesses,” Vistas in Microbial Ecology and Environmental Biotechnology, Arizona State University, Phoenix, AZ, April 21, 2005.
434. **Oerther, D.B.**, “Successful Academic Careers – Mentoring, Funding, and Winning CAREER Awards,” Pre-conference Workshop, Association of Environmental Engineering and Science Professors Bi-annual Research and Education Conference, Clarkson University, NY, July 23, 2005.
435. **Oerther, D.B.**, “Molecular Biology Tools to ID Microbes in Water,” All Section Wastewater Analyst Workshop, Ohio Water Environment Association, Lab Analyst Committee, Columbus, OH, September 16, 2005.
436. **Oerther, D.B.**, “Characterizing and Controlling Bacterial Biofilms in Environmental Bioprocesses,” Department of Civil and Environmental Engineering, Carnegie Mellon University, Pittsburgh, PA, October 7, 2005.
437. **Oerther, D.B.**, “FISHing in Activated Sludge,” Department of Civil and Environmental Engineering, University of Colorado, Boulder, CO, October 10, 2005.
438. **Oerther, D.B.**, “Characterizing and Controlling Bacterial Biofilms in Environmental Bioprocesses,” Department of Civil Engineering and Geological Sciences, University of Notre Dame, South Bend, IN, October 27, 2005.
439. **Oerther, D.B.**, “Is This Ecological Engineering?,” Department of Biological Sciences, Stanford University, Palo Alto, CA, November 9, 2005.

440. **Oerther, D.B.**, “Environmental Exposures,” Ohio River Valley Chapter of Certified Industrial Hygienists, Cincinnati, OH, November 17, 2005.
441. **Oerther, D.B.**, “Characterizing and Controlling Bacterial Biofilms in Environmental Bioprocesses,” School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA, November 21, 2005.
442. **Oerther, D.B.**, “Waterborne Infectious Disease,” Cincinnati Chapter of Engineers Without Borders, University of Cincinnati, Cincinnati, OH, November 28, 2005.
443. **Oerther, D.B.**, “Sensors for Urban Microbiological Water Quality,” WaterQUEST Workshop, Carnegie Mellon University, Pittsburgh, PA, December 8, 2005.
444. **Oerther, D.B.**, “Is This Ecological Engineering?,” Department of Civil and Environmental Engineering, Carnegie Mellon University, Pittsburgh, PA, December 15, 2005.

2006

445. **Oerther, D.B.**, “Characterizing and Controlling Bacterial Biofilms in Environmental Bioprocesses,” Department of Chemical Engineering, Indian Institute of Science, Bangalore, India, January 25, 2006.
446. **Oerther, D.B.**, “Environmental Biotechnology Program at the University of Cincinnati,” Department of Civil Engineering, Indian Institute of Science, Bangalore, India, February 5, 2006.
447. **Oerther, D.B.**, “Water Usage in the Electronics Manufacturing Industry,” 6th Annual Indo-American Environmental Leadership Program on “Water Saving Technologies,” sponsored by the United States Educational Foundation in India and the Department of Botany and Environmental Studies, Guru Nanak Dev University, Amritsar, India, February 24, 2006.
448. **Oerther, D.B.**, “Practicing the Mission of Promoting Mutual Understanding of the Fulbright Program,” Synergizing Fulbright Activities in South Asia and the U.S.: A Conference of Fulbright Scholars in South Asia, Visakhapatnam, India, March 7, 2006.
449. **Oerther, D.B.**, “Environmental Engineering and Water Quality Management in the USA,” Keynote Address, World Water Resources Day, National Institute of Technology Karnataka, Mangalore, India, March 22, 2006.
450. **Oerther, D.B.**, “A US Fulbrighter Experience in India,” Rotary Club of Fairfield, OH, July 7, 2006.
451. **Oerther, D.B.**, “Water Quality Challenges in Developing Countries: Tanzania, Kenya, and India,” Ohio Water Environment Association, Lab Analysts Meeting, Columbus, OH, September 8, 2006.
452. **Oerther, D.B.**, “Environmental Challenges in Modern India,” Department of Civil and Environmental Engineering, University of Cincinnati, OH, September 22, 2006.
453. **Oerther, D.B.**, “Ecological Considerations in Bioreactor Design: Genomics, Modeling, and Theory,” Department of Energy, Environment, and Chemical Engineering, Washington University in St. Louis, October 13, 2006.

2007

454. **Oerther, D.B.**, “Microbial Ecology, Bioprocess Engineering, Sensors, and the Developing World,” Department of Civil Engineering and Geological Sciences, University of Notre Dame, South Bend, IN, January 30, 2007.
455. **Oerther, D.B.**, “Evaluating Membrane Bioreactors for Biological Nutrient Removal and Biofouling,” Bruce Podwal Memorial Lecture, Department of Civil Engineering, City College of New York, March 27, 2007.
456. **Oerther, D.B.**, “A Framework for Sustainable Urban Engineering,” Sustainability Forum, College of Design, Art, Architecture, and Planning, University of Cincinnati, August 10, 2007.
457. **Oerther, D.B.**, “Introduction of Robert Neuwirth: Shadow Cities,” UC International, University of Cincinnati, November 14, 2007.

2008

458. **Oerther, D.B.**, “It’s a Marathon not a Sprint: A Discussion of International Sustainability and Partnerships in Tanzania,” Cincinnati Children’s Hospital Seminar Series, September 19, 2008.
459. **Oerther, D.B.**, “Quantifying Active Bacterial Populations in Environmental Samples,” Department of Chemical and Biomedical Engineering, University of South Florida, September 26, 2008.
460. **Oerther, D.B.**, “Center for Sustainable Urban Environments at the University of Cincinnati,” Campus Sustainability Day Celebration, University of Cincinnati, October 22, 2008.
461. **Oerther, D.B.**, “The Importance of Sustainability and Partnerships in Global Development,” UC Chapter of Engineers Without Borders, October 30, 2008.
462. **Oerther, D.B.**, “Environmental Biotechnology, Sustainable Urban Engineering, and Global Development,” Sponsored Research Services Lunch and Learn Series, University of Cincinnati, December 4, 2008.
463. **Oerther, D.B.**, “Highlights of the Department of Civil and Environmental Engineering, University of Cincinnati,” Keynote Address for the Lecture Series on Environmental Issues and Remedies, Institute of Science and Technology for Advanced Studies, Sardar Patel University, December 24, 2008.

2009

464. **Oerther, D.B.**, “The Three D’s of Sustainability: Diet, Density, and Development,” Department of Earth and Environmental Engineering, Columbia University, April 3, 2009.
465. **Oerther, D.B.**, “The Three D’s of Sustainability: Diet, Density, and Development,” Trans-disciplinary Lecture Series, Center for Sustainable Urban Engineering, University of Cincinnati, April 10, 2009.
466. **Oerther, D.B.**, “The Three D’s of Sustainability: Diet, Density, and Development,” Focus the Nation, University of Cincinnati, April 16, 2009.
467. **Oerther, D.B.**, “Think global, act local: Bringing sustainable development home to Cincinnati, OH, USA,” Pecha Kucha seminar series, Cincinnati Art Museum, August 5, 2009.

468. **Oerther, D.B.**, “Ethical Research and Social Responsibility in Sustainable Development,” Department of Civil and Environmental Engineering, University of Cincinnati, OH, November 6, 2009.
469. **Oerther, D.B.**, “Sustainable Living,” 3rd Annual International Education Summit, “Global Health: Issues and Opportunities,” Northern Kentucky University, November 13, 2009.

2010

470. **Oerther, D.B.**, “Social Entrepreneurship for the Developing World,” College of Business, University of Cincinnati, OH, January 23, 2010.
471. **Oerther, D.B.**, “Integrating Microbial Genomics with Sustainable Development to Ensure Water Quality,” Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute, February 2, 2010.
472. **Oerther, D.B.**, “Environmental Biotechnology for Masdar,” MIST Program, Massachusetts Institute of Technology, February 11, 2010.
473. **Oerther, D.B.**, “Applications of Biotechnology for Environmental Systems,” Department of Civil, Architectural, and Environmental Engineering, Missouri University of Science and Technology, Rolla, MO, February 24, 2010.
474. **Oerther, D.B.**, “Successful Graduate Studies at the University of Cincinnati: A Perspective by Dr. Oerther,” Graduate Student Recruitment Weekend Keynote Address, University of Cincinnati, OH, March 5, 2010.
475. **Oerther, D.B.**, “A Vision for the School of Global Sustainability at the University of South Florida,” University of South Florida, June 24, 2010.
476. **Oerther, D.B.**, “Kicking the Tires: Strategic Thoughts for the S&T Environmental Portfolio,” Missouri University of Science and Technology, Rolla, MO, September 9, 2010.
477. **Oerther, D.B.**, “Poopology,” DoYouPkRolla.org, Rolla, MO, September 15, 2010.
478. **Oerther, D.B.**, “Environmental Research at S&T for the Next Five Years,” DoYouPKRolla.org, Rolla, MO, December 15, 2010.

2011

479. **Oerther, D.B.**, “Hey Fatty, Fatty,” DoYouPkRolla.org, Rolla, MO, January 26, 2011.
480. **Oerther, D.B.**, “Moving the Chains: Summarizing 2010 and Looking Ahead to 2011,” Missouri University of Science and Technology, Rolla, MO, February 4, 2011.
481. **Oerther, D.B.**, “Molecular Microbial Ecology of Waste Treatment as a Model System to Understand the Role of Microbiology in the Obesity Epidemic,” Food Systems and Bioengineering Seminar, University of Missouri, Columbia, MO, February 8, 2011.
482. **Oerther, D.B.**, “S&T Earth Day Luncheon: Our Common Research Agenda,” Missouri University of Science and Technology, Rolla, MO, April 22, 2011.
483. **Oerther, D.B.**, “Strategic Planning: A Moving Target,” Missouri University of Science and Technology, Rolla, MO, September 2, 2011.

484. **Oerther, D.B.**, “S&T Environmental Portfolio,” Missouri University of Science and Technology Recruitment Event, Danforth Plant Research Center, St. Louis, October 25, 2011.
485. **Oerther, D.B.**, “Overview of Slow Sand Biofilters,” Regional Engineers Without Borders Meeting, Rolla, MO, November 6, 2011.
486. **Oerther, D.B.**, and Khayat, K., “Wisdom of the Sages,” Freshman Faculty Forum, Missouri University of Science and Technology, Rolla, MO, December 14, 2011.

2012

487. **Oerther, D.B.**, “The Personal Mission of a Professional Engineer, Honorary Nurse, and Architect to Provide Sanitation, Healthcare, and Jobs in India, Guatemala, and Tanzania,” Adventures Abroad Program, Office of International Studies, Missouri University of Science and Technology, Rolla, MO, January 31, 2012.
488. **Oerther, D.B.**, “How to Choose Intentional Living,” OneBook Program, Missouri University of Science and Technology, Rolla, MO, February 7, 2012.
489. **Oerther, D.B.**, “A Collage of Pecha Kucha: Working Globally to Eliminate Extreme Poverty,” Arts and Cultural Series, University of Missouri St. Louis, St. Louis, MO, February 13, 2012.
490. **Oerther, D.B.**, “Evidence from Blended Learning, a Flipped Classroom, and Mastery Grading,” Teaching and Learning Technology Conference, Rolla, MO, March 16, 2012.
491. **Oerther, D.B.**, “The Role of the Nurse in Meeting the Millennium Development Goals,” Nursing College, Hinduja Hospital, Mumbai, India, December 17, 2013.

2013

492. **Oerther, D.B.**, “Beyond Stamp Collecting: Diversity as a Conceptual Starting Point for Global Optimization of Bioprocesses,” N.V. Patel College of Pure and Applied Sciences, Vidya Nagar, Gujarat, India, January 7, 2013.
493. **Oerther, D.B.**, “Global Development: Abroad and at Home,” Chi Epsilon Midwest Conclave, Rolla, MO, March 9, 2013.
494. **Oerther, D.B.**, “Social Entrepreneurship & Design Thinking to Eliminate Extreme Poverty, Combat Obesity, and Ensure Access to Water & Sanitation,” Academy of Civil Engineers, Missouri University of Science and Technology, Rolla, MO, April 19, 2013.
495. **Oerther, D.B.**, 2013, “Social Entrepreneurship,” Rotary Club, Rolla, MO May 17, 2013.
496. **Oerther, D.B.**, Schrader, C., Truman, K., Manring, N., and Carroll, D., 2013, “The Future of Engineering Education: Roundtable Discussion,” MSPE Annual Conference, June 19, 2013.
497. **Oerther, D.B.**, 2013, “Choose Intentional Living,” Kiwanis Club, Rolla, MO July 23, 2013.
498. **Oerther, D.B.**, 2013, “Environmental Determinants of the Obesity Epidemic,” Biology Department Seminar, Missouri University of Science and Technology, Rolla, MO September 9, 2013.

499. **Oerther, D.B.**, 2013, “Social Entrepreneurship & Design Thinking to Eliminate Extreme Poverty, Combat Obesity, and Ensure Access to Water & Sanitation,” English Language Program, Missouri University of Science and Technology, Rolla, MO September 11, 2013.
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611. Antigua Observer, June 16, 2015, "US State Dep't to Assist with Securing Insurance for Fishers in the OECS," <http://antiguaobserver.com/us-state-dept-to-assist-with-securing-insurance-for-fishers-in-the-oeecs/>
 - a. Caribbean Regional Fisheries Mechanism, May 13, 2015, "High-level meeting of Caribbean Fisheries Ministers to be held in Grenada," http://www.crfm.net/index.php?option=com_k2&view=item&id=439:high-level-meeting-of-caribbean-fisheries-ministers-to-be-held-in-grenada&Itemid=179

- b. Caribbean Disaster Risk Management Agency, July 6, 2015, “UN Secretary General Ban Ki-Moon meets with Caribbean Agencies on Climate Change,” http://www.cdema.org/index.php?option=com_content&view=article&id=1462%3Aun-secretary-general-ban-ki-moon-meets-with-caribbean-agencies-on-climate-change-&catid=35%3Apress-releases&Itemid=1
 - c. State Magazine, July/August 2015, “Fighting Hunger: Office Helps Ensure World’s Access to Food,” issue 602, pages 12-13, <http://www.state.gov/documents/organization/245789.pdf>
 - d. eConnection, July 15, 2015, “Oerther receives meritorious honor award from U.S. Department of State,” <http://econnection.mst.edu/2015/07/oerther-earns-state-department-award/>
 - e. eConnection, October 5, 2015, “Our Ocean Conference delegate: unlocking climate resilience,” <http://econnection.mst.edu/2015/10/our-ocean-conference-delegate-unlocking-climate-resilience/>
 - f. SciDev.net, October 9, 2015, “Crean Novedoso Seguro Para Pequeños Pescadores Caribenos,” <http://www.scidev.net/america-latina/pesquerias/noticias/crean-novedoso-seguro-para-pequenos-pescadores-caribenos.html>
612. eConnection, June 24, 2015, “Oerther selected to attend 2015 Keck Futures Conference,” <http://econnection.mst.edu/2015/06/oerther-selected-to-attend-2015-keck-futures-conference/>

NOTES:

I DO NOT track graduate research credit as those students appear as advisees.

SUMMARY OF COURSES TAUGHT AND DEVELOPED

<u>Number</u>	<u>Title</u>	<u>Hours</u>	<u>Term</u>	<u>Year</u>	<u>Size</u>	<u>Evaluation^a</u>
<i>Courses offered at the University of Cincinnati</i>						
CEE600*	Chem. & Micro. of Env. Systems	3 hr	Winter	01	2	Undetermined
CEE725*	Molecular Methods in Env. Eng.	4 hr	Spring	01	15	4.9/5
CEE471*	Intro. to Env. Eng.	3 hr	Summer	01	19	4.0/5
CEE600	Chem. & Micro. of Env. Systems	3 hr	Winter	02	10	4.2/5
CEE601*	Chem. & Micro. Laboratory	1 hr	Winter	02	9	4.6/5
CEE619	Molecular Methods in Env. Eng.	4 hr	Spring	02	8	4.8/5
CEE471	Intro. to Env. Eng.	3 hr	Summer	02	15	4.4/5
CEE600	Chem. & Micro. of Env. Systems	3 hr	Winter	03	12	4.6/5
CEE601	Chem. & Micro. Laboratory	1 hr	Winter	03	10	4.7/5
CEE619	Molecular Methods in Env. Eng.	4 hr	Spring	03	21	4.7/5
CEE175*	Computer Applications in CEE	3 hr	Autumn	03	19	4.3/5
CEE600	Chem. & Micro. of Env. Systems	3 hr	Autumn	03	5	4.0/5
CEE601	Chem. & Micro. Laboratory	1 hr	Autumn	03	5	Undetermined
CEE619	Molecular Methods in Env. Eng.	4 hr	Winter	04	24	4.3/5
CEE646*	(Micro)Biological Prin. Env. Sys.	4 hr	Winter	04	24	4.3/5
CEE600	Chem. & Micro. of Env. Systems	3 hr	Autumn	04	18	4.5/5
CEE601	Chem. & Micro. Laboratory	1 hr	Autumn	04	18	Undetermined

CEE101*	Civil Engineering Seminar	1 hr	Winter	05	65	4.4/5
CEE619	Molecular Methods in Env. Eng.	4 hr	Winter	05	5	Undetermined
CEE646	(Micro)Biological Prin. Env. Sys.	4 hr	Winter	05	20	4.4/5
CEE600	Chem. & Micro. of Env. Systems	3 hr	Autumn	05	12	4.6/5
CEE601	Chem. & Micro. Laboratory	1 hr	Autumn	05	12	Undetermined
CEE619	Molecular Methods in Env. Eng.	4 hr	Winter	06	8	4.3/5 ^b
CEE646	(Micro)Biological Prin. Env. Sys.	4 hr	Summer	06	2	4.8/5
CEE100*	Introduction to Civil Engineering	3 hr	Autumn	06	58	4.8/5
CEE600	Chem. & Micro. of Env. Systems	3 hr	Autumn	06	8	3.3/5
CEE601	Chem. & Micro. Laboratory	1 hr	Autumn	06	8	Undetermined
ENVS397H*	Environ. Challenges in India	3 hr	Autumn	06	22	4.2/5
CEE619	Molecular Methods in Env. Eng.	4 hr	Winter	07	5	3.8/5 ^c
CEE103	Introduction to CEE: Math	1 hr	Autumn	07	58	3.3/5
CEE397H*	Environ. Challenges in India	3 hr	Autumn	07	16	4.7/5
CEE600	Chem. & Micro. of Env. Systems	3 hr	Autumn	07	20	4.4/5
CEE601	Chem. & Micro. Laboratory	1 hr	Autumn	07	19	4.7/5
CEE619	Molecular Methods in Env. Eng.	4 hr	Winter	06	6	Undetermined ^c
CEE676	Env Eng Seminar	1 hr	Winter	08	37	Undetermined
CEE472H*	Practical Aspects Bldg Nrg Audit	3 hr	Spring	08	14	4.7/5 ^d
CEE100	Introduction to CEE	1 hr	Autumn	08	91	3.8/5
CEE103	Introduction to CEE Math	1 hr	Autumn	08	91	3.9/5
CEE398H*	Readings in Sustain Urban Eng	3 hr	Autumn	08	20	4.3/5
CEE600*	Millennium Development Goal 7	3 hr	Autumn	08	15	4.6/5 ^e
CEE601*	MDG7 Lab	1 hr	Autumn	08	15	4.0/5
CEE600H*	Millennium Development Goal 7	3 hr	Autumn	08	15	5.0/5 ^e
CEE601H*	MDG7 Lab	1 hr	Autumn	08	15	5.0/5
CEE398H*	Readings in Sustain Urban Eng	3 hr	Spring	09	20	4.1/5 ^f
CEE472	Practical Aspects of Bldg Nrg Audit	3 hr	Spring	09	18	4.8/5 ^d
CEE100	Introduction to CEE	1 hr	Autumn	09	58	3.3/5
CEE103	Introduction to CEE Math	1 hr	Autumn	09	58	3.9/5
CEE398H	Readings in Sustain Urban Eng	3 hr	Autumn	09	23	4.8/5
CEE600	Millennium Development Goal 7	3 hr	Autumn	09	16	4.4/5 ^g
CEE601	MDG7 Lab	1 hr	Autumn	09	16	Undetermined
CEE600H	Millennium Development Goal 7	3 hr	Autumn	09	9	3.8/5 ^g
CEE601H	MDG7 Lab	1 hr	Autumn	09	9	Undetermined

Courses offered at the Indian Institute of Science, Bangalore, India

CE258*	Water and Sewage Plants	3 hr	Winter	06	8	4.8/5
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Courses offered at the Manipal Academy of Higher Education, Manipal, India

Biotech*	Enzymology	3 hr	Winter	06	20	4.9/5
Biotech	Enzymology	3 hr	Winter	07	17	4.8/5

Courses offered at the Missouri University of Science and Technology

CE261*	Fundam Env Eng and lab	3 hr	Spring	11	83	2.0/4
CE261*	Fundam Env Eng and lab	3 hr	Summer	11	15	Undetermined

CE390 ^h	UG Independent Research	6 hr	Summer	11	1	Undetermined
CE261 [*]	Fundam Env Eng and lab	3 hr	Autumn	11	72	1.3/4
CE390 ^h	UG Independent Research	3 hr	Autumn	11	1	Undetermined
CE261	Fundam Env Eng and lab	3 hr	Spring	12	49	2.7/4
CE390 ^h	UG Independent Research	3 hr	Spring	12	6	Undetermined
CE261	Fundam Env Eng and lab	3 hr	Summer	12	11	Undetermined
CE390 ^h	UG Independent Research	3 hr	Summer	12	5	Undetermined
CE261	Fundam Env Eng and Lab (8am)	3 hr	Autumn	12	30	2.0/4 (2.6/4 avg) ⁱ
CE261	Fundam Env Eng and Lab (11am)	3 hr	Autumn	12	34	3.0/4 (2.6/4 avg) ⁱ
CE390 ^h	UG Independent Research	3 hr	Autumn	12	6	Undetermined
CE261	Fundam Env Eng and Lab	3 hr	Spring	13	69	2.6/4
CE390 ^h	UG Independent Research	3 hr	Spring	13	4	Undetermined
CE390 ^h	UG Independent Research	3 hr	Summer	13	3	Undetermined
CE261	Fundam Env Eng and lab	3 hr	Autumn	13	70	2.7/4
CE261	Fundam Env Eng and Lab	3 hr	Spring	14	60	1.7/4
CE390 ^h	UG Independent Research	3 hr	Spring	14	4	Undetermined
CE390 ^{j,*}	Entrepreneurship	3 hr	Autumn	14	15	Undetermined
CE6601 [*]	Bio Principles in Env Eng Systems	3 hr	Autumn	15	5	in progress

Courses offered at the University of Missouri, St. Louis

Eng2000 ^{*,k}	Fundam Env Eng and lab	3 hr	Spring	14	7	Undetermined
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^{*} Note: Represents a new course preparation.

^a Note: For the University of Cincinnati, The Indian Institute of Science, and the Manipal Academy of Higher Education evaluations are scored with 5 as excellent; 3 as acceptable; and 1 as poor. For the Missouri University of Science and Technology evaluations are scored with 4 as excellent; 2 as acceptable; and 0 as poor.

^b Note: Course offered by graduate students Rob Smith and Kai Zhang using materials prepared by Dan Oerther

^c Note: Course offered by graduate students Mau Yi Wu and Ting Lu using materials prepared by Dan Oerther

^d Note: Course co-taught with Joe Harrell, Facilities Management, UC

^e Note: Course co-taught with Eric Mauer, College of Arts and Sciences, UC

^f Note: Course co-taught with Eric Gruenstein, College of Medicine, UC

^g Note: Course co-taught with Eric Mauer, College of Arts and Sciences, and Raj Metha, College of Business, UC

^h Note: Independent research is a one-on-one mentoring between student and faculty advisor

ⁱ Note: The same course was offered with an 8am start time, and an 11am start time. The evaluations weighted for total student enrollment was 2.6/4.0

^j Note: This course placed students into collaborative teams with students from business and computer science to complete work following the NSF I-Corps model; co-taught with John Lovitt (professional practice), Bonnie Bachman (economics), and Sajal Das (computer science), Missouri S&T

^k Note: Course materials were substantially adapted for different lab facilities, a single meeting per week, and adult students (engineering practitioners)

SHORT COURSE PREPARATION / CONFERENCE ORGANIZATION

- “Molecular Biology in Environmental Engineering Workshop,” National Science Foundation, Alexandria, VA, April 25 – 26, 2002.
- “Understanding Modern Microbial Identification Technologies in Environmental Settings,” National Science Foundation and University of Kenitra, Morocco, April 16 – 25, 2003.
- “Applications of Genomics in Water Quality,” Ohio Environmental Education Fund sponsored workshop, University of Cincinnati, Cincinnati, OH, May 31 – June 2, 2003.
- “FISHing for Bacteria in Activated Sludge,” Water Environment Federation, Preconference Technical Workshop, WEFTEC, Los Angeles, CA, October 11, 2003.
- “FISHing for Bacteria in Activated Sludge,” Water Environment Federation Preconference Technical Workshop, WEFTEC, New Orleans, LA, October 3, 2004.
- “SWOWEA Monthly Business Meeting,” Ohio Water Environment Association Business Meeting and Workshop, Cincinnati, OH, September 15, 2005.
- “FISHing for Bacteria in Activated Sludge,” Water Environment Federation Preconference Technical Workshop, WEFTEC, Washington, DC, October 30, 2005.
- “GK-12 International Activities Supplement for Project STEP: Building STEM Cincinnati,” National Science Foundation, Shirati, Tanzania, December 9, 2007 – January 13, 2008.
- “Partnership for Sustainability,” Annual Meeting of the Ohio Society of Professional Engineers, Cincinnati, OH, May 16-17, 2008.
- “Celebrating Sustainability,” Annual Meeting of the Center for Sustainable Urban Engineering, Cincinnati, OH, November 18, 2008.
- “Assessing the Design Portfolio of Missouri S&T,” site visit by Kate Hanisian and Ramsey Ford, Design Impact, Rolla, MO, October 28-30, 2010.
- “Environmental Summit,” Rolla, MO, December 15, 2010.
- “Short Course in Environmental Biotechnology,” Rolla, MO, June 7-15, 2011.
- “Seventy-fifth Anniversary,” Annual Meeting of the Missouri Society of Professional Engineers, Branson, MO, June 10-13, 2012.
- “Millennium Development Goals Theoretical and Field Work,” Department of Environmental Sciences, ISTAR, Vidya Nagar, Gujarat, India, December 20, 2012 – January 12, 2013.
- “Forward Focus,” Annual meeting of the Missouri Society of Professional Engineers, Branson, MO, June 16-19, 2013.
- “Sharing a Climate-Smart Food Security Risk Insurance Scheme for the Caribbean,” special briefing of the diplomatic corps from CARICOM countries to the United States, U.S. Department of State, Washington, DC, February 12, 2015.
- “Bioeconomy and Climate Change,” special meeting of the Foreign Service Institute, Washington, DC, May 6, 2015.
- “COAST Implementation Meeting for Jamaica,” special bi-lateral briefing between the Government of Jamaica and the Government of the United States, U.S. Embassy-Kingston, Jamaica, July 2, 2015.

- “COAST Technical Meeting,” special multi-lateral meeting between the World Bank, United Nations Food and Agricultural Organization, and the United States, Washington, DC, July 22, 2015.
- “The Importance of Insurance for Successful Fisheries,” bi-lateral side event between the Government of Chile and the Government of the United States, Our Ocean conference, Valparaiso, Chile, October 5, 2015.
- “Supporting the Role of Fish in Food Security and Nutrition: Caribbean Fisheries Climate-Risk Insurance; Our Oceans Conference; and Blue Growth Network,” tri-lateral side event among the Government of the United States, the Government of Chile, and the United Nations Food and Agricultural Organization, Rome, Italy, October 14, 2015.

STUDENT ADVISING

Visiting Scholars

Melanie Head, Ph.D. Candidate in Environmental Engineering, University of Manitoba, Winnipeg, MB, Canada, June 2001.

Keith Sears, Ph.D. Candidate in Environmental Engineering, Purdue University, West Lafayette, IN, April 2002.

Pete Wilkie, B.S. Candidate in Civil Engineering, University of Newcastle upon Tyne, Newcastle, England, June – September 2002.

Sharon Bachman, 11th-12th grade biochemistry/biophysics teacher at Hughes Center/CAMUS, June, 2005 – May, 2006.

Allison Ross, B.A. Candidate in Environmental Studies, University of Chicago, Chicago, IL, June – September, 2006.

Neal Grabowski, B.S. Candidate in Mechanical Engineering, University of Illinois, Urbana-Champaign, IL, June – September, 2006.

High School students

Charles Cain, January, 2003 – September, 2004

Lucas Nerbert, July, 2003 – September, 2004

David Nerbet, July, 2003 – September, 2003

Neal Grabowski, July, 2005 – September, 2005

Zhi Yuan Lu, July, 2007 – September, 2007

Srecharon Gorukanti, May, 2011 – July, 2011

Katherine Lee, May, 2011 – July, 2011

Bachelor

	<u>Employed</u>	<u>Graduation</u>
RoxAnne Butler	Sept., 2001 – June, 2003	June, 2003
Anna Hoessle	October, 2000 – June, 2004	June, 2004
Ian Laseke	Sept. 2003 – June, 2004	June, 2004
Sarah Pumphrey	January, 2003 – June, 2005	June, 2005
David Bailey	June, 2003 – June, 2005	June, 2007

Chris Luedeker	October, 2003 – June, 2006	June, 2006
Anne Ryan	April, 2005 – March, 2006	June, 2006
MaryKate Henrickson	June, 2005 – Sept., 2005	June, 2009
Dan Divelbiss	June, 2006 – Sept., 2006	June, 2006
Neil Schaner	Sept. 2006 – May, 2007	June, 2009
Elizabeth Dixon	Sept. 2007 – June, 2009	June, 2009
Daniel McCurry	Sept. 2007 – June, 2010	June, 2011
Andrew Schriner	May, 2008 – Sept., 2008	June, 2009
David Hackney	May, 2011 – Jan., 2012	May, 2012
Kathy Denby	Aug., 2011 – Jan., 2013	May, 2014
Lee Voth-Gaddert	Jan., 2012 – Dec., 2012	Dec., 2012
Montana Pucket	Jan., 2012 – Aug., 2012	Dec., 2012
Katie Kuehn	Jan., 2012 – May, 2012	May, 2013
Tommy Goodwin	Jan., 2012 – Aug., 2012	May, 2013
Melissa Buechlein	Jan., 2012 – May, 2012	May, 2014
Alex Korf	Jan., 2012 – Aug., 2012	May, 2014
Lauren Briggs	Aug., 2012 – Dec., 2012	Dec., 2012
Andrew Schrank	Aug., 2012 – Dec., 2012	Dec., 2012
Darrell Wallace	Aug., 2012 – Jan., 2013	May, 2014
Aaron Kilgore	Aug., 2012 – Dec., 2012	May, 2014
Elizabeth Brem	Jan., 2013 – Aug., 2013	May, 2014
Tyler Bick	Jan., 2013 – Aug., 2013	May, 2014
Michael Sestak	Jan., 2013 – May, 2013	May, 2015
Michelle Gibson	Jan., 2013 – Aug., 2013	May, 2014
Ashton Tiddy	May, 2013 – Aug., 2013	May, 2014
Katelyn Denby	May, 2013 – May, 2014	May, 2014
Kim Beck	Jan., 2014 – Aug., 2014	May, 2015
Nate Dowd	Jan., 2014 – May, 2014	May, 2014
Derek Schnoebelen	Jan., 2014 – Aug., 2014	May, 2016
Matt Hughes	Aug., 2014 – Dec., 2014	May, 2015
Mary Puelo	Aug., 2014 – Dec., 2014	May, 2015
Cori Hatley	Aug., 2014 – Dec., 2014	May, 2016
James Brizendine	Aug., 2014 – Dec., 2014	May, 2016

Master

	<u>Enrollment</u>	<u>Graduation</u>
Neeraja Iyer	September, 2001	August 2, 2004
Kai Zhang	September, 2002	August 26, 2004
Yanping Chen	September, 2002	May 25, 2005
Mark Simcoe	September, 2003	* withdrawn January, 2004
Crystal High	September, 2003	January 10, 2006
Regina Lamendella	September, 2004	December 21, 2005
Alicia Mansour	September, 2004	* dismissed January, 2007
Ting Lu	September, 2004	November 3, 2006
Ian Laske	September, 2004	December 19, 2006
Anna Hoessle	September, 2005	* withdrawn July, 2006

Mike Parsons	September, 2005	February 7, 2007
Kristin Mack	September, 2005	April 27, 2007
Sarah Pumphrey	September, 2005	July 30, 2008
Ben Humringhouse	September, 2005	May 21, 2010
Fikile Mtshiya	September, 2007	* changed advisors July, 2010
Zhouyang Liu	September, 2007	* changed advisors July, 2010
Karen Kleir Schrantz	September, 2007	April 18, 2012
Daniel Divelbiss	September, 2009	May 6, 2011
Andrew Schriener	September, 2009	March 13, 2015
Lee Voth-Gaeddert	January, 2013	April 2, 2014

Doctoral

	<u>Enrollment</u>	<u>Graduation</u>
Peter Stroot	September, 2000	December 6, 2003
Pascal Saikaly	September, 2000	July 11, 2005
Amy Polaczyk	November, 2001	* withdrawn April, 2003
Mau Yi Wu	September, 2003	July 30, 2010
Robert Smith	September, 2003	May 10, 2010
Kai Zhang	September, 2004	July 3, 2007
Regina Lamendella	September, 2005	November 12, 2009
Ting Lu	September, 2006	June 18, 2010
Shreya Ghosh	September, 2007	* withdrawn September, 2013
Nichole Brinkman	September, 2008	* changed advisors, July, 2010
Maria RamirezBernal	September, 2009	* dismissed June, 2011
Andrew Schriener	September, 2009	* withdrawn September, 2014
Micky Shetty	September, 2011	* dismissed January, 2012
Lee Voth-Gaeddert	September, 2014	May, 2017 (anticipated)

OTHER TEACHING RELATED ACTIVITY

- Electronic Classroom Training by ECSS and UCit, January 1, 2001.
- Utilizing BLACKBOARD Software for Classes by CET&L, March 1, 2001.
- Podcasting by UCit, July 17, 2007.
- How to Develop and Assess Learning Portfolios by CET&L, August 12, 2009.
- BLACKBOARD Basics by EdTech, August 10, 2010.
- Video Communication Center Open House, August 11, 2010.
- eFellows Community of Practice, Spring 2011.
- NAE Frontiers in Engineering Education workshop, November 12 – 16, 2011.
- Workshop on “Writing Good Clicker Questions,” by CERTI, S&T, January 27, 2012.
- Academic Advising, “Integrity and Academic Dishonesty,” by Office of Undergraduate Studies, January 30, 2012.
- ASEE/NAE Virtual Community of Practice, weekly meetings March – May, 2013; August – November, 2013.

COMMITTEE SERVICE

Doctoral Thesis Committees

Department of Civil and Environmental Engineering, University of Cincinnati

	<u>Advisor</u>	<u>Proposal</u>	<u>Final</u>
Ann Gunkel	Bishop	March, 2001	May 9, 2002
Amy Pruden	Suidan	March, 2002	July 18, 2002
Chris Green	Scarpino	June, 2001	August 2, 2002
Peter Stroot	Oerther	March, 2002	December 4, 2003
Jian Wang	Bishop	November, 2002	April 18, 2005
Sylvia Rodriguez	Bishop	October, 2002	April 27, 2005
Pascal Saikaly	Oerther	June, 2003	July 11, 2005
Peng Jin	Bishop	January, 2003	February 13, 2007
Robert Smith	Oerther	August, 2005	May 10, 2010
Qiang Zhang	Suidan	December, 2005	March 27, 2009
Kai Zhang	Oerther	September, 2006	July 3, 2007
Tianze Xu	Wei	---	February 3, 2009
Regina Lamendella	Oerther	December, 2007	November 12, 2009
Mau Yi Wu	Oerther	September, 2007	July 30, 2010
Ting Lu	Oerther	November, 2007	June 18, 2010

Other Departments at the University of Cincinnati

	<u>Advisor</u>	<u>Department</u>	<u>Final</u>
Prosenjit Mal	Beyette	Electrical Engineering	Jan 22, 2004
Sabrina Mueller	Kinkle	Biological Sciences	Jan 23, 2006
Nancy Burton	Reponen	Environmental Health	May 29, 2007

Department of Civil, Architectural, and Environmental Engineering, Missouri University of Science and Technology

	<u>Advisor</u>	<u>Proposal</u>	<u>Final</u>
Lee Voth-Gaeddert	Oerther	---	---

Invited Examiner

	<u>Advisor</u>	<u>University</u>	<u>Final</u>
Melanie Head	Oleszkiewicz	University of Manitoba	Jan, 2004

Master Thesis Committees

Department of Civil and Environmental Engineering, University of Cincinnati

	<u>Advisor</u>	<u>Proposal</u>	<u>Final</u>
Amy Polaczyk	Scarpino	June, 2001	April 23, 2002
Denise Gillam	Bishop	November, 2002	November 6, 2003
Neeraja Iyer	Oerther	January, 2003	August 2, 2004
Kai Zhang	Oerther	November, 2003	August 26, 2004
Yanping Chen	Oerther	March, 2004	May 25, 2005

Melissa Hoffman	Scarpino	March, 2005	December 21, 2005
Regina Lamendalla	Oerther	May, 2005	December 21, 2005
Crystal High	Oerther	September, 2004	January 10, 2006
Craig Davidson	Pat Scarpino	July, 2005	July 28, 2006
Ian Laseke	Oerther	<i>informal</i>	December 19, 2006
Ting Lu	Oerther	August, 2006	November 3, 2006
Sarah Pumphrey	Oerther	October, 2007	July 30, 2008
Mike Parsons	Oerther	<i>informal</i>	February 7, 2007
Ben Humringhouse	Oerther	<i>informal</i>	May 21, 2010
Daniel Divelbiss	Oerther/Boccelli	March, 2010	May 6, 2011
Karen Kleir Schrantz	Oerther/Boccelli	June, 2010	April 18, 2012

Other Departments at the University of Cincinnati

	<u>Advisor</u>	<u>Department</u>	<u>Final</u>
Grant Hollis	Papautsky	Electrical Engineering	March 7, 2003
Gaoshan Jing	Papautsky	Electrical Engineering	Aug 4, 2004
Jill Brannock	Shann	Biological Sciences	Nov 9, 2004
Nichole Brinkman	Kinkle	Biological Sciences	Feb 22, 2007
Kristin Mack	Kinkle	Biological Sciences	April 27, 2007

Department of Civil, Architectural, and Environmental Engineering, Missouri University of Science and Technology

	<u>Advisor</u>	<u>Proposal</u>	<u>Final</u>
Lee Voth-Gaeddert	Oerther	October, 2013	April 2, 2014

Other Departments at the Missouri University of Science and Technology

	<u>Advisor</u>	<u>Department</u>	<u>Final</u>
Kele Thrailkill	Nyogi	Biological Sciences	May 16, 2013

University of Cincinnati Committees

- Fiscal Coordinating Committee, 2008.
- USO Centers of Excellence Committee, 2008.
- Committee for International Affairs, 2008.
- Faculty Senate, 2007, 2008, 2009 Senator-at-large.
- Chair, Budget and Priorities Standing Committee of the Faculty Senate, 2008.
- Representative, NSF Regional Grants Conference, October 11-13, 2000
- Assessor, Cincinnati Scholarship Program, 2001.
- Grant reviewer, Pilot Project Program, Department of Environmental Health, 2001, 2002, 2003, 2005.
- Institutional Biosafety Committee, 2003, 2004 Chair, 2005 Chair, 2006 Chair.
- UC|21 Implementation Committee, “Academic Excellence”, 2004, 2005.
- UC, NKU, and Xavier efforts for Long-term Tsunami relief, 2005.
- UC AAUP Dispute Review Panel in the matter of Office of the Dean of the College of Medicine and Professor John MacLennan, 2005 Chair.

- UC Honors Council, 2007, 2008, 2009.

College of Engineering Committees (Cincinnati)

- Curriculum: 2005, 2006
- *Ad Hoc* Committees:
 - Freshman “Soft landing”: 2003
- Host for:
 - Dr. Bordogna, Ph.D., Deputy Director, National Science Foundation, April 18, 2002.

Department of Civil and Environmental Engineering Committees (Cincinnati)

- Curriculum: 2000, 2001, 2002, 2003, 2004 Chair, 2005 Chair, 2006, 2007.
- Faculty Search: 2002 Solid and Hazardous Waste; 2007 Director Center for Sustainable Urban Engineering.
- Advisor: Civil Engineering Class of 2001 – 2006; Civil Engineering Class of 2007 - 20011.
- Advisory Board Outreach: 2002, 2003, 2004, 2005, 2006, 2007.
- Reappointment, Promotion, and Tenure: 2006, 2007.
- *Ad Hoc* Committees:
 - URC Summer Graduate Student Fellowships Selection, 2001, 2002.
 - Evaluation of TA Policy for CEE Department, 2003, 2004.
 - Evaluation of Joint B.S./M.S. in Environmental Engineering, 2001.
 - Preparation of Posters for Department Homecoming Event, 2001.
 - Preparation of Posters for Baldwin Hall Rededication Event, 2002.
 - ABET2000 Evaluation and Assessment Committee: 2002, 2003, 2004 Co-Chair, 2005 Co-Chair, 2006 Co-Chair.
- Host for:
 - Professor Vernon Snoeyink, Ph.D., NAE, University of Illinois at Urbana-Champaign, Association of Environmental Engineering and Science Professors Distinguished Lecturer, 2001.
 - Glen Daigger, Ph.D, P.E., DEE, NAE, CH2MHill, Kappe Lecturer of the American Academy of Environmental Engineers, September 25, 2001.
 - Professor Bruce Rittmann, Ph.D., NAE, Northwestern University, Association of Environmental Engineering and Science Professors Distinguished Lecturer, June 12, 2003.
 - Gary Logsdon, Ph.D., P.E., DEE, Black and Veatch, Kappe Lecturer of the American Academy of Environmental Engineers, December 3, 2004.

Environmental Engineering and Science Program (Cincinnati)

- Curriculum: 2002, 2003.
- Outreach/Admission: 2004 Chair, 2005 Chair.
- *Ad Hoc* Committees:
 - Evaluation of GA vs. TA Policy, 2001.

- Graduate Student Awards Selection, 2001.
- Host for:
 - Fall picnic 2000; spring picnic 2001; spring picnic 2002.
 - Professor Francis de los Reyes, Ph.D., North Carolina State University, March 15, 2001.
 - Sam Jeyanayagam, Ph.D., P.E., DEE, Malcolm Pirnie, Inc., April 20, 2001.
 - Professor Dan Noguera, Ph.D., University of Wisconsin, Madison, March 29, 2002.

Missouri University of Science and Technology Committees

- Strategic Planning Committee, 2011, 2012, 2013.
- Research Centers Directors, 2010, 2011.
- Parking Committee, 2011, 2012, 2013.
- Sustainability Minor, 2011, 2012.
- Global Studies Minor, 2012, 2013.
- Faculty Senate, 2012, 2013, 2014, representing the Department of Civil, Architectural, and Environmental Engineering.

Department of Civil, Architectural, and Environmental Engineering Committees (Missouri)

- Vision 2020 Strategic Planning Committee: 2010, 2011.
- Promotion and Tenure Committee: 2010, 2011 (chair), 2012 (chair), 2013, 2015.
- Computer Committee: 2012.
- Graduate Committee: 2015.
- Freshman Advisor: 2012, 2013.
- *Ad Hoc* Committees:
 - FE Exam Review Task Force: 2011.
 - Third year P&T review for Leslie Sneed: 2011.
 - Sabbatical Review Task Force: 2011.
 - Open house host: February 20, 2012, April 6, 2012.
 - Workload policy: Spring 2012.
- Host for:
 - Jim Ford, Alumni, Missouri S&T, March 22, 2011.
 - Wayne Laufer, Alumni of Influence, Missouri S&T, April 15, 2011.
 - Professor Isabel Escobar, Assistant Dean for Research, College of Engineering, University of Toledo, September 23, 2011.
 - Professor Nirmal Kumar, Head of Environmental science, ISTAR, month of October, 2011.
 - Professor Sharon Walker, UC Irvine, October 26, 2011.
 - Dr. Jorge Ochoa, Chair, Academy of Mechanical Engineers, Missouri S&T, November 11, 2011.
 - Professor Bruce Rittmann, Regents Professor, Arizona State University and member of the NAE, Stueck Lecture, Missouri S&T, April 20, 2012.

PROFESSIONAL AFFILIATIONS

- Accreditation Board of Engineering and Technology (ABET)
 - Member since 2015
 - Program evaluator (PEV), Environmental Engineering
- American Academy of Environmental Engineers and Scientists (AAEES)
 - Member since 2005
 - Board Certified Environmental Engineer (BCEE, formerly DEE) since 2006
 - Member, Membership Committee, 2009 – 2013
 - Chair, Mentoring Committee, 2013 – present
 - Treasurer, 2013 – 2016
 - Trustee, 2013 – 2016
- American Association for the Advancement of Science (AAAS)
 - Member since 2011
- American Chemical Society (ACS)
 - Member since 2000
- American Public Health Association (APHA)
 - Member since 2011
- American Society of Civil Engineering (ASCE)
 - Member since 2000
 - Member, scientific advisory panel for EvTech evaluation of In-Pipe Technology (IPT), 2001 – 2002.
 - Associate Editor, *Journal of Environmental Engineering, ASCE*, 2006 – 2009
- American Association of Engineering Education (ASEE)
 - Member since 2001
- Association of Environmental Engineering and Science Professors (AEESP)
 - Member since 1996
 - Conference Planning Committee, 2002 – 2011.
 - Education Committee, 2003 – 2009.
 - Awards Committee: 2006 Vice Chair; 2007 Chair
 - Board of Directors: 2007 – 2010; Chief Information Officer, 2009-2010
 - Tau Chi Alpha Supreme Council Representative: 2009 – 2012
- Campus Christian Fellowship, Rolla, MO
 - Faculty mentor, Missouri University of Science and Technology student chapter: 2013, 2015, 2015
- City of Cincinnati, OH
 - Member, Climate Protection Steering Committee, one of 20 appointments by Mayor Mark Mallory, 2008 – 2010
 - Co-Chair, Green Cincinnati Food Task Force, appointed by Mayor Mark Mallory, 2008 – 2010
 - Co-Chair, Food Access Task Force, appointed by Vice Mayor David Crowley in collaboration with the Center for Closing the Health Gap
- City of Rolla, MO
 - Member, Advisory Committee, Ozark Rivers Solid Waste Management District, 2013 – present
- University City, MO

- Member, Green Practices Commission, 2012 – 2014
- Community Partnership, Rolla, MO
 - Community Builders, 2010 – 2014
- Engineers without Borders
 - Faculty mentor, University of Cincinnati student chapter, 2005 – 2009
 - Ad hoc advisor, Missouri University of Science and Technology student chapter, 2010 – present
- Fulbright Program
 - Member, Friends of Fulbright of India, since 2006
 - Member, Fulbright Association, since 2006
- Industrial Design Society of America
 - Faculty mentor, Missouri University of Science and Technology student chapter, 2011 – present
- Missouri Academy of Sciences
 - Member since 2011
- International Water Association
 - Member since 1997
- National Society of Professional Engineers (NSPE)
 - Member since 1996
 - Member, Board of Directors of the Cincinnati Chapter, 2003 – 2009
 - Vice President, Cincinnati Chapter, 2004
 - President, Cincinnati Chapter, 2005, 2007
- Ohio Academy of Sciences
 - Member, 2007-2009
- Order of the Golden Shillelagh, Missouri University of Science and Technology
 - Member, 2010 – present
- Sigma Theta Tau International, The Honor Society of Nursing
 - Lifetime Honorary member since 2011
 - Member, UN and Global Health Presidential Advisory Council, 2011-2013
- Sigma Xi, The Scientific Society
 - Member since 2002
 - Treasurer, Cincinnati Chapter, 2004 – 2008
- Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF)
 - Member since 2000
 - Chair, Sub Task 9000 committee to integrate techniques from molecular biology into Standard Methods for the Examination of Water and Wastewater. 2001 – 2007.
- Water Environment Federation (WEF)
 - Member since 1995
 - Founding author, annual literature review, “Molecular Methods in Biological Systems,” 2001 – 2006
 - Member, WEFTEC Program Committee, Research Symposium, 2002 – 2007
 - Vice Chair, WEFTEC Program Committee, Research Symposium, 2003
 - Chair, WEFTEC Program Committee, Research Symposium, 2004 – 2007
 - Associate Editor, *Water Environment Research*, 2004 – 2008

- Member, *Ad Hoc* Membership Recruitment Subcommittee, 2006
- Chair, Academic Stakeholders Committee, 2007
- Water Environment Research Foundation (WERF)
 - Invited participant, “Workshop on Indicators for Pathogens in Wastewater, Biosolids, and Stormwater,” December 11-12, 2004, San Antonio, TX.
 - Invited participant and associate moderator, “Sustainable Technology for Achieving Low TN and TP Effluents WERF Project # 02-CTS-1,” January 13-14, 2004, Washington, D.C.
 - Project Subcommittee (PSC) for 03-CTS-2S, “Identify, Screen, and Treat Contaminants in Water/Wastewater,” 2003 – 2008.
 - Project Subcommittee (PSC) for 04-CTS-3T, “Phase 2: Understanding Mechanisms and Methods to Mitigate Survival, Reactivation and Regrowth,” 2004 – 2009.

REVIEWER

- American Water Works Association Research Foundation (AwwaRF) Unsolicited Review Panel Committee (URPC) June 9, 2003
- American Society of Civil Engineers - *Journal of Environmental Engineering*
- American Society for Microbiology - *Applied and Environmental Microbiology*
- CICEET Unsolicited Grant Proposals, 2004, 2006.
- Federation of European Microbiology Societies - *FEMS Microbiology Letters*
- International Water Association (formerly IAWQ) - *Water Research*
- U.S. Environmental Protection Agency – STAR Grant Program
- Water Environment Research Foundation (WERF)
 - Project Subcommittee (PSC) for 03-CTS-2S, “Identify, Screen, and Treat Contaminants to Ensure Wastewater Security.”
- National Science Foundation
 - *Ad Hoc* Peer Review for Grants Submitted to the Biology Directorate
 - *Ad Hoc* Peer Review for Grants Submitted to the Bioengineering and Environmental Science Program
 - Unsolicited Review Panel December 10-12, 2002 for the Bioengineering and Environmental Science Program
 - CAREER Review Panel November 16 – 18, 2003 for the Bioengineering and Environmental Science Program
 - SENSORS Review Panel May 2 – 4, 2005 for the Bioengineering and Environmental Science Program

CONFERENCES ORGANIZED/SESSIONS CHAIRED

- Session Organizer, Special Session on Molecular Tools in Environmental Engineering, Research Symposium, WEFTEC, Water Environment Federation, Atlanta, GA, October 13 – 17, 2001.

- Workshop Organizer, NSF-sponsored workshop (BES-0116929) entitled, “Applying Molecular Biology Tools in Environmental Engineering,” Washington, D.C., April 25 – 26, 2002.
- Session Presider, Chemical/Physical Processes, Research Symposium, WEFTEC, Water Environment Federation, Chicago, IL, September 27 – October 2, 2002.
- Session Co-Presider, Recycle and Fate in Biological Nutrient Removal, WEFTEC, Water Environment Federation, Chicago, IL, September 27 – October 2, 2002.
- Session Co-Moderator, Micro-scale Biosensors for Environmental Monitoring, Environmental Chemistry and Analytical Chemistry, ACS Annual Spring Meeting, New Orleans, LA, March 23 – 27, 2003.
- International Workshop Organizer, NSF-sponsored international workshop (MCB-0306927) entitled, “Workshop to Expand the Understanding of Modern Microbial Identification Technologies in Environmental Settings,” Kenitra, Morocco, April 14 – 15, 2003.
- Session Presider, Membrane Bioreactors, Research Symposium, WEFTEC, Water Environment Federation, Los Angeles, CA, October 11 – 15, 2003.
- Session Co-Presider, Novel Treatment Technologies, Research Symposium, WEFTEC, Water Environment Federation, Los Angeles, CA, October 11 – 15, 2003.
- Session Co-Presider, Fate, Transport, and Destruction of Emerging Micropollutants, Research Symposium, WEFTEC, Water Environment Federation, New Orleans, LA, October 2-6, 2004.
- Session Presider, Advances in Anaerobic Treatment, Research Symposium, WEFTEC, Water Environment Federation, Washington, D.C., October 29 – November 3, 2005.
- Session Presider, DCWASA Drinking Water Research, Research Symposium, WEFTEC, Water Environment Federation, Washington, D.C., October 29 – November 3, 2005.
- Session Chair, Bioreactor Processes, Biofilm VI, International Water Association, Amsterdam, The Netherlands, September 25 – 27, 2006.
- Conference Organizer, Sustainable Urban Environments Kickoff Grant Meeting, Cincinnati, OH July 13, 2007.
- Session Presider, Biological Phosphorus Removal, Research Symposium, WEFTEC, Water Environment Federation, San Diego, CA, October 13 – 17, 2007.
- International Workshop Organizer, NSF-sponsored workshop (DGE-0538532) entitled, “NSF Project STEP International Supplement for Teacher Professional Development in Roche, Tanzania,” Shirati and Roche, Tanzania, December 29, 2007 – January 14, 2008.
- Conference Co-Organizer, Ohio Society of Professional Engineers Annual Spring Conference, May 15-16, 2008.
- Conference Organizer, Environmental Summit, Rolla, MO, December 15, 2010.
- Conference Co-Organizer, Mizzou Advantage Conference on “Frontiers in Metagenomics,” Columbia MO May 7-8, 2012.
- Session Chair, Metagenomic Discovery Tools, Mizzou Advantage Conference on “Frontiers in Metagenomics,” Columbia, MO, May 7-8, 2012.

- Conference Co-Organizer, Missouri Society of Professional Engineers Annual Summer Conference, June 10-13, 2012.
- Conference Co-Organizer, Missouri Society of Professional Engineers Annual Summer Conference, June 16-19, 2013.

LAST REVISION DATE

December, 2015