Angela R. Bielefeldt, Ph.D., P.E.

Contact Information

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Research Summary

71 refereed journal articles (37 engineering education research (EER), 34 environmental engineering)
13 book chapters (6 engineering education, 7 environmental engineering)
151 refereed conference papers on engineering education (16 won best paper awards from divisions of the American Society for Engineering Education, 7 went on to win best paper awards from their Professional Interest Council (PIC) and among those 2 won overall conference best paper)
Google Scholar h-index 33, i10-index 87. 3544 citations (as of 1/15/2023).
$1.9M external funding as PI, primarily from the National Science Foundation

Teaching Summary

Created and taught four new courses: graduate-level *Bioremediation*, graduate-level *Solid Waste Management*, required senior-level *Professional Issues in Civil Engineering*, *Introduction to Sustainability* for first-year students in a residential academic program
Senior capstone design course for environmental engineering 1998-2013, 2019; three teams won the national Water Environment Federation student design competition (two additional teams won the regional competition), two teams won AECOM student design competition, five teams placed in the top 3 of the Federal Aviation Administration student design competition
First-year students in: *Introduction to Civil Engineering* 1997-2022, *GEEN 1400 Engineering Projects* 2020-2022, *Introduction to Environmental Engineering* 2006-2010, *GEEN 1500 Introduction to Engineering* 2011-2012
Materials Science for Engineers (GEEN 3024), 2021-2023
Hazardous Waste Management course to seniors/graduate students, including online, 1997-2018
Mentored 13 graduated PhD students in civil engineering (8 EER); 3 EER in-progress
Mentored 45 undergraduate students in research (5 EER)

Leadership & Service Highlights

American Society for Engineering Education (ASEE)
- Rocky Mountain Section Chair and associated officer roles, 2016-2019
- Zone IV Conference Chair, 2018
- Community Engagement Division: Chair 2018-2020, other officer roles 2011-13, 2015-16, 2020-
- Environmental Engineering Division: Chair and associated officer roles, 2006-2013

American Society of Civil Engineers (ASCE)
- Body of Knowledge 3 Task Committee, 2016-2018
- Associate Editor, *Journal of Professional Issues in Engineering Education & Practice*, 2017-19
- Deputy Editor, *Journal of Civil Engineering Education*, 2020-
- Civil Engineering Program Criteria Task Committee, 2020-

Association of Environmental Engineering & Science Professors (AEESP)
- Treasurer and Board Member (elected), 2006-2009
- Biennial Conference Organizing Committee, 2013; Education Committee, 2018-2023

American Academy of Environmental Engineering & Science, Ethics Committee, 2021-2022
International Journal for Service Learning in Engineering, Editorial board 2011-present; Editor 2018-
American Association for the Advancement of Science (AAAS), Committee on Scientific Freedom and Responsibility, 2017–2023
University of Colorado Boulder: Privilege and Tenure Committee (CU system), 2018- ; VCAC 2023- ; First Level Review Committee of College of Engineering & Applied Science, 2017-2020 (Chair 2018-20); Engineering Plus/Integrated Design Eng Program Director, July 2019- ; Environmental Engineering Program Director, 2006-2010; Associate Chair CEAE Dept. 2012-13, 2014-15

Education

Ph.D. University of Washington, Seattle, WA, Civil Engineering, 1996
Dissertation: Biotreatment of Contaminated Gases in a Sparged Suspended-Growth Bioreactor: Mass Transfer and Biodegradation Model. Advisor: H.D. Stensel

M.S. University of Washington, Seattle, WA, Civil Engineering, 1994
Thesis: Cometabolic Degradation of Chlorinated Aliphatics Using a Phenol-Degrading Enrichment. Advisor: H.D. Stensel

B.S. Iowa State University, Ames, IA, Civil Engineering, 1992
Top Civil Engineering Senior

Professional Engineer, State of Colorado, #38043, Dec. 2003 to present

Related Experience

Professor. Department of Civil, Environmental, and Architectural Engineering (CEAE). University of Colorado Boulder. Aug. 2012 to present.
Research interests: engineering education; biodegradation and biotransformation of organic and inorganic pollutants in soil, water and air; sustainable water and wastewater treatment for developing communities. Teach environmental and civil engineering courses.

Director. Engineering Plus (e+) Program, renamed to Integrated Design Engineering. College of Engineering & Applied Science. University of Colorado Boulder. July 2019 to present.
ABET-accredited flexible B.S. degree where students select an engineering emphasis from among 6 options and a concentration. Led 3-6 instructors and supervised 1-2 staff persons. Led strategic initiatives to grow student enrollment and assist students with launching their careers.

Co-Director. Engineering Education and AI-Augmented Learning IRT. College of Engineering & Applied Science. University of Colorado Boulder. July 2020 to present.
Interdisciplinary Research Theme (IRT) initiative to build community and push forward new collaborations targeting the development theories and technologies for student-centered learning in K-16, graduate, and professional engineering and computing education.

ABET Assessment Coordinator. Department of Civil, Environmental, and Architectural Engineering (CEAE). University of Colorado Boulder. January 2008 to August 2018.
Wrote yearly outcomes report, assisted with yearly self-study reports written for Joint Evaluation Committees, evaluated FE results and assessment feedback from senior and alumni surveys, coordinated outcomes and objectives assessment measures, wrote Civil Engineering self-study (2011, 2017), contributed to Environmental and Architectural engineering self-studies (2017).

Faculty Director. Sustainable By Design Residential Academic Program (SBD RAP). University of Colorado Boulder. July 2014 to May 2017.
Organized courses, hired instructors, coordinated first-year engineering projects for the RAP, supervised staff person and graduate teaching assistants/resident advisors, coordinated community building activities for students, created and taught required course for first-year students.

Associate Director. Environmental Engineering (EVEN) Program. College of Engineering & Applied Science. University of Colorado Boulder. Aug. 2014 to Dec. 2016.
Led undergraduate curriculum and ABET assessment and evaluation activities.

Visiting Erskine Fellowship. Department of Civil and Natural Resources Engineering. University of Canterbury. Christchurch, New Zealand. July 2013 to Dec. 2013.

Co-taught Ecological Engineering (groundwater) and Environmental Engineering Design (site remediation). Research on sustainability education.

Associate Chair for Undergraduate Education. Department of Civil, Environmental, and Architectural Engineering (CEAE). University of Colorado Boulder. Jul. 2012 to June 2013, July 2014 to July 2015. *Chair CEAE curriculum committee; curriculum assessment, review, evaluation; coordinated undergraduate advising and recruiting.*

Associate Director. Mortenson Center in Engineering for Developing Communities (EDC). College of Engineering & Applied Science. University of Colorado Boulder. May 2009 to June 2010.
Set requirements for EDC emphasis within the environmental specialty of the graduate degrees in Civil Engineering, taught a required course in the core of this curriculum (under the first version of the program), and led outcomes assessment.

Director. Environmental Engineering (EVEN) Program. College of Engineering & Applied Science. University of Colorado Boulder. Sept. 2006 to June 2010.
Multi-disciplinary B.S. degree with participating faculty from 4 engineering departments. Managed new student recruiting, advised all first-year students, evaluated transfer student credits, assessed curriculum for ABET accreditation, led faculty meetings, nominated students for awards, coordinated activities for EVEN students in the Engineering Honors program, maintained the EVEN website, and supervised the single staff-person for the program. Under my leadership the student enrollment in the program increased from 58 in fall 2006 to 187 in fall 2010. While serving as Director, workload distribution was 40% teaching, 35% service, and 25% research.

J.S. Braun / Braun Intertec Professorship of Science & Technology (sabbatical). University of Minnesota, Dept. of Civil Engineering. Aug. 2005 to Mar. 2006.
Research: anaerobic and molecular methods to study bioremediation. Assisted fledgling Engineers Without Borders (EWB) student chapter.

Associate Professor. Department of Civil, Environmental, and Architectural Engineering (CEAE). University of Colorado Boulder. Aug. 2003 to Aug. 2012.

Assistant Professor. Department of Civil, Environmental, and Architectural Engineering (CEAE). University of Colorado Boulder. Aug. 1996 to Aug. 2003.

Assistant Engineer, Remediation Technologies, Inc., Seattle, WA. Summer 1994.
EPA SITE project investigating TCE and DCE gas treatment in packed-bed bioreactors.

Assistant Engineer, Montgomery Watson, Hazardous Waste Div., Des Moines, IA. Summer 1992.
Worked on Superfund 30% Remedial Design; wrote monitoring and quality assurance plans.

Intern; Sandia National Laboratories, Environmental Restoration, Albuquerque, NM. Summer 1991.
Literature review, lab studies, and design for in-situ bioremediation of an oil spill site.

Environmental Engineering Intern; CH2M Hill, Municipal Serv. Div., Reston, VA. Summer 1990.
Calculation checks, innovative water treatment literature review, bench scale testing.

Environmental Engineering Research Assistant; Iowa State University, Ames, IA. Supervisor A.D. Levine. July 1987 to Mar. 1992. *Laboratory studies and data interpretation*.

Honors & Awards

Best Paper from PIC III and the Engineering Leadership Development Division of the American Society for Engineering Education (ASEE) Annual Conference, Komarek, Bielefeldt, and Knight	2022
ASCE *Journal of Civil Engineering Education* Outstanding Associate Editor	2022
Woman Who Makes A Difference, Center for Inclusion & Social Change, CU Boulder	2021
Best Diversity Paper from the Engineering Ethics Division of American Society for Engineering Education (ASEE) Annual Conference, Rulifson and Bielefeldt	2020
Best Paper from the Engineering Ethics Division of American Society for Engineering Education (ASEE) Annual Conference, Polmear, Bielefeldt, et al.	2020
Fellow of the American Society for Engineering Education	2019
University of Colorado President's Teaching Scholar (lifetime guild appointment)	2019
Distinguished Achievement Award, Dept. Civil, Environmental, & Architectural Engineering University of Colorado - Boulder.	2019
Best Paper Award from PIC IV and the Engineering Ethics Division of the American Society for Engineering Education (ASEE) Annual Conference, Bielefeldt et al.	2019
Best Paper Award from the International Division of the American Society for Engineering Education (ASEE) Annual Conference, Bielefeldt, Canney, & Rulifson	2019
Best Paper Award from the Technological Literacy and Philosophy of Engineering Division of the American Society for Engineering Education (ASEE) Annual Conference, Polmear, Bielefeldt, et al.	2019
Best Poster Award from Rocky Mountain Section of the American Society for Engineering Education (ASEE) Conference, Zhao, Polmear, Bielefeldt, et al.	2019
Advisor for team of 5 EVEN seniors who won the national Water Environment Federation (WEF) Student Design competition in the wastewater category	2019
Advisor for team of 5 EVEN seniors who won the regional Rocky Mountain Water Environment Assoc./AWWA Student Design competition	2019
Best Paper Award from PIC IV and Engineering Ethics Division of the American Society for Engineering Education (ASEE) Annual Conference, with co-authors M. Polmear, D. Knight, C. Swan and N. Canney	2018
Best Paper Award from the Women in Engineering Division of the American Society for Engineering Education (ASEE) Annual Conference, with co-authors M. Forbes, J. Sullivan, and R. Littlejohn	2018
Stephen Ressler Best Paper Award from the Civil Engineering Division of the American Society for Engineering Education (ASEE)	2018
Best Paper Award from PIC I, nominated from Civil Engineering Division of the American Society for Engineering Education (ASEE) Annual Conference	2017
Best Paper Award from First-Year Programs Division of the American Society for Engineering Education (ASEE) Annual Conference, with co-authors Polmear, Knight, Canney, and Swan	2017
Outstanding Reviewer Award, American Society of Civil Engineers (ASCE) *Journal of Professional Issues in Engineering Education and Practice*	2016
Best Paper Finalist (among 3), 2016 ASEE/IEEE Frontiers in Education Conference Benjamin Dasher Best Paper Award, with co-authors M. Forbes and J. Sullivan	2016
Best Paper Award from PIC IV and Engineering Ethics Division of the American Society for Engineering Education (ASEE) Annual Conference, with co-author N. Canney	2016

Best Paper Award from American Society for Engineering Education (ASEE) Annual Conference with co-authors N. Canney and M. Russu. Liberal Education / Engineering & Society Division, PIC III, and Best Overall Paper 2015

Best Paper Award, Environmental Engineering Division of the American Society for Engineering Education (ASEE) Annual Conference 2015

Distinguished Service Award for Outstanding Service as a Co-Chair of the 2013 AEESP Research and Education Conference Organizing Committee, Association of Environmental Engineering and Science Professors (AEESP); with Junko Munakata-Marr 2013

Advisor for team of 5 EVEN seniors who won the regional Rocky Mountain Water Environment Assoc./AWWA Student Design competition; placed 3rd at national competition 2013

Advisor for two teams of EVEN seniors who placed in the Federal Aviation Administration (FAA) University Design Competition; the two CU teams tied for second 2013

Best Paper Award, American Society for Engineering Education (ASEE) Rocky Mountain Section Conference, Bielefeldt 2013

Outstanding Reviewer Award, American Society of Civil Engineers (ASCE) *Journal of Professional Issues in Engineering Education and Practice* 2012

Best Paper Award, K-12 Division of the American Society for Engineering Education (ASEE) Annual Conference, Zarske, Bielefeldt, et al. 2012

Advisor for winning team of 5 EVEN seniors in the AECOM Student Design Competition Competed against 16 teams from the U.S. and Canada 2012

Advisor for team of 4 EVEN seniors and 1 CVEN master's student who won the National Water Environment Federation (WEF) Student Design Competition 2012

Advisor for team of 4 EVEN seniors and 1 CVEN master's student who won the regional Rocky Mountain Water Environment Assoc./AWWA Student Design competition 2012

Advisor for three teams of EVEN seniors who placed in the Federal Aviation Administration (FAA) University Design Competition; CU teams placed second and two teams tied for third 2012

Outstanding Service Award, Boulder Faculty Assembly, University of Colorado 2012

Advisor for AECOM Student Design Competition, winning team of 4 EVEN seniors 2011
Competed against 15 teams from the U.S. and Canada

Max Peters Faculty Service Award, College of Engineering and Applied Science, University of Colorado - Boulder. 2010

Distinguished Service Award, Department of Civil, Environmental, & Architectural Engineering, University of Colorado - Boulder. 2010

Best Paper Award from American Society for Engineering Education (ASEE) Annual Conference with co-authors K. Paterson and C. Swan. Environmental Division, PIC II, and Best Overall Paper 2009

National Water Environment Federation (WEF) Student Design Competition; Orlando, FL, at WEFTEC in October; team of 6 EVEN students from CVEN 4434 mentored by Bielefeldt won the national competition 2009

Rocky Mountain Water Environment Federation (WEF)/American Water Works Assn (AWWA) Student Design Competition; team of 6 EVEN students from CVEN 4434 mentored by Bielefeldt won the regional competition 2009

Distinguished Service Award, Association of Environmental Engineering & Science Professors, for outstanding service as treasurer and board member 2009

Teaching Award. Department of Civil, Environmental, & Architectural Engineering, University of Colorado - Boulder. 2005

Association of Environmental Engineering and Science Professors (AEESP)/McGraw -Hill Award for Outstanding Teaching in Environmental Engineering & Science 2004

Early Career Award. American Society for Engineering Education (ASEE) Based on paper submitted to the Environmental Division for the Annual Conference 2003

Editor's Award for Outstanding Service from the American Society of Civil Engineers Journal of Environmental Engineering, Editor Robert G. Arnold 2002

Nominated for the Sullivan-Carlson Innovation in Teaching Award. Engineering Excellence Fund (EEF) Committee, University of Colorado. Dec. 2002, Dec. 2001

Certificate of Appreciation. Multicultural Engineering Program, LEAD, and Louis Stokes Alliance for Minority Participation. University of Colorado. 2001

Karen Morehouse Best Paper Award for Proceedings of the 1999 Conference on Hazardous Waste Research (with Illangasekare and Grant) 2000

Rudolf Hering Medal from the American Society of Civil Engineers for the best paper in the *Journal of Environmental Engineering,* with co-authors Stensel and Strand 1997

Mercury Seven Foundation Scholarship 1994

National Science Foundation, Graduate Research Fellowship 1992

Papers Published in Peer Reviewed Journals

(underlined authors Bielefeldt's graduate students; * undergraduate student co-author)

1. Komarek, R., A.R. Bielefeldt, D.W. Knight. 2021. Influences of Engineering Students' College Experiences on Leadership Skill Assurance. *International Journal of Engineering Education*. 37 (5), 1454-1465.

2. Komarek, R., A.R. Bielefeldt, D.W. Knight. 2021. Multirater Feedback of Leadership of Underrepresented Groups in a Civil Engineering Capstone Design Course. *Journal of Civil Engineering Education*. 147 (4), https://doi.org/10.1061/(ASCE)EI.2643-9115.0000049.

3. Harper, J., A. Bielefeldt, A. Javernick-Will, K. Dickinson, T. Veasna, T. Kozole, C. Nicoletti. 2021. Household Preferences for Rural Fecal Sludge Management Services in Cambodia: A Discrete Choice Experiment. *Environmental Science & Technology*. https://doi.org/10.1021/acs.est.0c04636.

4. Bielefeldt, A.R., M. Polmear, D. Knight, N. Canney, C. Swan. 2021. Educating engineers to work ethically with global marginalized communities. *Environmental Engineering Science*. 38 (5), 320-330. DOI 10.1089/ees.2020.0269.

5. Polmear, M., A.R. Bielefeldt, D. Knight, C. Swan, N. Canney. 2020. Exploratory Investigation of Personal Influences on Educators' Engagement in Engineering Ethics and Societal Impacts Instruction. *Science and Engineering Ethics*. 26 (6). https://doi.org/10.1007/s11948-020-00261-x

6. Bielefeldt, A.R., J.W. Lewis*, M. Polmear, D. Knight, N. Canney, C. Swan. 2020. Educating Civil Engineering Students about Ethics and Societal Impacts via Co-curricular Activities. *Journal of Civil Engineering Education*. 146 (4) DOI 10.1061/(ASCE)EI.2643-9115.0000021

7. Canney, N. and A.R. Bielefeldt. 2020. Collegiate service engagement correlations with engineering job selection and satisfaction. *International Journal of Service Learning in Engineering*. 15 (1), 1-17. https://doi.org/10.24908/ijsle.v15i1.13538

8. Harper, J., A. Bielefeldt, A. Javernick-Will, T. Veasna, C. Nicoletti. 2020. Context and Intentions: Practical Associations for Fecal Sludge Management in Rural Low-income Cambodia. *Journal of Water, Sanitation and Hygiene for Development*. https://doi.org/10.2166/washdev.2020.103

9. Bielefeldt, A.R., M. Polmear, D. Knight, N. Canney, and C. Swan. 2019. Disciplinary Variations in Ethics and Societal Impact Topics Taught in Courses for Engineering Students. *ASCE Journal of Professional Issues in Engineering Education and Practice.* 145 (4). DOI: 10.1061/(ASCE)EI.1943-5541.0000415

10. Bielefeldt, A.R. 2019. Professional Licensure Among Civil Engineering Faculty and Related Educational Requirements. *ASCE Journal of Professional Issues in Engineering Education and Practice.* 145 (3), https://doi.org/10.1061/(ASCE)EI.1943-5541.0000411.

11. Polmear, M., A.R. Bielefeldt, D. Knight, N. Canney, and C. Swan. 2019. Analysis of Macroethics Teaching Practices and Perceptions in Engineering: A Cultural Comparison. *European Journal of Engineering Education*. 44 (6). https://doi.org/10.1080/03043797.2019.1593323

12. Rulifson, G. and A.R. Bielefeldt. 2019. Learning Social Responsibility: Evolutions of Undergraduate Students' Predicted Engineering Futures. *International Journal of Engineering Education*. 35 (2), 572-584.

13. Bielefeldt, A.R. and N.E. Canney. 2019. Working Engineers' Satisfaction with Helping People and Society through their Jobs. *European Journal of Engineering Education*. 44 (6), 939-953. DOI: 10.1080/03043797.2018.1476468.

14. Rulifson, G. and A.R. Bielefeldt. 2019. Evolution of Students' Varied Conceptualizations About Socially Responsible Engineering: A Four Year Longitudinal Study. *Science and Engineering Ethics*. 25, 939-974. DOI: 10.1007/s11948-018-0042-4.

15. Forbes, M.H., A.R. Bielefeldt, J. Sullivan, R. Littlejohn. 2018. The Low Choice Culture in Undergraduate Engineering and Autonomy-Supportive Exceptions. *Journal of Professional Issues in Engineering Education and Practice*. 144 (1). https://doi.org/10.1061/(ASCE)EI.1943-5541.0000348

16. Bielefeldt, A.R., M. Polmear, N. Canney, C. Swan, D. Knight. 2018. Ethics Education of Undergraduate and Graduate Students in Environmental Engineering and Related Disciplines. *Environmental Engineering Science*. 35 (7): 684-695. DOI: 10.1089/ees.2017.0308

17. Bielefeldt, A.R., M. Polmear, D. Knight, C. Swan, N. Canney. 2018. Intersections between Engineering Ethics and Diversity Issues in Engineering Education. *Journal of Professional Issues in Engineering Education and Practice*. 144 (2). DOI: 10.1061/(ASCE)EI.1943-5541.0000360.

18. Rogers, J.D., I. Ferrer, S. Tummings*, A. Bielefeldt, J.N. Ryan. 2017. Inhibition of Biodegradation of Hydraulic Fracturing Compounds by Glutaraldehyde: Groundwater Column and Microcosm Experiments. *Environmental Science & Technology*. 51 (17), 10251-10261. DOI: 10.1021/acs.est.7b02316

19. Rulifson, G., A.R. Bielefeldt. 2017. Motivations to Leave Engineering: Through a Lens of Social Responsibility. *Engineering Studies*. 9 (3), 222-248. DOI: 10.1080/19378629.2017.1397159

20. Forbes, M.H., A.R. Bielefeldt, J.F. Sullivan, R.L. Littlejohn. 2017. Divergent Requirements for Technical and Non-Technical Coursework in Undergraduate Engineering Programs. *International Journal for Engineering Education*. 33 (1), 162-174.

21. Bielefeldt, A.R., N. Canney, C. Swan, M. Polmear, D. Knight. 2016. A Picture of Microethics and Macroethics Education of Biomedical Engineering Students in the United States. *Ethics in Biology, Engineering and Medicine*. 7 (1), 17-32. DOI: 10.1615/EthicsBiologyEngMed.2017018790

22. Bielefeldt, A.R., N. Canney, C. Swan, D. Knight. 2016. Contributions of Learning through Service to the Ethics Education of Engineering Students. *International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship.* 11 (2), 1-17. DOI:10.24908/IJSLE.V11I2.6392

23. Bielefeldt, A.R., N. Canney. 2016. Relationships between Religion, Spirituality and Socially Responsible Engineering. *Engineering Studies*. 8 (1), 66-90. http://www.tandfonline.com/doi/full/10.1080/19378629.2016.1147567.

24. Canney, N., A.R. Bielefeldt. 2016. Validity and Reliability Evidence of the Engineering Professional Responsibility Assessment Tool. *Journal of Engineering Education*. 105 (3), 452-477. https://doi.org/10.1002/jee.20124

25. Bielefeldt, A.R., N.E. Canney. 2016. Humanitarian Aspirations of Engineering Students: Differences Between Disciplines and Institutions. *Journal of Humanitarian Engineering*. 4 (1), 8-17. DOI: 10.36479/jhe.v4i1.43

26. Bielefeldt, A.R., N. Canney. 2016. Changes in the Social Responsibility Attitudes of Engineering Students Over Time. *Science and Engineering Ethics*. 22(5), 1535-1551. DOI 10.1007/s11948-015-9706-5.

27. Canney, N., A. Bielefeldt. 2015. Gender Differences in the Social Responsibility Attitudes of Engineering Students and How they Change over Time. *Journal of Women and Minorities in Science and Engineering*. 21 (3), 215-237. DOI: 10.1615/JWomenMinorScienEng.2015011109.

28. Canney, N., A. Bielefeldt. 2015. Differences in Engineering Students' Views of Social Responsibility Between Disciplines. *Journal of Professional Issues in Engineering Education and Practice*. 141 (4), 04015004. http://dx.doi.org/10.1061/(ASCE)EI.1943-5541.0000248.

29. Canney, N., A. Bielefeldt. 2015. A Framework for the Development of Social Responsibility in Engineers. *International Journal of Engineering Education*. Special issue on Engineering Education: Beyond Technical Skills. 31 (1B), 414-424.

30. McCormick, M., A.R. Bielefeldt, C. Swan, K. Paterson. 2015. Assessing Students' Motivation to Engage in Sustainable Engineering. *International Journal of Sustainability in Higher Education*. 16 (2), 136-154. DOI 10.1108/IJSHE-06-2013-0054.

31. McCormick, M., K. Lawyer, J. Wiggins, C. Swan, K. Paterson, A.R. Bielefeldt. 2015. Sustainable Engineering Assessment Using Rubric-Based Analysis of Challenge Question Responses. *Journal of Professional Issues in Engineering Education and Practice*. 141(2), 10pp. DOI: 10.1061/(ASCE)EI.1943-5541.0000211.

32. Bielefeldt, A.R., N. Canney. 2014. Impacts of Service-Learning on the Professional Social Responsibility Attitudes of Engineering Students. *International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship*, 9 (2), 47-63. DOI:10.24908/IJSLE.V9I2.5449

33. Tucker, B.G., D.O. Kazmer, A.R. Bielefeldt, K. Paterson, O. Pierrakos, A. Soisson, C. Swan. 2014. The Reflective Learner: Perspectives of Engineering Faculty Engaged in Learning Through Service.

International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship. 9 (2), 29-46. DOI: 10.24908/ijsle.v9i2.5448

34. Bielefeldt, A.R. 2014. Global Interests Among First-Year Civil and Environmental Engineering Students. *Journal of Professional Issues in Engineering Education and Practice.* 140 (2), 10 pp. DOI: 10.1061/(ASCE)EI.1943-5541.0000191.

35. Bielefeldt, A.R., C. Vos*. 2014. Stability of Biologically Reduced Chromium in Soil. *Journal of Environmental Chemical Engineering.* 2 (1), 550-556. DOI: 10.1016/j.jece.2013.10.012.

36. Paterson, Kurtis G., A.R. Bielefeldt, C.W. Swan, G. Rulifson, D. Kazmer, O. Pierrakos. 2013. Designing Value into Engineering Learning Through Service Activities Using a Blueprint Model. *International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship*. 8 (Fall Special Issue), 64-83. DOI: https://doi.org/10.24908/ijsle.v0i0.5132

37. Tucker, B.G., D.O. Kazmer, A.R. Bielefeldt, K. Paterson, O. Pierrakos, A. Soisson, C. Swan. 2013. Principles of Sustaining Partnerships between Higher Education and their Larger Communities: Perspectives from Engineering Faculty Engaged in Learning through Service. *International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship*. 8 (Fall Special Issue), 48-63. DOI: https://doi.org/10.24908/ijsle.v0i0.5131.

38. Bielefeldt, A.R. 2013. Pedagogies to Achieve Sustainability Learning Outcomes in Civil and Environmental Engineering Students. *Sustainability.* Special issue: Pedagogy for Education for Sustainability (EfS) in Higher Education (HE). 5 (10), 4479-4501. doi:10.3390/su5104479.

39. Bielefeldt, A.R., M. W. Stewart, E. Mansfield, R.S. Summers, J.N. Ryan. 2013. Effects of chlorine and other water quality parameters on the release of silver nanoparticles from a ceramic surface. *Water Research*. 47, 4032-4039. doi: 10.1016/j.watres.2013.01.058.

40. Bielefeldt, A.R., R.S. Summers, and T. Relph. 2012. TEC Project Report: National Inventory of Regional Collaboration Among Water and Wastewater Utilities. *Journal American Water Works Association*. 104 (7), 67-78. doi: 10.5942/jawwa.2012.104.0110.

41. Song, M. and A. Bielefeldt. 2012. Toxicity and inhibition of bacterial growth by series of alkylphenol polyethoxylate nonionic surfactants. *Journal of Hazardous Materials*. 219, 127-132. doi: 10.1016/j.jhazmat.2012.03.063.

42. Bielefeldt, A.R., M.M. Dewoolkar, K.M. Caves, B.W. Berdanier, and K.G. Paterson. 2011. Diverse Models for Incorporating Service Projects into Engineering Capstone Design Courses. *International Journal of Engineering Education*, 27(6) 1206-1220.

43. Bielefeldt, A.R. 2011. Incorporating a Sustainability Module into First-Year Courses for Civil and Environmental Engineering Students. *ASCE Journal of Professional Issues in Engineering Education and Practice.* 137 (2), 78-85. doi: 10.1061/(ASCE)EI.1943-5541.0000050

44. Bielefeldt, A.R., Ma. G.D. Gutierrez-Padilla, S. Ovtchinnikov, J. Silverstein, and M. Hernandez. 2010. Bacterial kinetics of sulfur oxidizing bacteria and their biodeterioration rates of concrete sewer pipe samples. *ASCE Journal of Environmental Engineering*. 136 (7): 731-738.

45. Bielefeldt, A.R., K.G. Paterson, and C.W. Swan. 2010. Measuring the Value Added from Service Learning in Project-Based Engineering Education. *The International Journal of Engineering Education*. 26 (3): 535-546.

46. Bielefeldt, A.R., K. Kowalski, A. Kohler, C. Schilling*, S. Schreier*, and R. Scott Summers. 2010. Removal of Virus to Protozoan Sized Particles in Point-of-Use Ceramic Water Filters. *Water Research*. 44 (5): 1482-1488. doi:10.1016/j.watres.2009.10.043

47. Gutierrez-Padilla, G., A.R. Bielefeldt, S. Ovtchinnikov, M. Hernandez, and J. Silverstein. 2010. Biogenic sulfuric acid attack on different types of commercially produced concrete sewer pipes. *Cement and Concrete Research.* 40 (2): 293-301. doi:10.1016/j.cemconres.2009.10.002

48. Bielefeldt, A.R., K. Kowalski, and R.S. Summers. 2009. Bacterial Treatment Effectiveness of Point-of-Use Ceramic Water Filters. *Water Research*. 43 (14): 3559-3565. doi:10.1016/j.watres.2009.04.047

49. Gutierrez-Padilla, Ma. G., A. Bielefeldt, S. Ovtchinnikov, J. Pellegrino, and J. Silverstein. 2009. Simple scanner-based image analysis for corrosion testing: concrete application. *Journal of Materials Processing Technology*. 209 (1): 51-57. doi: 10.1016/j.jmatprotec.2008.01.043

50. Cort, T., SK Park, C. Wozniak*, and A.R. Bielefeldt. 2006. Biotreatment of Surfactant Flush Wastewater from Wood Treatment Soil. *ASCE Journal of Environmental Engineering*. 132(1): 112-119. doi: 10.1061/(ASCE)0733-9372(2006)132:1(112)

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3. Bielefeldt, A.R. 2018. Chapter 3 - Faculty and Student Perspectives on Community Engagement in Engineering Education. *Community Engagement: Principles, Strategies, and Practices*. R. Kronick, ed. Nova Science Publishers, Inc. ISBN: 978-1-53613-023-2

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(underlined authors Bielefeldt's graduate students; * undergraduate student co-author)

1. Bielefeldt, A.R. 2022. Work in Progress: Personalizing engineering ethics through the individual stories of engineers and people impacted. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*.

2. Bielefeldt, A.R. 2022. Faculty responsibility for student safety, health, and welfare? *American Society for Engineering Education (ASEE) Annual Conference & Exposition*.

3. Beardmore, D., R. Sandekian, A.R. Bielefeldt. 2022. Supporting STEM graduate students with dis/abilities: Opportunities for Universal Design for Learning. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 26 pp. https://peer.asee.org/41796

4. Polmear, M., A.R. Bielefeldt. 2022. Compliance or catalyst: Faculty perspectives on the role of accreditation in engineering ethics education. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*.

5. Komarek, R., A.R. Bielefeldt, D. Knight. 2022. Self-assessment of leadership behaviors over time among students in a mechanical engineering capstone design course. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*.

6. Bielefeldt, A.R., S. Schill, H. Passov*. 2022. Work in Progress: Intersections between mentoring attributes and outcomes among Learning Assistants. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*.

7. Tisdale, J., A.R. Bielefeldt, L. MacDonald, C. Salvinelli. 2022. Sustainability inclusion efforts in three unique first-year engineering courses. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*.

8. Tisdale, J., A.R. Bielefeldt, K. Ramos, R. Komarek. 2022. Range of practices of sustainability incorporation into first-year general engineering design course. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*.

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11. Schill, S., A.R. Bielefeldt. 2021. Mentoring correlates to characteristics of university K-12 outreach programs: Survey findings (Fundamental). *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 24 pp. https://peer.asee.org/37500

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14. Bielefeldt, A.R., J.W. Lewis, M. Polmear, D. Knight, C. Swan. 2021. Engineering alumni rate the impact of co-curricular activities on their ethical development. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 18 pp. https://peer.asee.org/37050

15. Polmear, M., A.R. Bielefeldt, C. Swan, D. Knight. 2021. Undergraduate engineering students' exposure to, and valuation of, ethics through the lens of socialization. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 13 pp. https://peer.asee.org/37949

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17. Bielefeldt, A.R. 2021. Intersectional complexities of race/ethnicity and gender in engineering students' professional social responsibility attitudes. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 19 pp. https://peer.asee.org/37375

18. Bielefeldt, A.R., L. Nolen. 2021. Civil engineering Master's programs: Requirements and outcomes. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 23 pp. DOI 10.18260/1-2—36795 https://peer.asee.org/36795

19. Bielefeldt, A.R., J. Silverstein. 2021. Environmental justice and equity issues: In our backyards and beyond. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 18 pp. https://peer.asee.org/37094

20. Lewis, J.W., A.R. Bielefeldt. How are engineering ethics integrated into high school STEM education in Colorado? *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 19 pp. https://peer.asee.org/37249

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22. Bielefeldt, A. 2021. Faculty integration of social justice issues into courses and co-curricular activities for engineering students. Collaborative Network for Engineering & Computer Diversity (CoNECD) Virtual Conference. January. 20 pp. https://peer.asee.org/36090

23. Bielefeldt, A., J. Tsai, B. Myers, D. Godrick, J. Sullivan. 2021. Minority status and belonging: Engineering math as a vehicle to build community. Collaborative Network for Engineering & Computer Diversity (CoNECD) Conference, Virtual, Jan. 24-28. 18 pp. https://peer.asee.org/36109

24. Bielefeldt, A. 2020. Listening to community voices as part of ethical civil engineering: experiences in civil engineering courses. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 17 pp. DOI 10.18260/1-2—34930. https://peer.asee.org/34930

25. Bielefeldt, A. 2020. Unconscious bias in peer ratings of international students' contributions to first-year design projects? *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 13 pp. DOI 10.18260/1-2—35407. https://peer.asee.org/35407

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27. Polmear, M., A.R. Bielefeldt, N.E. Canney, C. Swan, D. Knight. 2020. Student Perceptions of an Ethics Intervention: Exploration Across Three Course Types. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 17 pp. DOI 10.18260/1-2—35229. https://peer.asee.org/35229. Best Paper of the Engineering Ethics Division.

28. Bielefeldt, A., G. Rulifson. 2020. Undergraduate student benefits from involvement in K-12 outreach. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 15 pp. DOI 10.18260/1-2—35415. https://strategy.asee.org/35415

29. Bielefeldt, A., M. Polmear, D. Knight, C. Swan, N. Canney. 2020. Variations in reflections as a method for teaching and assessment of engineering ethics. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 16 pp. DOI 10.18260/1-2—35485. https://peer.asee.org/35485

30. Schill, S., A.R. Bielefeldt. 2020. WIP: What does it mean to mentor? Conceptions of mentoring in K12 outreach programs. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 9 pp. DOI 10.18260/1-2—35703. https://peer.asee.org/35703

31. Bielefeldt, A., M. Polmear, D. Knight, C. Swan, N. Canney. 2019. Sustainable Engineering Ethics: Teaching Sustainability as a Macroethical Issue. 2019 IEEE International Symposium on Technology in Society (ISTAS) Proceedings. Miriam Cunningham and Paul Cunningham, Eds. 6 pp. DOI: 10.1109/ISTAS48451.2019.8937862

32. Polmear, M., A. Bielefeldt, D. Knight, C. Swan, N. Canney. 2019. Exploration of the Ethics and Societal Impacts Teaching Practices of Anglo and Western European Educators. *8th Research in Engineering Education Symposium*. Cape Town, South Africa. July 10-12. 10 pp.

33. Bielefeldt, A.R. 2019. Human Rights as a Lens for Engineering Ethics? *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 13 pp. DOI 10.18260/1-2—32905. https://peer.asee.org/32905

34. Bielefeldt, A.R. 2019. Education for Sustainable Civil Engineering: A Case Study of Affective Outcomes among Students. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 17 pp. DOI 10.18260/1-2—32687. https://peer.asee.org/32687

35. Bielefeldt, A.R. and A. Morse. 2019. Teaching and Assessment of Innovation and Creativity in Civil Engineering: Why? How? Now! *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 16 pp. DOI 10.18260/1-2—33342. https://peer.asee.org/33342

36. Bielefeldt, A.R., N.E. Canney, and G. Rulifson. 2019. Military-Bound and Veteran Student Views on Engineering Social Responsibility. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 19 pp. DOI 10.18260/1-2—33109. https://peer.asee.org/33109

37. Bielefeldt, A.R., G. Rulifson, and N.E. Canney. 2019. Social Responsibility Related to Global Experiences and Interests of U.S. Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 20 pp. DOI 10.18260/1-2—33274. https://peer.asee.org/33274. Best paper award from International Division.

38. Polmear, M., A. Bielefeldt, D. Knight, N. Canney, C. Swan. 2019. Hidden Curriculum Perspective on the Importance of Ethics and Societal Impacts in Engineering Education. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 20 pp. DOI 10.18260/1-2—32887. https://peer.asee.org/32887. Best paper award from the Technological Literacy and Philosophy of Engineering Division.

39. Bielefeldt, A.R., B.E. Barry, D.B. Hains, L. Nolen, K.J. Fridley. 2019. Constituent Input in the Process of Developing the Third Edition of the Civil Engineering Body of Knowledge (CEBOK3). *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 22 pp. DOI 10.18260/1-2—32540. https://peer.asee.org/32540

40. Bielefeldt, A.R., D. Zhao*, A. Kulich*, M. Polmear, N.E. Canney, C. Swan, D. Knight. 2019. Student Views on their Role in Society as an Engineer and Relevant Ethical Issues. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 17 pp. DOI 10.18260/1-2—33304. https://peer.asee.org/33304. Best paper Ethics Division and PIC IV.

41. Bielefeldt, A.R., M. Polmear, D. Knight, N. Canney, C. Swan. 2019. Institutional Variations in Ethics and Societal Impacts Education: Practices and Sufficiency Perceptions Among Engineering Educators. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 17 pp. DOI 10.18260/1-2—32972. https://peer.asee.org/32972

42. Canney, N.E., A.R. Bielefeldt, M. Polmear, C. Swan, D. Knight. 2019. Development of an ethics survey based on the four-domain development diagram. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 13 pp. DOI 10.18260/1-2—32652. https://peer.asee.org/32652

43. Fridley, K.J., K.G. Sutterer, E. Back, D. Williamson, A.R. Bielefeldt. 2019. Curricular Changes Needed to Conform to the CEBOK3 – Three Case Studies. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 23 pp. DOI 10.18260/1-2—32575. https://peer.asee.org/32575

44. Myers, B., A. Bielefeldt, J. Sullivan. 2019. Quantifying the Pool of Underrepresented Minority Students for Engineering Studies. *CoNECD – The Collaborative Network for Engineering and Computing Diversity Conference Proceedings*, Crystal City, April 14-22. 31 pp.

45. Myers, B., A. Bielefeldt, J. Sullivan. 2019. Critical GPA and Standardized Test score Admission Thresholds. *CoNECD – The Collaborative Network for Engineering and Computing Diversity Conference Proceedings*, Crystal City, April 14-22. 19 pp.

46. Bielefeldt, A.R. 2018. Engineering Student Interest in Future Work Abroad. ASEE/IEEE Frontiers in Education (FIE) Conference. San Jose CA, Oct. 4-6. 5 pp. DOI: 10.1109/FIE.2018.8659036

47. Bielefeldt, A.R., M. Polmear, D. Knight, C. Swan, N. Canney. 2018. Education of Electrical Engineering Students about Ethics and Societal Impacts in Courses and Co-curricular Activities. ASEE/IEEE Frontiers in Education (FIE) Conference. San Jose CA, Oct. 4-6. 9 pp. DOI: 10.1109/FIE.2018.8658888

48. Knight, D., M. Polmear, A. Bielefeldt, N. Canney, C. Swan. 2018. Exploring the Range of Methods used to Assess Engineering Students' Education on Ethical and Societal Impact Issues. ASEE/IEEE Frontiers in Education (FIE) Conference. San Jose CA, Oct. 4-6. 8 pp. DOI: 10.1109/FIE.2018.8658582

49. Rulifson, G. and A.R. Bielefeldt. 2018. Influence of Internships on Engineering Students' Attitudes about Socially Responsible Engineering. ASEE/IEEE Frontiers in Education (FIE) Conference. San Jose CA, Oct. 4-6. 7 pp. DOI:10.1109/FIE.2018.8658647

50. Forbes, M.H., A.R. Bielefeldt, J.F. Sullivan, R. Littlejohn. 2018. Probing Correlations Between Undergraduate Engineering Programs' Customizability and Gender Diversity. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 7 pp. DOI 10.18260/1-2—30892. https://peer.asee.org/30892. Best Paper Women in Engineering Division.

51. Polmear, M., A.R. Bielefeldt, D. Knight, N. Canney, C. Swan. 2018. Faculty Perceptions of Challenges to Educating Engineering and Computing Students About Ethics and Societal Impacts. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 18 pp. DOI 10.18260/1-2—30510. https://peer.asee.org/30510. Best Paper Engineering Ethics Division, Best Paper PIC IV (among 534 papers).

52. Bielefeldt, A.R. and G. Rulifson. 2018. Environmental Considerations in Engineering: Students' Goals and Journeys. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 15 pp. DOI 10.18260/1-2—30434. https://peer.asee.org/30434

53. Bielefeldt, A.R., M. Polmear, D. Knight, N. Canney, C. Swan. 2018. Ethics and Societal Impacts Education of Chemical Engineering Undergraduate and Graduate Students: Results of a National Survey. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 15 pp. DOI 10.18260/1-2--30442. https://peer.asee.org/30442

54. Bielefeldt, A.R., M. Polmear, D. Knight, N. Canney, C. Swan. 2018. Effective Ethics Education: Examining Differing Faculty Perspectives. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 20 pp. DOI 10.18260/1-2--30355. https://peer.asee.org/30355

55. Bielefeldt, A.R. 2018. Perceived Importance of Leadership in their Future Careers Relative to Other Foundational, Technical and Professional Skills among Senior Civil Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 16 pp. DOI 10.18260/1-2—30869. https://peer.asee.org/30869

56. Komarek, R., A.R. Bielefeldt, D. Knight. 2018. Evolution of Leadership Behaviors During Two-Semester Capstone Design Course in Mechanical Engineering. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 12 pp. DOI 10.18260/1-2--30460. https://peer.asee.org/30460

57. Bielefeldt, A.R. 2018. What Do First-Year and Senior Civil Engineering Students Think About Raising the Bar on the Education Requirements for Professional Licensure? *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 20 pp. DOI 10.18260/1-2--31233. https://peer.asee.org/31233

58. Bielefeldt, A.R. 2018. Perceptions of the Civil Engineering Body of Knowledge Outcomes by Senior Students: Effect of Activities, Internships, and Career Goals. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 20 pp. DOI 10.18260/1-2--30871. https://peer.asee.org/30871

59. Polmear, M., A.R. Bielefeldt, D. Knight, N. Canney, C. Swan. 2018. Faculty Perceptions of the Most Effective Settings and Approaches for Educating Engineering and Computing Students About Ethics and Societal Impacts. *American Society for Engineering Education (ASEE) Annual Conference & Exposition*. 19 pp. DOI 10.18260/1-2--30511. https://peer.asee.org/30511

60. Bielefeldt, A.R., M. Polmear, D. Knight, C. Swan, N. Canney. 2017. An Overview of the Microethics and Macroethics Education of Computing Students in the United States. *ASEE/IEEE Frontiers in Education (FIE) Conference*. Oct. 18-21. Indianapolis, IN. DOI: 10.1109/FIE.2017.8190445

61. Bielefeldt, A.R., L.D. Montoya, G. Rulifson. 2017. Methods Matter: Contrasting Undergraduate Research Experience Outcomes based on Surveys and Interview Methods. *ASEE/IEEE Frontiers in Education (FIE) Conference*. Oct. 18-21. Indianapolis, IN. DOI: 10.1109/FIE.2017.8190647

62. Bielefeldt, A.R., M. Polmear, D. Knight, C. Swan, N. Canney. 2017. Institutional Differences in the Education of Engineering and Computing Students about Ethics and Societal Impacts. *Christian Engineering Conference*. June 28-30, Cedarville, OH. 19 pp. p. 53-71.

63. Polmear, M., D. Knight, A. Bielefeldt, C. Swan, N. Canney. 2017. Analysis of Macroethics Teaching Practices and Perceptions in Engineering: Results of an International Survey. *REES 2017 – Research in Engineering Education Symposium*. July 6-8, Bogota Columbia. 8 pp.

64. Bielefeldt, A.R. 2017. Disengaging or Disappearing? Losing the most Socially Motivated Students from Engineering? *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. 17 pp. https://peer.asee.org/28186

65. Bielefeldt, A.R. 2017. Challenges of a Professional Issues Course in Civil Engineering: Comparison Across Two Years. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. 27 pp. Nominated as best paper from Civil Engineering division (among 45 papers) and selected by PIC I (among 326 papers). https://peer.asee.org/28024

66. Bielefeldt, A.R., M. Polmear, D. Knight, C. Swan, N. Canney. 2017. Incorporation of Ethics and Societal Impact Issues into Senior Capstone Design Courses: Results of a National Survey. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. 19 pp. https://peer.asee.org/28516

67. Bielefeldt, A.R., M. Polmear, D. Knight, C. Swan, N. Canney. 2017. Incorporation of Ethics and Societal Impact Issues into First Year Engineering Courses: Results of a National Survey. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. 15 pp. Selected as Best Paper of First-Year Programs Division (among 59 papers). https://peer.asee.org/28515

68. Canney, N., E. Simon*, A.R. Bielefeldt, M. Polmear, D. Knight, C. Swan. 2017. Challenges and Opportunities: Faculty Views on the state of Macroethical Education in Engineering. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. 12 pp. https://peer.asee.org/28022

69. Komarek, Rebecca, A. Bielefeldt, D. Knight. 2017. Exploring the use of the Competing Values Framework in Engineering Education. American Society for Engineering Education (ASEE) Annual Conference and Exposition Proceedings. June 25-28. Columbus, OH. 18 pp. https://peer.asee.org/28343

70. Rulifson, G. and A. Bielefeldt. 2017. Fourth Year Engineering Students' Descriptions of the Importance of Improving Society Through their Engineering Careers. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. https://peer.asee.org/28384

71. Forbes, M., A. Bielefeldt, J. Sullivan. 2017. Exploring the Appeal of Customizable Computing Programs to Undergraduate Women. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. 8 pp. https://peer.asee.org/28334

72. Forbes, M., A. Bielefeldt, J. Sullivan. 2017. Exploring Impacts of Flexible, Balanced Engineering Program Curricula. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 25-28. Columbus, OH. 15 pp. https://peer.asee.org/28330

73. Forbes, M., A. Bielefeldt, J. Sullivan. 2016. Curricular Choice and Technical--Non-Technical Balance in Computer Science and Engineering Degree Programs. *Frontiers in Education (FIE) Conference*. Oct. 12-15. Erie, PA. 8 pp. DOI: 10.1109/FIE.2016.7757500

74. Knight, D., A. Bielefeldt, N. Canney, C. Swan. 2016. Macroethics Instruction in Co-curricular Settings: The Development and Results of a National Survey. *Frontiers in Education (FIE) Conference*. Oct. 12-15. Erie, PA. 4 pp. DOI: 10.1109/FIE.2016.7757437

75. Bielefeldt, A.R. 2016. First-Year Students' Conceptions of Sustainability as Revealed Through Concept Maps. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.26912. 18 pp.

76. Bielefeldt, A.R., S.A. Jones, J. Mueller Price, K. Schulte Grahame, A, Gillen*. 2016. Impacts of Sustainability Education on the Attitudes of Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.25552. 18 pp.

77. Bielefeldt, A.R., N.E. Canney. 2016. Perspectives of Engineers on Ethical Dilemmas in the Workplace. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.25892. 18 pp. Best Paper Ethics Division and PIC IV.

78. Bielefeldt, A.R. 2016. Infusing Macroethical Ideas into a Senior Engineering Course. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI:10.18260/p.25693. 15 pp.

79. Forbes, M.H., A.R. Bielefeldt, J.F. Sullivan. 2016. Implicit bias? Disparity in Opportunities to Select Technical versus Non-Technical Courses in Undergraduate Engineering Programs. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.25598. 22 pp.

80. Canney, N.E., A.R. Bielefeldt, G. Rulifson. 2016. Exploring Interviews as Validity Evidence for the Engineering Professional Responsibility Assessment. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.26851. 15 pp.

81. Bielefeldt, A.R., G. Rulifson. 2016. Attitudes that Students Believe Best Characterize Engineers. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.26345. 23 pp.

82. Bielefeldt, A.R., N.E. Canney, C. Swan, D. Knight. 2016. Efficacy of Macroethics Education in Engineering. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.26919. 21 pp.

83. Bielefeldt, A.R., M.H. Forbes, J.F. Sullivan. 2016. Curricular Choice and Technical – Non-Technical Balance in Environmental Engineering Degree Programs. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 26-29. New Orleans, LA. DOI: 10.18260/p.26622. 21 pp.

84. Canney, N., A.R. Bielefeldt, M. Russu*. 2015. How Engineering Students Define Social Responsibility. *Frontiers in Education (FIE) Conference*. Oct. 21-24, El Paso, TX. DOI: 10.1109/FIE.2015.7344215

85. Bielefeldt, A.R. 2015. Characteristics of Engineering Faculty Engaged in the Scholarship of Teaching and Learning. *Frontiers in Education (FIE) Conference*. Oct. 21-24, El Paso, TX. 8 pp. DOI: 10.1109/FIE.2015.7344212

86. Bielefeldt, A.R. 2015. Sustainable, Global, Interdisciplinary and Concerned for Others? Trends in Environmental Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #11278. DOI: 10.18260/p.24786. 19 pp. https://peer.asee.org/24786 Environmental Engineering Division Best Paper Award.

87. Bielefeldt, A.R., C. Swan, K. Paterson, D.O. Kazmer, O. Pierrakos. 2015. Learning Through Service Engineering Faculty: Characteristics and Changes over Time. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #12480. DOI: 10.18260/p.24415. 18 pp. https://peer.asee.org/24415

88. Rulifson, G., A.R. Bielefeldt. 2015. Engineering Students' Varied and Changing Views of Social Responsibility. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #13591. DOI: 10.18260/p.23981. 16 pp. https://peer.asee.org/23981

89. Rulifson, G., N.E. Canney, A.R. Bielefeldt. 2015. Service-Motivated Students' Transitions to Industry. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #13612. DOI: 10.18260/p.24705. 10 pp. https://peer.asee.org/24705

90. Forbes, M.H., A.R. Bielefeldt, J.F. Sullivan. 2015. The Choice Opportunity Disparity: Exploring Curricular Choice Opportunities for Engineering vs. Non-Engineering Majors. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #11782. DOI: 10.18260/p.24850. 15 pp. https://peer.asee.org/24850

91. Komarek, R., A. Bielefeldt. 2015. Impact of Teaching Style on Student Learning and Satisfaction in Statics. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #13618. DOI: 10.18260/p.24227. 14 pp. https://peer.asee.org/24227

92. Canney, N.E., A. Bielefeldt. 2015. Volunteerism in Engineering Students and Its Relation to Social Responsibility. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #12231. DOI: 10.18260/p.25046. 12 pp. https://peer.asee.org/25046

93. Canney, N.E., A. Bielefeldt, M. Russu*. 2015. Which Courses Influence Engineering Students' Views of Social Responsibility. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Paper ID #12225. DOI: 10.18260/p.25071. 15 pp. https://peer.asee.org/25071 Liberal Education / Engineering & Society Division Best Paper Award. PIC III Best Paper Award. Best Paper Award Overall (among 1786 papers).

94. Muscat, Robert J., A.R. Bielefeldt, D.M. Riley, R.A. Bates. 2015. Peace, Conflict and Sustainability: Addressing Global and Ethical Issues in Engineering Education. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-17. Seattle, WA. Panel M720. Paper ID #13321. 9 pp. DOI 10.18260/p.24553 https://peer.asee.org/24553

95. Bielefeldt, A.R. 2014. Introducing First Year Engineering Students to Infrastructure Sustainability Rating Systems. *ASCE International Conference on Sustainable Infrastructure: Creating Infrastructure for a Sustainable World*. Nov. 4-6. Long Beach, CA. pp. 972-984.

96. Bielefeldt, A.R. 2014. Does Engineering Attract or Repel Female Students Who Passionately Want to Help People? *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-18. Indianapolis, IN. Paper ID #9573. 14 pp. DOI 10.18260/1-2--20333 https://peer.asee.org/20333

97. Bielefeldt, A.R., N.E. Canney. 2014. Social Responsibility Attitudes of First Year Engineering Students and the Impact of Courses. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-18. Indianapolis, IN. Paper ID #9569. 16 pp. DOI 10.18260/1-2--23022 https://peer.asee.org/23022

98. Rulifson, G.A., A.R. Bielefeldt, W. Thomas*. 2014. Understanding of Social Responsibility by First Year Engineering Students: Ethical Foundations and Courses. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-18. Indianapolis, IN. Paper ID #9425. 27 pp. DOI 10.18260/1-2--23224 https://peer.asee.org/23224

99. Tucker, B.G., D.O. Kazmer, C. Swan, A.R. Bielefeldt, K. Paterson, O. Pierrakos, G.A. Rulifson, L. Barrington. 2014. Research Institutions' Teaching Imperative: Rising to the Commitment of Service-Learning in Engineering Education. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 15-18. Indianapolis, IN. Paper ID #9136. 13 pp. DOI 10.18260/1-2--22976 https://peer.asee.org/22976

100. Canney, N., A. Bielefeldt. 2013. Examining the Correlation between Religion and Social Responsibility in Engineering Students. *43rd Annual Frontiers in Education (FIE) Conference*. Oct. 23-26. Oklahoma City, OK. DOI: 10.1109/FIE.2013.6685151

101. Bielefeldt, A. 2013. Teaching a Hazardous Waste Management Course using an Inverted Classroom. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 22-26. Atlanta, GA. Paper ID #7166. 13 pp. DOI 10.18260/1-2--22521 https://peer.asee.org/22521

102. Bielefeldt, A.R., K. Paterson, C. Swan, O. Pierrakos, D.O. Kazmer, A. Soisson. 2013. Spectra of Learning Through Service Programs. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 22-26. Atlanta, GA. Paper ID #7162. 17 pp. DOI 10.18260/1-2--22465 https://peer.asee.org/22465

103. Canney, N.E., T. Bowling*, A.R. Bielefeldt. 2013. In their own words: Engineering students' view on the relationship between the engineering profession and society. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 22-26. Atlanta, GA. Paper ID #7276. 11 pp. DOI 10.18260/1-2--19738 https://peer.asee.org/19738

104. Tucker, B.G., D.O. Kazmer, O. Pierrakos, C. Swan, A.R. Bielefeldt, K. Paterson, A. Soisson. 2013. Faculty Perspectives on Learning Through Service in Engineering Education: Challenges and Opportunities. *American Society for Engineering Education (ASEE) Annual Conference and*

Exposition. June 22-26. Atlanta, GA. Paper ID #6469. 18 pp. DOI 10.18260/1-2--19610 https://peer.asee.org/19610

105. Zarske, M.S., D.E. Schnee, A.R. Bielefeldt, D.T. Reamon. 2013. The Impacts of Real Clients in Project-Based Service-Learning Courses. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 22-26. Atlanta, GA. Paper ID #7666. 19 pp. DOI 10.18260/1-2--22598 https://peer.asee.org/22598

106. Swan, C., A.R. Bielefeldt, K. Paterson, D.O. Kazmer, O. Pierrakos, A. Soisson, B.G. Tucker. 2013. Workshops for the Engineering Faculty Engagement in Learning Through Service (EFELTS) Project: Development and Initial Findings. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. June 22-26. Atlanta, GA. Paper ID #7552. 12 pp. DOI 10.18260/1-2--22786 https://peer.asee.org/22786

107. Bielefeldt, A. 2013. Student Perceptions of the Importance and Achievement of Sustainable Engineering Outcomes. *American Society for Engineering Education (ASEE) Rocky Mountain Section Conference.* March 29-30, Pueblo, CO. 10 pgs. Best Paper Award.

108. Canney, N., A. Bielefeldt. 2012. A Model for the Development of Personal and Professional Social Responsibility for Engineers. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Educational Research Methods Division. June 10-13. San Antonio, TX. Paper AC 2012-3889. 19 pp. DOI 10.18260/1-2--20830 https://peer.asee.org/20830

109. Canney, N., A. Bielefeldt. 2012. Engineering Students' Views of the Role of Engineering in Society. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Community Engagement in Engineering Education Constituent Committee Division. June 10-13. San Antonio, TX. Paper AC 2012-3887. 20 pp. DOI 10.18260/1-2--21315 https://peer.asee.org/21315

110. Zarske, M.S., J.L. Yowell, J.F. Sullivan, A.R. Bielefeldt, D.W. Knight, T. O'Hair. 2012. K-12 Engineering for Service: Do project-based service-learning design experiences impact attitudes in high school engineering students? *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. K-12 Division. June 10-13. San Antonio, TX. Paper AC 2012-3802. 15 pp. Division Best Paper Award (among 100 papers). https://peer.asee.org/21627

111. Zarske, M.S., D.T. Reamon, A.R. Bielefeldt, D.W. Knight. 2012. Service-Based First Year Engineering Projects: Do they make a difference? *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Community Engagement in Engineering Education Constituent Committee Division. June 10-13. San Antonio, TX. Paper AC 2012-3805. 15 pp. DOI 10.18260/1-2--21914 https://peer.asee.org/21914

112. Bielefeldt, A. 2012. Student Learning Outcomes During an Environmental Engineering Summer Research Program. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Engineering Division. June 10-13. San Antonio, TX. Paper AC 2012-3783. 21 pp. DOI 10.18260/1-2--21943 https://peer.asee.org/21943

113. Bielefeldt, A. 2012. Similarities and Differences in Architectural, Civil, and Environmental Engineering Students' Perceptions of the Body of Knowledge. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Civil Engineering Division. June 10-13. San Antonio, TX. Paper AC 2012-3785. 19 pp. DOI 10.18260/1-2--21915 https://peer.asee.org/21915

114. Bielefeldt, A. 2012. Competitions for Environmental Engineering Capstone Design Projects: Student Preferences and Learning Outcomes. *American Society for Engineering Education (ASEE) Annual*

Conference and Exposition. Environmental Engineering Division. June 10-13. San Antonio, TX. Paper AC 2012-3782. 18 pp. DOI 10.18260/1-2--21094 https://peer.asee.org/21094

115. Bielefeldt, A.R., K. Paterson, C. Swan, J.J. Duffy, O. Pierrakos, N.E. Canney. 2012. Engineering Faculty Engagement in Learning Through Service Summit: Best Practices and Affinity Mapping. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Constituent Committee for Community Engagement in Engineering Education. June 10-13. San Antonio, TX. Paper AC 2012-4351. 16 pp. DOI 10.18260/1-2--21304 https://peer.asee.org/21304

116. Pierrakos, O., A. Zilberberg, C.W. Swan, A.R. Bielefeldt, K. Paterson, J.J. Duffy, S. Mcvay. 2012. Faculty Survey on Learning Through Service: Development and Initial Findings. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Constituent Committee for Community Engagement in Engineering Education. June 10-13. San Antonio, TX. Paper AC 2012-5229. 22 pp. DOI 10.18260/1-2--21392 https://peer.asee.org/21392

117. Bielefeldt, A.R. 2011. Sustainability Ethics among First-Year Civil and Environmental Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Ethics Division. June 26-29, Vancouver, BC Canada. Paper AC 2011-1362. 18 pp. DOI 10.18260/1-2--18599 https://peer.asee.org/18599

118. Bielefeldt, A.R. 2011. Global Interests and Experience Among First-Year Civil Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Civil Engineering Division. June 26-29, Vancouver, BC Canada. Paper AC 2011-1348. 21 pp. DOI 10.18260/1-2--18032 https://peer.asee.org/18032 [nominated for best paper of division]

119. Wiggins, J., M.E. McCormick, A.R. Bielefeldt, C.W. Swan, K. Paterson. 2011. Students and Sustainability: Assessing Student's Understanding of Sustainability from Service Learning Experiences. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Paper 2011-1335. Environmental Engineering Division. June 26-29, Vancouver, BC Canada. 11 pp. DOI 10.18260/1-2--18676 https://peer.asee.org/18676 [student best paper award from Environmental Division]

120. Bielefeldt, A.R. 2010. Evolution of a Sustainability Focused First-Year Environmental Engineering Course. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 20-23, Louisville, KY. Paper AC 2010-353. 12 pp. DOI 10.18260/1-2--15861 https://peer.asee.org/15861

121. McCormick, M., K. Lawyer, M. Berlin, C. Swan, K. Paterson, A. Bielefeldt, J. Wiggins. 2010. Evaluation of Sustainable Engineering Education via Service Learning and Community Service Efforts. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 20-23, Louisville, KY. Paper AC 2010-1102. 14 pp. DOI 10.18260/1-2--16322 https://peer.asee.org/16322 [student best paper environmental division]

122. Bielefeldt, A. 2010. Introducing First-Year Civil Engineering Students to Sustainability. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Civil Engineering Division. June 20-23, Louisville, KY. Paper AC 2010-352. 15 pp. DOI 10.18260/1-2--15860 https://peer.asee.org/15860

123. Bielefeldt, A.R. 2010. Student Perceptions of the Civil Engineering Body of Knowledge. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Civil Engineering Division. June 20-23, Louisville, KY. Paper AC 2010-351. 13 pp. DOI 10.18260/1-2--15859 https://peer.asee.org/15859

124. Bielefeldt, A.R. 2010. Diverse Models for Incorporating Service Learning in Capstone Design. *Capstone Design Conference*. June 7-9, Boulder, CO.

125. Swan, C. W., K.G. Paterson, A.R. Bielefeldt. 2009. Panel – Measuring the Impacts of Project-Based Service Learning in Engineering Education. Session M3B. *Frontiers in Education (FIE).* Oct. 18-21. San Antonio, TX. DOI: 10.1109/FIE.2009.5350508

126. Bielefeldt, A. 2009. Mapping an Undergraduate Curriculum onto the Environmental Engineering Body of Knowledge. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 24-17, Austin, TX. Paper AC 2009-684. 18 pp. https://peer.asee.org/4925

127. Bielefeldt, A., K. Paterson, C. Swan. 2009. Measuring the Impacts of Project-Based Service Learning. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Engineering Division. June 24-17, Austin, TX. Paper AC 2009-1972. 15 pp. DOI 10.18260/1-2--5642 https://peer.asee.org/5642 Best Environmental Engineering Division Paper, Best Paper PIC II, and Best Overall Paper (among 1389 at the conference).

128. Bielefeldt, A. 2009. Gender Differences in the Attitudes of Students in Freshmen Engineering Courses. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Women in Engineering Division. June 24-17, Austin, TX. Paper AC 2009-685. 11 pp. DOI 10.18260/1-2--4926 https://peer.asee.org/4926

129. Bielefeldt, A. 2009. Cognitive Diversity and the Performance of Freshmen Engineering Teams. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 24-17, Austin, TX. Paper AC 2009-683. 16 pp. DOI 10.18260/1-2--4924 https://peer.asee.org/4924

130. Bielefeldt, A. 2009. Perceptions of Cheating Behaviors by Freshmen Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Engineering Ethics Division. June 24-17, Austin, TX. Paper AC 2009-1384. 11 pp. DOI 10.18260/1-2--5323 https://peer.asee.org/5323

131. Bielefeldt, A. 2009. Retaining Students Interested in Energy in Environmental Engineering. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 24-17, Austin, TX. Paper 2009-681. 11 pp. DOI 10.18260/1-2--4922 https://peer.asee.org/4922

132. Paterson, K., A. Bielefeldt, C. Swan. 2009. An Interactive Panel Session on Measuring the Impacts of Project-Based Service Learning on Engineering Education. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. International Division. June 24-17, Austin, TX. Paper AC 2009-2034. 8 pp. DOI 10.18260/1-2--5666 https://peer.asee.org/5666

133. Bielefeldt, A. 2008. Cultural Competency Assessment. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 23-25, Pittsburgh, PA. Paper AC 2008-2313. 13 pp. DOI 10.18260/1-2--4275 https://peer.asee.org/4275

134. Bielefeldt, A. 2008. Incorporating Energy Issues into Environmental Engineering. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 23-25, Pittsburgh, PA. Paper AC 2008-2289. 12 pp. DOI 10.18260/1-2--4263 https://peer.asee.org/4263

135. Bielefeldt, A., B. Amadei, R. Sandekian. 2008. Community Service Attitudes of Engineering Students Engaged in Service Learning Projects. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. International Division. June 23-25, Pittsburgh, PA. Paper 2008-2430. 13 pp. DOI 10.18260/1-2--4319 https://peer.asee.org/4319

136. Bielefeldt, A. 2008. Drinking Water Activity for High School Outreach Program. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. K-12 & Pre College Engineering Division. June 23-25, Pittsburgh, PA. Paper 2008-2327. 9 pp. DOI 10.18260/1-2--4282 https://peer.asee.org/4282

137. Bielefeldt, A.R. and K. High. 2007. Work in Progress: Assessing the Cultural Competency of Engineering Students. *Frontiers in Education (FIE) Conference*. Oct. 10-13. DOI: 10.1109/FIE.2007.4417944

138. Bielefeldt, A. 2007. Solid And Hazardous Waste Course Targeted To The Developing World. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 25-27, Honolulu, Hawaii. Paper 2007-812. 6 pp. DOI 10.18260/1-2--1931 https://peer.asee.org/1931

139. Bielefeldt, A. R. 2007. Introduction to Environmental Engineering Course Aimed at Recruiting and Retaining Students. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 25-27, Honolulu, Hawaii. Paper 2007-805. 9 pp. DOI 10.18260/1-2--1927 https://peer.asee.org/1927

140. Bielefeldt, A., B. Amadei, R. Sandekian. 2007. Engineering For The Developing World Course Gives Students International Experience. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. International Division. June 25-27, Honolulu, Hawaii. Paper AC 2007-799. 11 pp. DOI 10.18260/1-2--1922 https://strategy.asee.org/1922

141. Amadei, B., R. Sandekian, R.S Summers, A. Bielefeldt. 2006. Engineering for Developing Communities: Integrating Education, Research and Development, and Service/Outreach into Engineering Education. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. International Division. June 19-21, Chicago, IL. Paper 2006-220. 10 pp. DOI 10.18260/1-2--134 https://peer.asee.org/134

142. Bielefeldt, A.R. 2006. Undergraduate Research on Appropriate and Sustainable Technology. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 19-21, Chicago, IL. Paper 2006-1229. 11 pp. DOI 10.18260/1-2--721 https://peer.asee.org/721

143. Bielefeldt, A., D. Shannon, J. Shah, R.S. Summers, J. Ruttenber. 2006. Environmental Health for Developing Communities Pilot Course. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Division. June 19-21, Chicago, IL. Paper 2006-1223. 9 pp.

144. Bielefeldt, A. 2006. Attracting Women to Engineering that Serves Developing Communities. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Women in Engineering Division. June 19-21, Chicago, IL. Paper 2006-1221. 10 pp. DOI 10.18260/1-2--715 https://peer.asee.org/715

145. Bielefeldt, A. 2006. Increasing the International Awareness of Engineering Students. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Emerging Trends

poster session. June 19-21, Chicago, IL. Paper 2006-1222. 10 pp. DOI 10.18260/1-2--716 https://peer.asee.org/716

146. Bielefeldt, A.R. 2006. Upgrade of a Wastewater Treatment Facility to Meet Capacity and Nutrient Removal Requirements. In: *Case Studies in Environmental Engineering and Science*. Ed. Alok Bhandari and Michael A. Butkus. Published by the AEESP Education Committee. http://www.aeespfoundation.org/publications.html#CaseStudies

147. Bielefeldt, A.R. and R. Malhotra. 2006. Wastewater Treatment Facilities for a Native American Tribe. In: *Case Studies in Environmental Engineering and Science*. Ed. Alok Bhandari and Michael A. Butkus. Published by the AEESP Education Committee. http://www.aeespfoundation.org/publications.html#CaseStudies

148. Bielefeldt, A.R. 2005. Challenges and Rewards of On-Campus Projects in Capstone Design. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Design in Engineering Education Division. June. Portland, OR. Session 3625. 10 pp.

149. Bielefeldt, A.R., B. Amadei, R.S. Summers. 2005. Incorporating Earth Systems Engineering Concepts throughout the Civil Engineering Degree to Create the Engineer of the 21st Century. *American Society for Engineering Education (ASEE) Annual Conference and Exposition*. Civil Engineering Division. June. Portland, OR. Session 3215. 9 pp.

150. Bielefeldt, A.R., R.S. Summers, B. Amadei, R. Sandekian, J. Shah, M. Pinnell, W. Moeller. 2005. Creating an Engineering for Developing Communities Emphasis in Environmental Engineering. *American Society of Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Engineering Division. June. Portland, OR. Nominated for best paper award.

151. Bielefeldt, A.R. 2003. Capstone Environmental Design Course Incorporating Sustainable Projects. *American Society of Engineering Education (ASEE) Annual Conference and Exposition*. Environmental Engineering Division. Nashville, TN. [Early Career Award]

Engineering Education and Teaching Related Conference Workshops, Papers, and Presentations
(underlined authors Bielefeldt's graduate students; * undergraduate student co-author)

1. Bielefeldt, A.R. 2021. A Human Face: Individual and Collective Perspectives in the Ethics Education of First-Year Civil Engineering Students. 22nd Society for Ethics Across the Curriculum (SEAC) Annual Conference. Virtual. October 7-9, 2021.

2. Bielefeldt, A.R., S. Schill, and H. Passov*. 2021. Mentoring perspectives of Learning Assistants. 2021 Learning Assistant Alliance Research Symposium. Virtual. Oct. 21-22, 2021. https://sites.google.com/view/2021lars/home

3. Special Session: ETHICS-2021 Author Meets Critics - Extracting Accountability: Engineers and Corporate Social Responsibility by Jessica Smith. Critics: S. Field, A. Bielefeldt, E. Englehardt. IEEE Ethics-2021 Conference: Engineering and Corporate Social Responsibility / IEEE International Symposium on Technology and Society (ISTAS21). Oct. 28-31, 2021. Virtual

4. Bielefeldt, A.R., J.A. Leydens, A.D. Christy, M. Lima, M. Natarajaranthinam, J.D. Thompson. 2021. What are crucial barriers and opportunities to bring our whole selves to engineering education? Moving watermelons together. American Society for Engineering Education (ASEE) Annual Conference & Exposition. Workshop W452. July 28. Virtual. 27 pp. https://peer.asee.org/38039

5. Polmear, M., A.R. Bielefeldt, N.E. Canney, C. Swan. 2019. Integrating Ethics and Societal Impact Topics into Engineering Education – Actionable Ideas for Macroethics Topics, Teaching Methods, and Assessment. American Society for Engineering Education (ASEE) Annual Conference & Exposition. Workshop U212W. June 15. Tampa FL.

6. Polmear, M. and A.R. Bielefeldt. 2019. Integrating Ethics and Societal Impacts into Engineering Courses: Opportunity to Develop Actionable Ideas. American Society for Engineering Education (ASEE) Rocky Mountain Section Conference. May 19-21. Laramie WY.

7. Zhao, David*, A.R. Bielefeldt, M. Polmear, D. Knight, C. Swan, N. Canney. 2019. Rubric Assessment of Ethics and Societal Impacts Content of Student Assignments. American Society for Engineering Education (ASEE) Rocky Mountain Section Conference. May. Laramie WY. *Best Poster Award*.

8. Bielefeldt, A.R., A. Downs, M.W. Vogt. 2018. Engineering Licensure: An Asset Facing Challenges. Panel. American Society of Civil Engineers (ASCE) 2018 Convention. Oct. 12-15. Denver, CO.

9. M. Polmear, A.R. Bielefeldt, D. Knight, C. Swan, N. Canney. 2018. Workshop: Integrating Ethics and Societal Impact Topics into Engineering Education: Actionable Ideas for Macroethics Topics, Teaching Methods, and Assessment. American Society for Engineering Education (ASEE) Zone IV Conference. March 25-27. Boulder, CO.

10. Lewis, J.W.*, M. Polmear, A.R. Bielefeldt, D. Knight. 2018. An Insight into the Techniques and Activities Faculty Utilize to Introduce Ethical Concepts through Co-Curricular Environments. Poster. American Society for Engineering Education (ASEE) Zone IV Conference. Mar. 25-27. Boulder, CO.

11. Bielefeldt, A.R. 2018. An Engineering Perspective on the New AAAS Statement on Scientific Freedom and Responsibility. Poster. American Society for Engineering Education (ASEE) Zone IV Conference. March 25-27. Boulder, CO.

12. Bielefeldt, A.R., M. Polmear, D. Knight, C. Swan, N. Canney. 2017. Ethics Across the Curriculum? Integrating Ethics and Societal Impact Topics into Core Engineering Courses. Proceedings of the American Society for Engineering Education (ASEE) Rocky Mountain Section Conference. Sept. 22-23. Provo, UT. 15 pp.

13. Bielefeldt, A.R. 2017. Sustainability Knowledge and Attitudes Revealed Through Concept Maps. Association for Environmental Engineering & Science Professors (AEESP) Biennial Conference. June 20-22. Ann Arbor, Michigan.

14. Bielefeldt, A.R., M. Polmear, D. Knight, N. Canney, C. Swan. 2017. Ethics Education in Environmental Engineering. Poster. Association for Environmental Engineering & Science Professors (AEESP) Biennial Conference. June 20-22. Ann Arbor, Michigan.

15. Bielefeldt, A.R., D. Knight, C. Swan, N. Canney. 2016. Macroethics Education in Engineering and Computing Courses. Proceedings of the American Society for Engineering Education (ASEE) Rocky Mountain Section Conference. Sept. 30-Oct. 1. Cedar City, UT. 13 p.

16. Mattei, N.J., A.R. Bielefeldt, S.P. Mattingly, L. Haselbach, C.I. Davidson, C.L. Antaya Dancz, K. Parrish, S. Luster-Teasley, Y. Pearson Weatherton, S.J. Burian. 2016. U206 Sunday Workshop: Resources and Strategies for Addressing ASCE's New ABET Criterion on Sustainability. American Society for Engineering Education (ASEE) Annual Conference & Exposition. June 25-29. New Orleans, LA.

17. Pearson Weatherton, Y., A. Bielefeldt, C. Davidson. 2016. Strategies and Resources for Incorporating Sustainability into Engineering Curricula. ABET Symposium. Apr 14-15. Hollywood, FL.

18. Bielefeldt, A.R. 2015. Ethic of Care and Engineering Ethics Instruction. Proceedings of the American Society for Engineering Education (ASEE) Rocky Mountain Section Conference. April 10-11. Denver, CO. 7 pp.

19. Bielefeldt, A.R. 2015. Student Learning Outcomes from Service-Learning K-12 Outreach in a First-Year Introduction to Engineering Course. Proceedings of the American Society for Engineering Education (ASEE) Rocky Mountain Section Conference. April 10-11. Denver, CO. 13 pp.

20. Rulifson, G.A., N. Canney, A.R. Bielefeldt. 2014. Interfacing with Poverty: How Students and Alumni Reflect on Travel Affecting their Social Responsibility Development. Society for Social Studies of Science (4S) / Sociedad Latinoamericana de Estudios Sociales de la Ciencia y la Tecnologia (ESOCITE) Annual Meeting. August 20-23. Buenos Aires, Argentina.

21. Canney, N., G. Rulifson, A. Bielefeldt. 2014. Oh the places you'll go: an exploration of the career pathways for alumni of engineering service programs. Engineering, Social Justice and Peace (ESJP) Annual Conference. August 17-19. Buenos Aires, Argentina.

22. Kelly, William, Jeffrey Seay, Liv Haselbach, Matthew Roberts, Angela Bielefeldt. 2013. U264D Workshop: Engineering Education for a Sustainable Future. American Society for Engineering Education (ASEE) Annual Conference and Exposition. June 23, 2013, 9 am - 4 pm. Atlanta, GA.

23. Bielefeldt, A. 2011. Growing Student Interest in Renewable Energy. Association for Environmental Engineering and Science Professors (AEESP) Conference: Global Sustainability and Environmental Engineering & Science. Oral presentation. July 10-12. Tamp, FL.

24. Bielefeldt, A., J. Burken, J. Hughes, S. Jones, K. Paterson, D. Reinhart. 2011. "Workshop: Frontiers in Environmental Education." Association for Environmental Engineering and Science Professors (AEESP) Conference: Global Sustainability and Environmental Engineering & Science. University of South Florida, Tamp, FL. July 10-12.

25. Dvorak, B., A.R. Bielefeldt, C. Just. 2011. Workshop: Service learning projects and sustainability. Association for Environmental Engineering and Science Professors (AEESP) Conference: Global Sustainability and Environmental Engineering & Science. University of South Florida, Tamp, FL. July 10-12.

26. Swan, C., J. Duffy, O. Pierrakos, K. Paterson, A. Bielefeldt. 2011. The EFELTS Project – Engineering Faculty Engagement in Learning Through Service. American Society for Engineering Education (ASEE) Annual Conference and Exposition Proceedings. (Paper 2011-1324). NSF Grantees Poster Session. June 26-29. Vancouver, BC Canada.

27. Swan, C., K. Paterson, A. Bielefeldt, B. Striebig. 2011. ISES – A Longitudinal Study to Measure the Impacts of Service on Engineering Students. American Society for Engineering Education (ASEE) Annual Conference and Exposition Proceedings. (Paper 2011-1328). NSF Grantees Poster Session. June 26-29. Vancouver, BC Canada.

28. Bielefeldt, A.R. 2011. Research Experience for Undergraduates (REU) Site in Environmental Engineering. Poster. NSF Engineering Education Awardees Conference. March 13-15. Reston VA.

29. Bielefeldt, A.R., C. Swan, K. Paterson, M. McCormick. 2011. Assessing Students' Motivation to Learn and Practice Sustainable Engineering. Poster. NSF Engineering Education Awardees Conference. March 13-15. Reston VA.

30. Bielefeldt, A.R. 2010. Sustainability in Civil and Environmental Engineering Courses at CU-Boulder. Poster. PAP3460. Association for the Advancement of Sustainability in Higher Education (AASHE) Annual Conference. Denver, CO.

31. Swan, C., A. Bielefeldt, and K. Paterson. 2010. Global Education: Potential Impacts of Service-Based Projects in Global Engineering Education. World Environmental & Water Resources Congress. May 16-20. Providence, Rhode Island.

32. Swan, C., A. Bielefeldt, and K. Paterson. 2010. Evaluation of Sustainable Engineering Education via Service Learning. Poster. NSF Engineering Education Awardees Conference. Feb. 1-2. Washington DC.

33. Bielefeldt, Angela R., K. Paterson, and C. Swan. 2009. An Interactive Workshop Session on Measuring the Impacts of Project-Based Service Learning on Engineering Education. 12th Annual Colloquium on International Engineering Education. Oct. 22-25. Ames, IA.

34. Bielefeldt, Angela R., B. Amadei, R. Sandekian, R.S. Summers, and K. Linden. 2009. Engineering for Developing Communities Program: Education for Sustainable Development. Poster. 12th Annual Colloquium on International Engineering Education. Oct. 22-25. Ames, IA.

35. Paterson, K., A. Bielefeldt, and C. Swan. 2009. International Project Based Service Learning. Association of Environmental Engineering and Science Professors (AEESP) Biennial Conference. July 27-28. Iowa City, IA.

36. Silver, D., B. Amadei, R. Scott Summers, R. Klees, R. Sandekian, B. Bialek, and A. Bielefeldt. 2008. Program to Education Environmental Engineers to Work Toward Sustainable Development. Poster. *Institute for the Environment Environmental Symposium: Sustainable and Safe Drinking Water in Developing and Developed Countries: Where Science Meets Policy*. Nov. 5 - 6. University of North Carolina – Chapel Hill, NC.

37. Bielefeldt, A.R. and K. High. 2007. Cultural Competency Assessment Tool Development for Engineering Students. 10th Annual Colloquium on International Engineering Education: Curricular Innovations for Global Engineering Competency. November 1 – 4. West Lafayette, Indiana.

38. Bielefeldt, A.R. 2007. Community Service Attitudes of First-Year Students and Senior Students Working on Service Learning Design Projects. Poster. Association for Environmental Engineering and Science Professors Biennial Conference – Interactions at the Interface: Making the Connections Between Environments, Disciplines and Nations. July 28 – August 1. Blacksburg, VA.

39. Mihelcic, J., A. Bielefeldt, J. Zimmerman, S. Jones, K. Patterson, and A. Ramaswami. 2007. Sustainability Workshop. Association for Environmental Engineering and Science Professors Biennial Conference – Interactions at the Interface: Making the Connections Between Environments, Disciplines and Nations. July 28 – August 1. Blacksburg, VA.

40. Bielefeldt, A.R. 2007. Environmental Engineering Service Learning Projects for Developing Communities. National Capstone Design Conference. June 10-12. University of Colorado, Boulder, CO. Paper 12183, 10 pp.

41. Sandekian, R., B. Amadei, A. Bielefeldt, and R.S. Summers. 2007. Engineering for Poverty Reduction: Challenges and Opportunities. Fifth LACCEI International Latin American and Caribbean Conference for Engineering and Technology (LACCEI'2007) – Developing Entrepreneurial Engineers for the Sustainable Growth of Latin America and the Caribbean: Education, Innovation, Technology and Practice. May 29 – June 1. Tampico, Mexico.

42. Bielefeldt, A.R., B. Amadei, R.S. Summers, K.M. Strzepek, P.S. Chinowsky and K.R. Molenaar. 2006. An Educational Initiative to Address Earth Systems Engineering for Developing Communities. Working Commission W107 Construction in Developing Economies, International Symposium on Construction in Developing Economies: New Issues and Challenges. January 18-20. Santiago, Chile.

43. Sandekian, R, B. Amadei, A. Bielefeldt, and R.S. Summers. 2006. Engineering for Developing Communities: Integrating Education, Research and Development, and Service/Outreach into Engineering Education. 3rd African Regional Conference on Engineering Education (ARCEE) and 4th South African Conference on Engineering Education (SACEE). Sept. 26-29. Pretoria, South Africa.

44. Bielefeldt, A.R., B. Amadei, R.S. Summers, R. Sandekian. 2005. Engineering for Developing Communities Theme Attracts Diverse Student Interest. Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference. July. Potsdam, NY.

45. Katz, L., B. Allenby, A. Bielefeldt, C. Davidson, J. Mihelcic, K. Jahan, A. Zander. 2005. Introducing Sustainability Into Engineering Curriculum: Has the Wheel Finally Been Created? Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference. July 24-26. Clarkson University, New York.

46. Katz, L., B. Allenby, A. Bielefeldt, C. Davidson, J. Mihelcic, K. Jahan, A. Zander. 2005. Workshop W2: Environmental Sustainability: Educating Students, Colleagues and Ourselves. Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference. July 24-26. Clarkson University, New York.

47. Pinnell, M., B. Amadei, A.R. Bielefeldt, W. Moeller, R. Sandekian. 2005. Service-Learning in Engineering: Summary of Findings from a Pre-Conference Workshop. Poster. American Society for Engineering Education (ASEE) Conference and Exposition. June 13. Portland, OR.

48. Bielefeldt, A.R., B. Amadei, R.S. Summers. 2005. Department Level Reform Grant: Engineering for Developing Communities (EDC) and Earth Systems Engineering (ESE). Poster. National Science Foundation (NSF) Engineering and Computing Education Grantees Meeting. Feb. Washington, D.C.

49. Bielefeldt, A.R. and J. Silverstein. 2002. A Successful Model for Integrating Sustainable Development Projects into a Capstone Design. Association of Environmental Engineering and Science Professors (AEESP) Education Conference. Aug. Toronto.

Environmental Engineering Research Published in Conference Proceedings

(<u>underlined</u> authors Bielefeldt's graduate students; * undergraduate student co-author)

1. <u>Harper, J.</u>, A. Bielefeldt, A. Javernick-Will, T. Veasna, C. Nicoletti. 2018. Intentions toward fecal sludge management in rural developing communities. Working Paper Proceedings. 16th Engineering Project Organization Conference (EPOC). June 25-27. Brijuni, Croatia. 35 pp. (refereed)

2. Ginley, J., A. Bielefeldt, <u>T. Relph</u>. 2012. Facing the New Normal: The Role of Regional Collaboration. The Utility Management Conference (Water Environment Federation, AWWA). Jan. 30 – Feb. 2. Miami, FL.

3. Panacewicz, L.P., A. Bielefeldt, C. Schulz, R.S. Summers, T. Relph*. 2010. Enhanced Ceramic Water Filtration System for Contaminant Removal for Households in Developing Countries. AWWA Water Quality Technology Conference (WQTC). Nov. 14-17. Savannah, GA.

4. Stewart, M.W., A. Bielefeldt, E. Mansfield, R.S. Summers, J. Ryan. 2010. Effects of water quality parameters on the release of silver nanoparticles from a ceramic surface using a quartz crystal microbalance. AWWA Water Quality Technology Conference (WQTC). Nov. 14-17. Savannah, GA.

5. Bielefeldt, A.R., R.S. Summers, A. Kohler, K. Kowalski. 2009. Bacteria and Virus Removal in Point-Of-Use Ceramic Water Filters. Presentation and paper at the Water Environment Federation Disinfection 2009 – International Ceramic Pot Filter Workshop. March 1. Atlanta, CA.

6. Kowalski, K., A.R. Bielefeldt, R.S. Summers. 2008. Bacterial Growth in Point-of-Use Ceramic Water Filters. Presentation and paper in the *Proceedings of the 2008 Institute for the Environment Environmental Symposium: Sustainable and Safe Drinking Water in Developing and Developed Countries: Where Science Meets Policy*, edited by Phil Singer. Nov. 5 - 6. University of North Carolina – Chapel Hill, NC.

7. Bielefeldt, Angela R., Rajat Srivastav, R. Luhrs, Scott Andrews. 2008. NDMA Oxidation by Permanganate. Presentation and extended abstract at the 6th International Conference on Oxidation and Reduction Technologies for In-Situ Treatment of Soil and Groundwater (ORTs-6). Sept. 22-25. San Diego, CA.

8. Gutierrez-Padilla, Guadalupe, A. Bielefeldt, M. Hernandez, J. Silverstein. 2007. Monitoring of microbially induced concrete corrosion in pipelines. NACE International Corrosion Conference and Expo. Paper 07514. March 11-15. Nashville, TN.

9. Gutierrez-Padilla, Ma.Guadalupe D., A.R. Bielefeldt, M. Hernandez, J. Silverstein. 2006. Biokinetics of Sulfur Oxidizing Microorganisms and Monitoring of Microbially Induced Concrete Corrosion in Pipelines. Corrosion NACExpo 2006, 61st Annual Conference and Exposition. March 12 – 16. San Diego, CA.

10. Gutierrez-Padilla, Ma.Guadalupe D., A.R. Bielefeldt, M. Hernandez, J. Silverstein. 2005. Biogeochemical Cycling of Sulfur: Biokinetics of the Extremophiles Sulfur Oxidizing Microorganisms. The Joint International Symposia for Subsurface Microbiology (ISSM 2005) and Environmental Biogeochemistry (ISEB XVII). Presentation and paper. August 14-19. Jackson Hole, WY.

11. Zamora-Thompson, Xochitl, Angela R. Bielefeldt, Jan Kreider. 2005. Integrating Renewable Energy in Water Systems: Design Case Studies for the Galápagos Islands. Solar World Congress. Aug. 6-12. Orlando, Fla.

12. Bielefeldt, A.R., C. Vos*. 2004. Chromium-Contaminated Soil Treatment By In-Situ Stabilization. Water Environment Federation Annual Conference and Exposition. Oct. New Orleans, LA.

13. Pfeiffer, P., A.R. Bielefeldt, T. Illangasekare, D. Dai. 2002. Vegetable Oil Injection for In Situ Remediation of TCE: Physical/Chemical Effects. Water Environment Federation Annual Conference and Exposition. Oct. Chicago, Il.

14. Bielefeldt, A., M. Lutz, S. Taylor*, M. Song, L. Wyeno, J. Anderson. 2002. Use of Iron Chemicals for Odor Control: Lab Studies and Full Scale Results. Water Environment Federation Annual Conference and Exposition. Oct. Chicago, Il.

15. Tseng, J., A.R. Bielefeldt. 2000. Biological Transformation of Cr+6 In Soil Under Varying Redox Conditions. Water Environment Federation Annual Conference and Exposition. Oct. Anaheim, CA.

16. Bielefeldt, A.R., T. Illangasekare, R. LaPlante*. 2000. The Impact of Biodegradation of De-Icing Chemicals on the Conductivity and Dispersivity of Porous Media. Conference on Hazardous Waste Research. May 23-25. Denver, CO. p. 70-75.

17. Cort, T., A.R. Bielefeldt. 2000. Mechanism and Kinetics of Nonionic Surfactant Inhibition of Pentachlorophenol Biodegradation. Conference on Hazardous Waste Research. May 23-25. Denver, CO. p. 91-98.

18. Bielefeldt, A.R., T. Illangasekare, M. Grant. 1999. Biodegradation of De-Icing Compounds in Columns Simulating a Range of Natural Conditions. Conference on Hazardous Waste Research. May 25-27. St. Louis, MO. p. 186-191 (Karen Morehouse Best Paper Award)

19. Bielefeldt, A.R., H.D. Stensel, M. Romain. 1997. VOC treatment and odor control using a sparged shallow activated sludge reactor. Water Environment Federation Annual Conference and Exposition. October. Chicago. Vol. 1, Part 1, p. 93-101.

20. Bielefeldt, A.R., H.D. Stensel. 1997. Biodegradation of BTEX-Contaminated Gas in a Sparged Shallow Liquid Reactor. In Situ and On-Site Bioremediation: Vol. 5. New Orleans. April. Symposium chairs B.C. Alleman and A. Leeson. Battelle Press. Columbus, Ohio. p. 37-42.

21. Bielefeldt, A.R., H.D. Stensel, S.E. Strand. 1995. Degradation of Chlorinated Aliphatic Compounds by Methane and Phenol-Oxidizing Bacteria. Bioremediation of Chlorinated Solvents, Ed. R.E. Hinchee et al. Battelle Press. Columbus, Ohio.

Presentations on Environmental Engineering Research at Professional Conferences
(underlined authors Bielefeldt's graduate students; * undergraduate student co-author)

1. Harper, J., A. Bielefeldt, A. Javernick-Will, T. Veasna, C. Nicoletti. 2020. Household Preferences for Rural Fecal Sludge Management Service Attributes: A Discrete Choice Experiment. *2019 WASH Symposium,* University of Colorado Boulder, Boulder, CO, March 2020.
2. Harper, J., A. Bielefeldt, A. Javernick-Will, M. Asaduzzaman, S. Karki. 2019. Why Pit Emptiers in Rural Bangladesh Do What They Do?: Decision-making in Fecal Sludge Management. *University of North Carolina Water and Health Conference,* Chapel Hill, North Carolina, USA, October 2019.
3. Harper, J., A. Bielefeldt, A. Javernick-Will. 2019. Describing and Improving Behaviors When Rural Latrine Pits Fill: A Randomized Controlled Trial. 5th International Faecal Sludge Management Conference (FSM5), Capetown, South Africa, February 19-21, 2019. https://fsm5.susana.org/images/FSM_Conference_Materials/Wednesday/Afternoon/Applied_Research/FSM5_Harper.pdf
4. Harper, J., A. Bielefeldt, A. Javernick-Will, T. Veasna, C. Nicoletti. 2018. How intentions toward fecal sludge management vary regionally and seasonally in rural Cambodia. Poster. Water and Health Conference: Where Science Meets Policy. Oct. 29-Nov. 2. Chapel Hill, NC.
5. Harper, J., A. Bielefeldt, A. Javernick-Will. 2018. Intentions Toward Fecal Sludge Management in Rural Developing Communities. Presented at the Metropolitan State University's Humanitarian Engineering Symposium, Denver, CO, April 2018. Available at https://bit.ly/39QowN0.

6. Harper, J., A. Bielefeldt, A. Javernick-Will. 2017. Evaluating and Modifying Behavior to Improve Sanitation Infrastructure Sustainability. Third Place Student Poster winner. Symposium for Sustainable Infrastructure 2 (SSI-2), ASCE, APWA, ISI. Nov. 3-4. Boulder CO.

7. Rogers, J., L. Ferrer, E.M. Thurman, J. Rosenblum, A.R. Bielefeldt, J.N. Ryan. 2017. Polypropylene glycol surfactants and their degradation products as potential indicator compounds for shallow groundwater impacted by hydraulic fracturing fluids. ENVR 633. 253rd American Chemical Society (ACS) National Meeting & Exposition. April 2-6. San Francisco, CA.

8. Rogers, J., L. J. Rosenblum, Ferrer, E.M. Thurman, A.R. Bielefeldt, J.N. Ryan. 2017. Biodegradation of organic additives and hydrocarbons from flowback water of the Denver-Julesburg Basin: a laboratory study of shallow groundwater conditions. GEOC 341. 253rd American Chemical Society (ACS) National Meeting & Exposition. April 2-6. San Francisco, CA.

9. Rogers, J., S. Tummings*, A. Bielefeldt, J. Ryan. 2016. Inhibition of biodegradation of hydraulic fracturing fluid organic compounds in groundwater by the biocide glutaraldehyde. 251st American Chemical Society (ACS) National Meeting & Exposition. Division of Environmental Chemistry: ENVR 213. Mar. 13-14. San Diego, CA.

10. Bielefeldt, Angela R. 2010. Sustainable Communities: Water and Wastewater Challenges. SACNAS. Sept. 30 – Oct. 3. Anaheim, CA.

11. Kohler, A., S. Soundarrajan, M. Stewart, R.S. Summers, A.R. Bielefeldt. 2009. Impacts of Silver on Long-term Disinfection by Point-of-Use Ceramic Water Filters. OU International WaTER (Water Technologies for Emerging Regions) Conference. Oct. 26-27. Norman, Oklahoma.

12. Bielefeldt, A.R. 2009. Remediation of NDMA Contaminated Groundwater by In Situ Chemical Oxidation. Alliance of Hazardous Materials Professionals (AHMP) National Conference. Aug. 31 – Sept. 2. San Diego, CA.

13. Srivastav, R., A. Bielefeldt. 2008. NDMA Oxidation by Permanganate. 5th Annual Rocky Mountain AWWA/WEF student conference. May. Golden, CO.

14. Bielefeldt, A.R., R. Scott Summers, K. Kowalski, B. Bishop*, C. Schilling*, A. Malhotra*, et al. 2007. Removal of Virus-Sized Particles and E. coli by the Filtron. Association for Environmental Engineering and Science Professors Biennial Conference – Interactions at the Interface: Making the Connections Between Environments, Disciplines and Nations. July 28 – August 1. Blacksburg, VA.

15. Barr, Stephen C.*, A. R. Bielefeldt. 2007. Hexavalent Chromium Biotransformation Mechanism that Predominates in Soil under Sulfate-Reducing Bacterial (SRB) Activity. Poster. 17th Annual AEHS West Coast Conference on Soil, Sediments, and Water. March 19-22. San Diego, CA.

16. Kowalski, K., B. Bishop*, A. Bielefeldt, R.S. Summers. 2007. Filtron. Poster. 4th Annual Rocky Mountain AWWA/WEF student conference. May. Boulder, CO.

17. Song, M., A.R. Bielefeldt. 2006. Effect of Nonionic Surfactant on the Biodegradation of Pentachlorophenol. Poster. Fifth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 22-25. Monterey, CA.

18. Song, M., A.R. Bielefeldt. 2006. Effect of Nonionic Surfactant on the Biodegradation of Pentachlorophenol. 3rd Annual Rocky Mountain AWWA/WEF student conference. May 19. Fort Collins, CO.

19. Gutierrez-Padilla, Ma.Guadalupe D., A.R. Bielefeldt, M. Hernandez, J. Silverstein. 2006. Microbially Induced Corrosion of Concrete Sewer Pipelines by Sulfur Oxidizing Microorganisms. 3rd Annual Rocky Mountain AWWA/WEF student conference. May 19. Fort Collins, CO.

20. Gutierrez-Padilla, Ma.Guadalupe D., A.R. Bielefeldt, M. Hernandez. 2005. Biokinetics of Sulfur Oxidizing Microorganisms and Modeling Microbially Induced Concrete Corrosion. 2nd Annual Rocky Mountain AWWA/WEF student conference. May. Laramie, WY.

21. Song, Myoungsuk, A. Bielefeldt. 2005. Effect of a Non-Ionic Surfactant on Bacterial Activity During the Biodegradation of a Toxic Substrate. 2nd Annual Rocky Mountain AWWA/WEF student conference. May. Laramie, WY.

22. Bielefeldt, A.R., R.S. Summers, C. Fahlin*, S. Givler, K. Kowalski*, K. Medina*, L. Hollenkamp*, A. Malhotra*, H. Wright*. 2005. Evaluating the Water Treatment Effectiveness of the Filtrón. Mascaro Engineering Sustainability Conference. April 10-12. Pittsburgh, PA.

23. Zamora-Thompson, Xochitl, A.R. Bielefeldt. 2005. Integrating Renewable Energy In Water Systems: Design Case Study for the Galápagos Island of Floreana. Mascaro Engineering Sustainability Conference. April 10-12. Pittsburgh, PA.

24. Bielefeldt, A.R., P.R. Pfeiffer, T. Illangasekare, C. Woodward, B. Henry. 2004. Vegetable Oil Emplacement for Remediation of Chlorinated Solvent Sites. Poster. Remediation of Chlorinated and Recalcitrant Compounds. Battelle. May. Monterey, CA.

25. Vestal, E.W., T.H. Illangasekare, A. Ramaswami, A.R. Bielefeldt. 2002. Bioisolation of Non-Aqueous Phase Liquid Pool Mixtures in the Subsurface: The Importance of Non-Ideal Chemical Behavior and Pool Chemical Heterogeneity on Dissolution and Bioavailability. Geological Society of America Annual Meeting. October. Denver, CO.

26. Woodward, C.A., T. Illangasekare, A. Bielefeldt, D. Dai. 2002. Vegetable Oil Delivery Techniques for Use as a Carbon Source in the Reductive Dechlorination of Chlorinated Solvents in Saturated Porous Media. Poster. Geological Society of America Annual Meeting. October. Denver, CO.

27. Schakel, S., T. Illangasekare, D. Dai, A. Bielefeldt, B. Henry. 2002. An Experimental Study of the Behavior of Vegetable Oil Emulsions in Sandy Soils Associated with DNAPL Site Remediation. Poster. Geological Society of America Annual Meeting and Exposition. October. Denver, CO.

28. Isleyen, M., K.A. Morrison, A. Ramaswami, A.R. Bielefeldt, T.H. Illangasekare. 2001. Biodegradation of PAH Mixtures. Environmental Research Conference. May. Manhattan, KS.

29. Ramaswami, A., T. Illangasekare, A.R. Bielefeldt. 2001. Biostabilization of Multicomponent Non-Aqueous Phase Liquids (DNAPLs). International Containment and Remediation Conference. June. Orlando, FL.

30. Vestal, E., T. Illangeskare, A.R. Bielefeldt, K. Morrison, A. Ramaswami. 2000. Estimation of Styrene Inhibition and Induction Kinetic Parameters on a Mixed Consortium of PAH-Degrading Bacteria: Implications for Modeling and Bioisolation Schemes. Hazardous Waste Conference. May. Denver, CO.

31. Richard, R., T. Illangeskare, A.R. Bielefeldt, A. Ramaswami. 2000. The Effects of Microbial Growth and Transport on Soil Characteristics: A One-Dimensional Analysis. Poster. Hazardous Waste Conference. May. Denver, CO.

32. Bielefeldt, A.R., T. Illanagasekare, M. Grant, T. Butler. 2000. Biodegradation of Airplane De-Icing Fluids under Simulated Aquifer Conditions. Poster. Groundwater 2000: International Conference on Groundwater Research. June. Copenhagen, Denmark.

33. Riffel, A.M., A.R. Bielefeldt, A. Ramaswami, T. Illangasekare. 1999. Evaluating the Potential for In-Situ Biostabilization of Aroclor 1242 DNAPL. Geological Society of America Annual Meeting. Oct. Denver, CO.

34. Vestal, E., Tissa Illangeskare, Anu Ramaswami, K. Morrison, A.R. Bielefeldt. 1999. Modeling of net interphase mass exchange in NAPL-Water systems undergoing biodegradation at the spill-site scale. Hazardous Waste Conference. May. St. Louis, MO.

35. Vestal, E., T. Illangeskare, A. Ramaswami, A.R. Bielefeldt. 1999. Modeling of net interphase mass exchange in NAPL-Water systems undergoing biodegradation at the spill-site scale. American Geophysical Union (AGU) 19th Annual Hydrology Days. Aug. Ft. Collins, CO.

36. Vestal, E., T. Illangasekare, A.R. Bielefeldt, A. Ramaswami, T.J. Donahue. 1999. Net Interphase Mass Exchange from NAPL Pools in NAPL-Water Systems Undergoing Biodegradation. Geological Society of America Annual Meeting. Oct. Denver, CO.

37. Riffel, A., A.R. Bielefeldt, A. Ramaswami, T. Illangasekare. 1999. PCB Biostabilization. Air & Waste Management Association Rocky Mountain States Student Poster Session. April. First place student poster.

38. Bielefeldt, A.R., T. Illangasekare, C. McEachern. 1998. Effect of Biofilm Growth on the Fate of Contaminants in the Subsurface. Conference on Hazardous Waste Research. May. Snowbird, UT.

39. Bielefeldt, A., T. Illangasekare, C. McEachern. 1998. Impact of Biofilm Growth in Porous Media on the Fate of Contaminants in the Subsurface. Poster. Water Environment Federation Annual Conference and Exposition. Oct. Orlando, FL.

40. Bielefeldt, A.R., S.E. Strand, H.D. Stensel. 1994. Degradation of High Concentrations of TCE and DCE Without Intermediate Toxicity by a Phenol-Degrading Enrichment. Poster. American Society of Microbiologists Annual Conference. May. Las Vegas, NV.

41. Bielefeldt, A.R., G. Walter. 1993. Aerobic Cometabolic Degradation of Chlorinated Aliphatic Organic Compounds. Pacific Northwest Pollution Control Association Conference. Nov. Sea-Tac, WA.

Environmental Engineering Research Reports

(underlined authors Bielefeldt's graduate students; * undergraduate student co-author)

1. Bielefeldt, AR., R.S. Summers, T. Relph. 2012. National Inventory of Regional Collaboration Among Water and Wastewater Utilities. Report to the American Water Works Association (AWWA) Strategic Management Practices Committee (SMPC). 128 pp. http://www.awwa.org/Resources/content.cfm?ItemNumber=54283&navItemNumber=58296

2. Berlin, M., Z. Steinbach, G. Ancmon, A. Bielefeldt. 2010. Potential Sulfide Inhibition of Bacterial Dechlorination. Report to Doug Salter (Thornton Dry Cleaning Site) and Brian Olmstead (EOR Resources Corp). May.

3. Bielefeldt, A.R. and E. Krauss*. 2010. *Thornton Dry Cleaning Site: Bioremediation Bench-Scale Screening Study*. Report to the Colorado Dept. of Public Health and the Environment (CDPHE) on behalf of Doug Salter and Brian Olmstead, EOR Resources Corp. Final report, Feb.

4. Bielefeldt, A.R. 2009. *Thornton Dry Cleaning Site: Bioremediation Bench-Scale Screening Study*. Report to the Colorado Dept. of Public Health and the Environment (CDPHE) on behalf of Doug Salter and Brian Olmstead, EOR Resources Corp. Aug. 11 2nd update. Final report due Dec.

5. Srivastav, Rajat and A.R. Bielefeldt. 2008. *Evaluation of Permanganate Oxidation to Remediate NDMA Contaminated Sites: Phase 3 – Bench Scale Feasibility Study*. Report to Robert Luhrs, Raytheon Corp. Aug. 12.

6. Srivastav, Rajat and A.R. Bielefeldt. 2008. *Evaluation of Permanganate Oxidation to Remediate NDMA Contaminated Sites: Phase 2 – Bench Scale Feasibility Study*. Report to Robert Luhrs, Raytheon Corp. Feb. 18.

7. Srivastav, Rajat and A.R. Bielefeldt. 2008. *Ordway Feedlot Manure to Energy: Technical Feasibility Study.* Report to ICAST-USA and Ordway. June 19.

8. Srivastav, Rajat and A.R. Bielefeldt. 2007. *Evaluation of Permanganate Oxidation to Remediate NDMA Contaminated Sites: Literature Review*. Report to Robert Luhrs, Raytheon Corp. Sept. 17.

9. Bielefeldt, A.R., T. Illangasekare, D. Dai. 2005. *Delivery and Behavior of Vegetable Oil for Treating Chlorinated Solvent Contaminated Sites*. A Technical Review based on Laboratory and Field Results Conducted under a Grant from the U.S. Air Force Center for Environmental Excellence (AFCEE) through the Parsons Corporation.

10. Bielefeldt, A.R., M. Song, S. Taylor*. 2002. *Use of Iron Chemicals for Odor Control at the Longmont, CO, Wastewater Treatment Plant: Full Scale Results*. Research report to the City of Longmont.

11. Taylor, S.*, A.R. Bielefeldt, J. Silverstein. 2001. *The Use and Effects of Iron-Based Compounds on Wastewater Treatment Processes.* Research report to the City of Longmont.

12. Bielefeldt, A.R., T. Cort, S. Park. 2000. *Enhancing Bioremediation of Toxic Compounds using Surfactants.* Completion report to the Graduate School, Council on Research and Creative Work, at the University of Colorado. The project was funded by a Junior Faculty Development Award (JFDA), July 1999 to June 2000.

13. Bielefeldt, A.R., T. Cort, S. Park. 1999. *Effect of Surfactants on Bioremediation of Soils Contaminated with Toxic Compounds.* Completion report to the Graduate School, Council on Research and Creative Work, at the University of Colorado. The project was funded by the Summer Session Research Grant (SSRG), July 1998 to June 1999.

14. Levine, A.D., A.R. Bielefeldt, B.S. Bradley. 1991. *Energy Recovery from Degradable Plastics*. Project completion report submitted to the Iowa State Water Resources Research Institute.

15. Carlson, Haws, Lozier, Bielefeldt. 1990. *Program of Bench-Scale Testing for Treatability Evaluation of Dismal Swamp Water*. Technical Memo to CH2M Hill PAC members.

16. Levine, A.D., A.L. Spiesman, A.R. Bielefeldt. 1988. *Study of the Influence of Permanganate Oxidation on Trihalomethane Formation*. Submitted to the City of Sioux City, Iowa.

Invited Lectures

Bielefeldt, Angela R. 2022. Community engagement contributes to educating socially responsible engineering students. Distinguished Speaker Seminar, Chemical & Biological Engineering, University of British Columbia. Nov. 4.

Bielefeldt, Angela R. 2021. Socially responsible engineering as a pathway to inclusivity? A systems perspective. Engineering and Science Education program, Clemson University. October 1.

Bielefeldt, Angela R. 2019. Current issues in educating environmental engineering professionals. Rocky Mountain Association of Environmental Professionals. 20 August.

Bielefeldt, Angela R. 2018. Perspectives on the Social Responsibilities of the Engineering Profession. Environmental and Water Resources Engineering Graduate Seminar series. University of South Florida. March 21.

Bielefeldt, Angela R. 2017. The Role of Engineering Design in Educating Caring and Socially Responsible Engineers. Engineering Design and Society Division Seminar. Colorado School of Mines. Sept. 29.

Bielefeldt, Angela R. 2017. Community Engagement in Engineering Education as a Way to Increase Inclusiveness. SEAS Lecturers' Seminar on Teaching & Learning. University of Pennsylvania, Philadelphia, PA. April 19.

Bielefeldt, Angela R. 2016. Models for Integrating Design into Undergraduate Programs. Southeastern Association of Electrical and Computer Engineering Department Heads (SECEDHA). Atlanta, GA. Nov. 11.

Bielefeldt, A. 2012. Why Aren't There More Female Scientists, Engineers? PBS NewsHour Live Chat Panelist, April 25. http://www.pbs.org/newshour/rundown/2012/04/stemchat-why-arent-more-women-in-science-and-engineering.html

Bielefeldt, Angela R. 2012. Point of use water treatment for developing communities using ceramic water filters. Missouri University of Science & Technology, Environmental Research Center, April 30, Rolla, MO.

Bielefeldt, Angela R. (co-authors Guadalupe Gutierrez-Padilla, M. Hernandez, J. Silverstein) 2011. Microbial Induced Concrete Corrosion (MICC) in Sewer Pipes. University of Wyoming, graduate seminar, April 4, Laramie, WY.

Bielefeldt, Angela R., R. Scott Summers, A. Kohler, K. Kowalski. 2009. Performance Evaluation of Point-of-Use Ceramic Water Filters. AWWA Water Quality Technology Conference (WQTC). Seattle, WA. Nov. 15-18. (invited presentation)

Bielefeldt, A.R., B. Amadei, R. Scott Summers, R. Sandekian 2007. Engineering for Developing Communities (EDC): Education for the 21st Century. Water Technologies for Emerging Regions (WaTER) Center. School of Civil Engineering and Environmental Science. University of Oklahoma. Feb. 12, 2007.

Bielefeldt, A.R., B. Amadei, R. Scott Summers, R. Sandekian. 2005. Engineering for Developing Communities (EDC) Program at the University of Colorado. Sustainable Futures Institute. Michigan Technological University. Oct. 21.

Bielefeldt, A.R. and T. Illangasekare. 2002. Bioclogging Effects Relevant to In-Situ Bioremediation of Organic Contaminants. American Geophysical Union Spring Meeting. Washington D.C. May. [Invited presentation by Bielefeldt]

Patents

Bielefeldt, A.R., and H.D. Stensel, S.E. Strand, and R. Herwig. US. Patent No. 5,874,291, Issued Feb. 1999. Degradation of Environmental Toxins by a Filamentous Bacterium.

Bielefeldt, A.R., and H.D. Stensel. U.S. Patent No. 5985649, Issued Nov. 16, 1999. A Device and Method for Removal of Gas Contaminants Through a Shallow Sparged Bioreactor.

Grants & Funding

As Principal Investigator (PI) or Co-PI.

PI. "ADVANCE Partnership: Strategic Partnership for Alignment of Community Engagement in STEM (SPACES)." National Science Foundation (EES). $136,406. 8/15/22-7/31/26. Lead PI A. Ferro at Clarkson U, PIs Trotz USF, Hobbs UC Irvine, Ivey UC Berkeley.

Co-PI. "Research Initiation: Enhancing Engineering Students' Innovation Self-Efficacy through Design of K-12 STEM Projects." National Science Foundation (EEC). $199,915. 9/1/22-8/31/24. PI Azadeh Bolhari.

Co-PI. "Data analysis and civil engineering: Can we use smartphones and machine learning to learn about pavement deterioration?" University of Colorado Boulder CEAS EE-AIL IRT SEED Grant. $11,558. 12/15/20-6/30/22. PI Cristina Torres-Machi, coPI Lv.

Co-PI. "An intersectional analysis of student experiences and perceptions in êrst-year engineering projects classes" University of Colorado Boulder CEAS EE-AIL IRT SEED Grant. $6,981. 12/15/20-6/30/22. PI Malinda Zarske, coPI Soltys.

PI. "Building STEM Identity Among Undergraduate Student Mentors." University of Colorado Boulder SEED Grant. $49,999. 7/1/2020 – 12/31/2021. Co-PI: Valerie Otero.

Co-PI. "Studying Leadership Development in Undergraduate Engineering Students." University of Colorado Boulder Chancellor's Award for Excellence in STEM Education – Faculty/Staff Award. $2,850. 8/15/17 – 5/15/18. PI Rebecca Komarek.

PI. "Collaborative Research: Efficacy of Macroethics Education in Engineering." National Science Foundation (SES). $349,660. 9/1/15 – 8/31/19. Co-PIs C. Swan (Tufts University) and Nathan Canney (Seattle University).

Co-PI. "GAANN: Graduate Assistance in Areas of National Need – Engineering Community Resilience." PI Ross Corotis, additional co-PIs Javernick-Will, Liel. $885,834. 9/2015 – 8/2018.

Co-PI. "REU Site in Environmental Sustainability." National Science Foundation. PI Lupita Montoya. $299,959. 3/1/13 – 2/28/16.

Co-PI. "Environmental Engineers and Scientists of 2050: Education, Research and Practice." Association of Environmental Engineering and Science Professors (AEESP) Biennial Conference 2013. PI L. Figueroa (Colorado School of Mines), co-PIs J. Munakata Marr (CSM) and A. Ramaswami (CU-Denver). Awarded April 4, 2012 for conference in summer 2013 with a budget of ~$180,000.

PI. "Assessing Engineering Students' Understanding of Social Responsibility from Undergraduate and Graduate Education into Professional Life." National Science Foundation (EEC). $346,190. 6/1/12 – 5/31/15. No cost extension to 8/31/16.

PI. "National Inventory of Regional Collaboration." American Water Works Association. $15,000. 5/16/2011 – 12/31/2011. Co-PI R. Scott Summers.

PI. "Collaborative Research: Engineering Faculty Engagement in Learning Through Service." National Science Foundation. $174,996. 9/15/10 – 8/31/13; no cost extension to 8/31/14. Co-PIs at collaborating universities: Chris Swan (Tufts University), John Duffy (Univ. of Massachusetts-Lowell), Kurt Paterson (Michigan Technological University), Olga Pierrakos (James Madison University); each university has a separate budget.

PI. LEAP Associate Professor Growth Grant. University of Colorado. $2000. 6/1/10 – 5/30/11.

PI. "REU Site in Environmental Engineering." National Science Foundation. $299,995. 5/15/10 – 4/30/13. co-PI Fernando Rosario-Ortiz.

Co-PI. "New GK-12: Engineering for Society – An Energy and Environmental Sustainability Research Pathway to Cultivate Engineering Leaders and Enrich Education for Disadvantaged Youth." National Science Foundation. $2,834,349. 6/1/10-5/30/15. No cost extension 9/1/17. PI Jacquelyn Sullivan, co-PIs Fernando Rosario-Ortiz, Malinda Zarske.

PI. Enhanced Ceramic Water Filter. CDM. $15,000. 10/1/09 – 8/31/10.

PI. "Collaborative Proposal: Evaluation of Sustainable Engineering Education via Service Learning Efforts in Engineering." National Science Foundation. $58,634. 9/1/2009 – 2/28/2011. co PIs at collaborating universities: Chris Swan (Tufts University, lead) and Kurt Paterson (Michigan Technological University); each university has a separate budget.

Co-PI. PI Kurt Paterson (Michigan Tech) and co-PI Chris Swan (Tufts University). "A Summit on Measuring the Impacts of Project-Based Service Learning on Engineering Education." National Science Foundation. $66,806. 10/01/08 – 12/31/09.

PI. "Evaluation of Permanganate Oxidation to Remediate NDMA Contaminated Sites." EMS Corp., Evergreen, CO. $13,000. 6/08 – 12/08.

PI. "Remediation of NDMA Contaminated Groundwater by In Situ Chemical Oxidation." IHMM John J. McCambridge Research Grant. $10,000. 9/1/08 – 8/31/09.

PI. "Evaluation of Permanganate Oxidation to Remediate NDMA Contaminated Sites." EMS Corp., Evergreen, CO. $12,000. 8/07 – 2/08.

PI. "Evaluation of In Situ Treatment Methods for NDMA Contaminated Sites in Colorado" and "Remediation of Sites Contaminated by Dry Cleaning Activities in Colorado." Outreach Committee. University of Colorado - Boulder. $5000. 8/07 – 7/08. No cost extension through 12/09.

PI. Co-PI R. Scott Summers. "Determining the Importance of Silver in Home Filters used to Disinfect Drinking Water in Developing Countries" Lindbergh Foundation. $10,580. 7/1/07 – 6/31/08.

PI. Co-PI R. Scott Summers. "REU Site in Environmental Fluids - Science, Assessment, and Treatment." National Science Foundation. $285,822. 3/1/06 – 2/28/09.

Participants: 30 students; 73% female, 27% minority, 33% from non-PhD granting institutions.

Co-PI. PI R. Scott Summers. "Sustainability of the Filtron for Microbial Disinfection." Environmental Protection Agency (EPA). P3 Program. $10,000. 8/2005 - 6/2006.

Co-PI. PI B. Amadei; additional coPIs R.S. Summers, R. Sandekian. "A Course in Appropriate Technologies for the Developing World." NCIIA. $37,500. 7/2005 - 6/2008.

PI. Co-PIs Bernard Amadei and R. Scott Summers. "Engineering for Developing Communities and Earth Systems Engineering as a Catalyst for Enhancing Learning in Environmental and Civil Engineering." Funded by the National Science Foundation. 8/1/04-7/30/05; no cost extension to 1/31/06. $99,755.

PI. "Integration of Service-Learning into a Capstone Engineering Course." Service Learning Center, University of Colorado at Boulder. 1/1/04-12/30/04. $3900.

PI. "Pathogen Removal by the Filtron Water Filter." Mini Proposal to the Engineering Excellence Fund (EEF), College of Engineering and Applied Science, University of Colorado at Boulder. Oct. 15, 2003. Co-Investigators: Scott Summers, Katie Medina. 10/15/03-5/1/04. $998.

Co-Principal Investigator with T. Illangasekare (PI) and Dongping Dai (Co-PI). "Selection of Molasses or Vegetable Oil for Enhanced Bioremediation of Chlorinated Solvents." Funded by the U.S. Air Force through Parsons Engineering to Colorado School of Mines. 9/01 - 1/03. $207,033 (30% to ARB).

PI. "Wastewater Treatment Plant Ferric and Ferrous Chloride Investigation (full scale)." City of Longmont, Colorado. Oct. 2001-June 2002. $22,026.

PI. "Wastewater Treatment Plant Ferric and Ferrous Chloride Investigation (lab scale)." City of Longmont, Colorado. Dec. 2000-Feb. 2001. $6,405.

Co-Principal Investigator with A. Ramaswami and T. Illangasekare. "Bioavailability and Biostabilization of Multicomponent Dense Non-Aqueous Phase Liquids (DNAPLs) in the Subsurface." US EPA, National Center for Environmental Research and Quality Assurance. 10/1/97 - 9/30/00 (no cost extension to 12/01). $433,441 (20% to ARB).

Co-Principal Investigator with Tissa Illgangasekare. "Upscaling of flow and transport of de-icing compounds and JP-8 under conditions of bioactivity." US Air Force Office for Scientific Research through the EPA Hazardous Substances Research Center. 10/1/98 to 5/30/99 (no cost extension to 9/00). $70,000 (50% to ARB).

PI. "Enhancing Bioremediation of Toxic Compounds using Surfactants." University of Colorado Council on Research and Creative Work Junior Faculty Development Award. 7/1/99 to 6/30/00. $5,000.

PI. "Effect of surfactants of bioremediation of soils contaminated with Toxic Compounds." University of Colorado Council on Research and Creative Work (CRCW) Summer Session Research Grant. 7/1/98 to 5/31/99. $4,000.

Co-Principal Investigator with Mark Hernandez. "Modernizing Engineering Curricula by Integrating Applied Microbiology." From the Engineering Excellence Fund at the University of Colorado. 7/1/98 to 6/31/99. $16,225 (50% to ARB).

Student Research Supervision

Ph.D. Students

1. Cort, Todd, P.E. 2000. Effects of Surfactants on Pentachlorophenol Biodegradation by *Sphingomonas chlorophenolicum* sp. Strain RA2. Five papers published in peer reviewed journals. Currently: lecturer and co-director Center for Business and the Environment, Yale University.

2. Park, Sung-kil. 2002. Impacts of a Non-ionic Surfactant on the Remediation of NAPL-Associated and Soil Sorbed Pentachlorophenol. Four papers published in peer reviewed journals. Currently: POSCO, Section Manager, Environment Planning Team, Korea

3. Gutierrez-Padilla, Guadalupe. 2007. Activity of sulfur oxidizing microorganisms and impacts on concrete pipe corrosion. WEF/AWWA Rocky Mountain Student Section 1st Conference, 2004, first place poster. 3 papers published. Currently: Researcher, Boston MA.

4. Song, Myoungsuk. 2008. Surfactant Effects on Microbial Activity during Pentachlorophenol Degradation by *Sphingomonas Chlorophenolicum* strain RA2. Co-author on 2 papers. Currently: post-doc at CU-Boulder

5. Zarske, Malinda Schaefer. 2012. Impacts of service-learning projects on high school and first year engineering students' attitudes, efficacy, and persistence. Currently: senior instructor CU-Boulder.

6. Canney, Nathan, P.E. 2013. Assessing Engineering Students' Understanding of Social Responsibility from Undergraduate and Graduate Education into Professional Life. Chancellor's Award for Excellence in STEM Education – Graduate Award, University of Colorado Boulder, 2011-2012. Instructor Seattle University, 2013-2017. CYS Structural Engineers.

7. Forbes, Marissa. 2015. Course Choice Opportunity and Technical – Non-Technical Balance in Undergraduate Engineering Education. Currently: Adjunct Assistant Professor, University of San Diego.

8. Rulifson, Greg, P.E. 2015. Evolving Social Responsibility Understandings, Motivations, and Career Goals of Undergraduate Students Initially Pursing Engineering Degrees. Teaching assistant professor 2015-2018, adjunct faculty 2018-2019, Colorado School of Mines. AAAS Science and Technology Policy Fellow, USAID, 2019-present.

9. Myers, Beth. 2016. Access Pathways Into and Through Engineering Education for Underrepresented Populations. Formerly: engineering assessment specialist, ITLL, CU-Boulder. 'Rising Star in Diversity' Award 2019 from ASEE CoNECD (Collaborative Network for Engineering & Computing Diversity). Currently: Associate Vice Chancellor for Academic Planning and Institutional Effectiveness, University of Colorado Denver. Formerly: Assistant Vice Provost/Assistant Vice Chancellor, CU-Boulder.

10. Polmear, Madeline. 2019. Examining Faculty Perspectives and Practices Related to Engineering Ethics and Societal Impacts Education Through an Input-Environment-Output Lens. Currently: EUTOPIA Science & Innovation Fellowship/Marie Sklodowska-Curie COFUND Fellow at Vrije Universiteit Brussel. Formerly: post-doctoral fellow at University of Florida with Denise Simmons (2019-2021).

11. Komarek, Rebecca. 2020. Leadership Behavioral Complexity Among Engineering Capstone Design Students. Currently: assistant director of the Idea Forge, CU-Boulder.

12. Harper, James. 2020. Effective Behavior Change Modification of Fecal Sludge Management for Improved Sanitation Infrastructure Sustainability. Started Aug. 2016. Preliminary exam spring 2017, comprehensive exam April 2019. GAANN Fellow. Co-advised by Amy Javernick-Will.

13. Schill, Sabina. 2021. Understanding Undergraduate Student Mentors' STEM Identity Development in K-12 STEM Outreach Programs: A Phenomenographical Approach. Started June 2016. GK-12 Fellow, Teaching Assistant, Editor for TeachEngineering Digital Library. Currently: post-doc at Florida International University.

14. Tisdale, Joan. In progress. Sustainability integration into mechanical engineering courses and curricula. Fall 2020, Spring 2021, Fall 2021 instructor for GEEN 1400 First-year Engineering Projects. GPTI MCEN Thermodynamics Spring 2022. Passed comprehensive examination May 2022.

15. Beardmore, D.C. In progress. Exploring how invisibly dis/abled graduate students experience dis/ableism in their academic environments. Passed comprehensive examination Dec. 2021. Spring 2022 instructor for GEEN 1400 First-year Engineering Projects.

16. Higuera, Janice. In progress. Partnerships with purpose: Native Americans and Military Engineers support veteran housing. Started January 2022. Passed preliminary exam Sept. 2022.

M.S. thesis students

1. McEachern, Camille [Buehler]. 1998. Effect of Bacterial Growth by Means of Jet Fuel Constituents on the Hydraulic Conductivity and Dispersivity of Porous Media in One- and Two-Dimensional Systems. Best MS poster, Hydrology Days, Colorado State University, 1998. One paper published in peer reviewed journal.

2. Riffel, Allison. 1999. Aerobic Biostabilization of Polychlorinated Biphenyl DNAPLs by a Pure Bacterial Culture. One paper published in peer reviewed journal.

3. Pfeiffer, Patricia. 2003. Physical/Chemical Interactions of Vegetable Oil with Chlorinated Ethenes. One paper in conference proceedings; 2 journal papers published in peer reviewed journals.

4. Zamora-Thompson, Xochitl. 2004. Integrating Renewable Energy in Water Systems: Technology, Sustainability, and Design Case Studies in the Galápagos Islands. Two presentations at technical conferences.

5. Kowalski, Kate. 2008. Removal of Virus-Sized Particles and E. coli by the Potters for Peace Ceramic Water Filter. Two papers presented at technical conferences; co-author of two journal papers.

6. Srivastav, Rajat. 2008. Kinetics of NDMA Oxidation by Permanganate under Varying pH and Temperature Conditions. Two papers presented at technical conferences.

7. Kohler, Amanda. 2009. E. coli removal and washout under long-term loading conditions. Co-author on one journal paper.

8. Stewart, Michael. 2010. Effects of pH, ionic strength, and dissolved organic matter on the release of silver nanoparticles used in ceramic water filters from representative ceramic surfaces. Co-author of one journal paper.

9. Panacewicz, Lauren. 2011. Evaluation of enhanced ceramic water filtration (ECWF) systems for turbidity and bacteria removal for households in developing countries.

10. Relph, Tamara. 2012. Regional Collaboration in the Water and Wastewater Utility Sector.

11. Lewis, Jake Walker. 2019. How are engineering ethics integrated into high school education in Colorado?

M.S. non-thesis student research projects

1. Watada, Marianne. May 1997. Natural Denitirification in a Sewage Contaminant Plume, Cape Cod, Massachusetts.

2. Park, Sung-kil. Dec. 1998. The Sorption of Pentachlorophenol in Soil-Water Systems Containing a Micelle-Forming Surfactant. (obtained PhD, see above)

3. Butler, Tamara [Johndrow]. May 1999. Effect of Propylene Glycol Induced Biogrowth on Hydraulic Conductivity and Dispersivity of a Two-Dimensional Homogeneous Porous Media.

4. Song, Myoungsuk. Dec. 1999. A Study of Surfactant Toxicity Effects on Gram Negative Bacteria. (obtained PhD, see above)

5. Grant [Uttecht], Megan. May 2000. Hydrodynamic Effects of Biogrowth on Propylene Glycol in Sand Columns. One paper published in peer reviewed journal.

6. Tseng, Julia. Dec. 2000. Indigenous Microbial Transformation of Chromium(VI) in Soil under Varying Redox Conditions. One paper published in peer reviewed journal.

7. Park, Dongchan. Dec. 2001. Effects of Diesel Fuel Biodegradation on Aquifer Properties.

8. Givler, Suzanne. 2004. Bioclogging of the Filtron during Water Treatment.

9. Straten, Melissa. 2004/5. Bioclogging during Enhanced Bioremediation.

10. Hill, Jennifer. 2005. Biodegradation of lecithin and vegetable oil emulsions.

11. Soundarrajan, Subhashini. 2009. Longterm disinfection of *E. coli* by a full point-of-use ceramic water filter.

12. Berlin, Meredith. 2010. Bench scale feasibility of enhanced reductive dechlorination to remediate a dry-cleaning site: impacts of high sulfide.

13. Brandt, Erica. 2013. Dissolved oxygen and TOC effects on *E. coli* survival in ceramic water filters.

M.S. non-thesis student independent study projects

Rutkowski, Tom. 2002. Wetlands treatment for wastewater in the communities of Guadalupe and Conejos in Conejos County, CO.

Turner, Seth. 2003. Wastewater treatment for agricultural reuse for Jemez Pueblo, New Mexico.
Tucker, Hillary. 2003. Environmental Impacts of Airport Deicing Activities.
Heavner, Ben. 2003. Source water alternatives evaluation for drinking water for Conejos, CO.
Sirakavit, Glen. 2008. Improved Sustainability of the Carpet Washing Process in Afghanistan.
Wiggins, Jonathan. 2012. Gaps in Community Scale Micro-Hydro Systems in Eastern Nepal. Master's Project with EDC.

Graduate Student Independent Study courses

Herring, Duane. 2003. Bioremediation and Phytoremediation.
Dehart-Rogers, Jessica. 2015. Bioremediation.
Corts, Anna. 2015. Bioremediation.
Venkata Swamy, Susmitha. 2016. Solid Waste Management.

Undergraduate student research

1. Knight, Joshua. 1998. Biodegradation of Monochlorobenzene. Senior thesis. Earned M.S. Univ. South Carolina. Ph.D. University of Colorado Denver.
2. Kadrmas, Korey. May 1998. Attached versus Suspension Bioremediation Kinetics. 3 cr. Earned M.S. University of Colorado at Denver.
3. LaPlante, Rosanna Allen. 1999. Bioclogging effects of Propylene Glycol in Column Studies at Varying Groundwater Velocity. 3 cr. Co-author on two peer reviewed publications.
4. Martin, Colleen. 1999. Identifying Hyperaccumulating Plants Growing at Chromium Contaminated Sites in Colorado. McNair Summer Research Program scholar.
5. Wozniak, Chenine. May 2000. Surfactant-Aided Bioremediation of Pentachlorophenol in Soil. 3 cr. Co-author on one paper. Earned M.S. Colorado School of Mines.
6. Fahlin, Chris. 2002. Filtron Assessment for Drinking Water Treatment. Undergraduate Research Opportunities Program (UROP). 3 cr.
7. Medina, Katie. 2003-2004. Filtron. MEP Fellowship and Discovery Learning Center Intern. (co-advised by R. Scott Summers)
8. Hollenkamp, Lucas. 2004. Filtron. Discovery Learning Center Intern. (co-advised by R. Scott Summers). Earned M.S. at University of Minnesota-Twin Cities.
9. Malhotra, Anisha. 2004-5. Filtron removal of pathogens. Independent Study. 3 cr.
10. Arellano, Jason. 2005. Characterization of particle sizes removed by the Filtron. MEP Fellowship.
11. Leech, Kari. 2004-5. UROP: Engineers Without Borders - Haiti Water Project. Undergraduate Research Opportunities Program (UROP). Earned M.S. degree Univ. North Carolina-Chapel Hill, pursuing Ph.D. University of Colorado Boulder.
12. Bishop, Ben. 2006-7. Filtron: Removal of Fluorescent Microspheres as Viral Surrogates. Discovery Learning Center Intern. (co-advised by R. Scott Summers) Earned MS degree at Univ. Florida
13. Sparkman, David. 2007. Filtron: Removal of E. coli. Discovery Learning Center Intern. (co-advised by R. Scott Summers); Pursuing PhD at CU-Boulder in EDC program.
14. Millspaugh, Robert. 2008. Filtron: Effect of Silver on Removal of Fluorescent Microspheres as Viral Surrogates. Discovery Learning Center Intern. (co-advised by R. Scott Summers)
15. Krauss, Eva. 2009. NDMA oxidation by permanganate in the presence of TCE. Paid hourly. Earned MS from CU-Denver in 2012.
16. Pasten, E. Ray. Summer 2009. Biotransformation of arsenic and chromium co-contaminants. McNair Summer Research Program scholar.
17. Schmeisser, Lauren. 2009-2010. Filtron: Effect of E. coli concentration on treatment effectiveness. Discovery Learning Center Intern. Earned MS from CU in 2012.
18. Relph, Tamara. 2010-2011. Effect of flow rate on E. coli disinfection by ceramic water filter cores. Discovery Learning Center Intern. Earned MS from CU in 2012.

19. Schmeisser, Lauren. 2011. New dual-ceramic water filter design for water treatment in Ghana. Independent Study. 3 cr. Earned MS from CU in 2012.
20. Brandt, Erica. 2011-2012. The Effect of Dissolved Oxygen on Bacteria Inactivation in Ceramic Water Filters. CU Undergraduate Research Opportunities Program (UROP) grant. Earned BS/MS at CU in civil engineering – EDC in 2013.
21. Bowling, Tess. 2012-2013. Understanding Engineers Sense of Social Responsibility from Undergraduate and Graduate Education into Professional Life. Discovery Learning Center Intern.
22. Thomas, Whitney. 2013-2014. Student Perceptions of the Role of Social Responsibility in Engineering: Interviews with First Year Students. Discovery Learning Center Intern.
23. Trout, Sara. Fall 2014. Student Perceptions of the Role of Social Responsibility in Engineering: Interviews with Sophomore Students. Discovery Learning Center Intern.
24. Lewis, Jake. Summer 2017. Faculty Perceptions of Engineering Students' Ethics Learning in Co-curricular Settings. CU-SPUR Intern. (Continued to MS at CU, in progress)
25. Zhao, David. Fall 2018 – Spring 2019. Student and Alumni Education and Perceptions of Engineering Ethics. Discovery Learning Intern.
26. Passov, Haley. Summer 2021. Identity development through mentoring among Learning Assistants. SPUR intern.

Undergraduate summer REU student independent study research
(http://spot.colorado.edu/~bielefel/REU.html)

1. Wozniak, Chenine. 2000. Partitioning of Organic Contaminants into Surfactant Micelles. BS University of Colorado Boulder. M.S. at Colorado School of Mines (see above).
2. Garcia, Janet. 2000. Biodegradation of Propylene Glycol under Varying Redox Conditions. BS New Mexico State University.
3. Nguyen, Suzanne. 2001. Laboratory Investigation on the Physical Behavior of Organic Substrates and TCE in the Subsurface. BS University of Utah. MS at SUNY.
4. Warren, Jennifer. 2002. Bioclogging in Sand due to Vegetable Oil. BS University of Texas Austin. MS at University of California – Davis.
5. Murphy, Jessica. 2002. Effect of Propylene Glycol Induced Biogrowth on the Hydraulic Conductivity and Dispersivity of a Two-Dimensional Heterogeneous Porous Media.
6. Vos, Catherine. 2003. Investigation of Enhanced Bioremediation for Chromium Stabilization in Contaminated Field Soil. Co-author on 1 conference paper and 1 peer-reviewed journal paper. BS University of Colorado Boulder.
7. Kowalski, Kate. 2003. Filtron. Co-advised with R. Scott Summers. BS Syracuse University. Completed M.S. degree at University of Colorado – Boulder; see further details above
8. Wright (Wendell), Heather. 2004. Disinfection of colloidal silver and the Filtron. Co-advised with R. Scott Summers. BS and MS Michigan Technological University, PhD at University of South Florida.
9. Colyar, Kendra. 2004. Environmental effects of microbial concrete corrosion. Co-advised with Mark Hernandez. BS University of Idaho. Completed MS University of Colorado-Boulder.
10. Stephen Barr. 2006. Hexavalent chromium biotransformation in soil under sulfate-reducing conditions. Co-author and presented 1 paper at professional conference. Graduated June 2009 with B.S. environmental engineering from Cal Poly-San Luis Obispo. Graduate degree University of Edinburgh
11. Cherylynn Schilling. 2007. Removal of fluorescent microspheres and E. coli by the Filtron. Co-advised by R. Scott Summers. Co-author on peer-reviewed paper under review. BS Southern Illinois University.
12. Caldwell, Adam. 2008. Permanganate oxidation of NDMA. BS from Gannon University. MS at Carnegie Mellon University.

13. Schreier, Simon. 2008. Effect of flow rate on E. coli removal by the Filtron. Co-advised by R. Scott Summers. Co-author on peer-reviewed paper. BS Brandeis University. Pursuing MS/PhD at Clemson University in Entomology and Soil Sciences.
14. Relph, Tamara. 2010. Enhanced Ceramic Water Filter for Removal of Pathogens and Inorganics from Water. Co-advised by R. Scott Summers. Earned MS from CU in 2012.
15. Stewart, Sydney. 2011. Silver and flowrate effects on bacterial disinfection by ceramic water filter cores.
16. Wald, Ileana. 2012. Oxygen effects on bacterial disinfection by ceramic water filter cores.
17. Distler, Lauren. 2014. Sustainability of Site Remediation.
18. Nez, Tasha. 2015. Environmental health educational resources for Native American communities. Co-advised by Lupita Montoya.

Undergraduate student independent study projects

1. Teets, Hunter. 2003. Foutaka Zambougoo [Mali] Design Alternatives. EWB Project.
2. Richards, Laura. 2004. Water Quality in Muramba, Rwanda. EWB Project. Completed MS at University of North Carolina
3. Stephens-Hotopp, Brian. 2004. Lagoon and Solar Pump Study for Wastewater from Jemez Pueblo, New Mexico. MS Northwestern University.
4. Stevenson, Kitty. 2008/2009. Greenhouse Gas Emissions from Conferences and Events at UCAR. (co-advised by Kimberly Kosmenko, UCAR)
5. Mathers, Sarah. Fall 2009. Bioremediation Evaluation for Air Force PJKS Site in Colorado.
6. Sposato, Meghan. Fall 2014. Life Cycle Assessment of Hydroloc Soil Amendment versus Conventional Landfarming for Treatment of Drilling Waste.

Served on the Ph.D. committees (final defense) of: Kwan-Hyang Jo (1997), Nayef Al-Mutari (1997), Jiehl Oh (1998), Tarek Saba (1998), Gilbert Barth (1999), Jeff Cornell (2000), Cyndee Gruden (2000), Wendy Cheung (2002), Ivette O'Brien (2002), Ellen Rubin (2003), Muna Abu-Dalo (2003), Azra Bilgin (2003), Mehmet Iselyn (Univ. of CO – Denver; 2004), Miquelito Arias (2005), Hyeoksun Choi (2005), Chad Seidel (2006), Tae Uk Kim (2006), Steve Dutton (2008), Mari Rodriguez (2009), R. Blaine McClesky (2010); Shauna Kocman (University of Colorado – Denver, 2010); Susi Marlina (University of Colorado at Denver, 2012); Heming Wang (University of Colorado at Denver, 2013); Casey Forestal (University of Colorado at Denver, 2013); Joshua Knight (University of Colorado – Denver, 2013), David Wagner (2013), Kaitlin Litchfield (2014), Todd France (2015), Masoud Arshadi (2015), Amy Piscopo (2015), Wyatt Champion (2016), Amanda Hohner (2016), Zhe (Jenny) Huang (2017), Jessica Dehart-Rogers (2017), Hadi Yazdi (2017), Lauren Reising (2018), Joshua Jack (2019), Alexandra Lau (CU Physics, 2020), Tanya Ennis (CU School of Education, 2022).

External evaluator for Seema Jilani, University of Karachii – Pakistan (2005).

Served on Ph.D. committee (comprehensive exam) of: Eric Vestal (Colorado School of Mines, 2001); Yvonne Bogatsu (2001), Paul Leidig (Purdue University, 2021).

Served on the Master's thesis committees of: Dan Thompson (1996), Cecilia Penarrieta (1998), Jude Grounds (1999), Summer Waters (1999), Kendra Morrison (CU-Denver 1999), Allison Keith (2000 defense; 2002 graduated), Derek Richard (Colorado School of Mines, 2001), Erich Simon (2001), Melissa Anderson (2001), Sybil Sharvelle (2002), Yumiko Abe (2003), Natalie Smith (2003), Shannon Ullmann (Colorado School of Mines, 2004), Lisa Clarke (2004), Ann Kaplan (Colorado School of Mines, 2004), Gary Vance (2004), April Tumey (2005), Hyukjin Cho (2007), Molly Brodin (2008), Joyce Huang (2012), Anne Wrobetz (2014), Laura Reising (2015), Paige Pruisner (2016), Naomi Chang (2019).

Served on Master's report committee of: Wyatt Kennedy (2011; Building Systems Program), Laurent Feraudet (2011; EDC); John Barbee (2012; EDC); Cary Ellmers (2012; EDC); Chayla Rowley (2012; EDC); Lia Brune (2013; EDC); Ben Miller (2013); Connie Bottenberg (2013; EDC); Joseph Lytwyn (2017; CEM).

Mentor for undergraduate student hourly employees assisting with graduate research in the laboratory: Rosanna Allen LaPlante (civil engineering), Dean Rager (chemical engineering), Samantha Illangasekare (engineering student from Stanford), Shannon Taylor (civil engineering), Eva Krauss.

Mentor for high school students working on science fair project: Zachary Steinbach and Greg Ancmon, Monarch High, Sulfide Toxicity Effects on PCE Dechlorination (2009-2010).

Coursework Teaching

Faculty Course Questionnaire (FCQ) data are based on anonymous student ratings of the course and instructor overall (maximum over multiple offerings); 1 (low) to 6 (high), thru 2019.

Course Number **Title** (credits), years taught Course description. *FCQ course overall / instructor overall (max)*	Total # of Semesters Taught	# of Students/ semester
EVEN 1000 **Introduction to Environmental Engineering** (1 credit), 2006-10 A required overview course for first-year env. engrg students; sustainability, ethics, and team lifecycle assessment. *FCQ 5.0/5.6*	5	28-84
AREN 1316 **Introduction to Architectural Engineering** co-taught with CVEN 1317 **Introduction to Civil Engineering** (2 credits), 2012, 2014-2016 A required overview course to introduce ethics, sustainability, professional licensure, and team bridge design. **2-cr version developed**. *FCQ 4.9/5.3*	4	78-89
CVEN 1317 **Introduction to Civil Engineering** (1 credit), 1997-2011, 2017-22 A required overview course for freshman Civil Engineering students, including ethics, professional skills and the Body of Knowledge, sustainability, and team bridge design. *FCQ 4.8/5.2*	21	16-74
CVEN 3414 **Fundamentals of Environmental Engineering** (3 credits), 2004 Required for all CVEN and EVEN students.	1	43
CVEN 4434/5434 **Environmental Engineering Design** (3-4 cr.), 1998-2013, 2019 and 2020 (co-taught with M. Walker) The capstone course required for undergraduate env. engineering students. A real-world project is taken from proposal to design. Service learning projects often included. **Graduate version developed.** *FCQ 5.3/5.8*	14	10-53
CVEN 4474/5474 **Hazardous & Industrial Waste Management** (3 credits), 1997-2012, 2018; Elective; regulations, risk assessment, site remediation. *FCQ 5.1/5.4.* Taught for distance learning (CATECS) in Spring 2001. Taught online asynchronous in Summer 2013, 2014, 2016 *FCQ 3.8/4.2*	16	14-40
CVEN 4897 **Professional Issues in Civil Engineering** (2 credits), 2015-2019 FE preparation, ethics, sustainability, professional licensure, risk/uncertainty, regulations/public policy, leadership. **New course developed.** *FCQ 3.0/4.4*	5	19-64
CVEN 6834/5834/5514 **Bioremediation** (3 credits), 1996-2004, 2007, 2012, 2018. A graduate-level course covering in-situ and ex-situ methods for bioremediation of contaminated sites. **New course developed.** *FCQ 5.6/5.8*	9	6-19
CVEN 5834/5544 **Solid Waste Management** (3 credits), 2000-2003 A graduate-level course covering waste generation and treatment options. **New course developed.**	4	8-21
GEEN 1400 **Engineering Projects** (3 credits), 2020-2022 Hands-on team design projects for first-year students	3	24-30
GEEN 1500 **Introduction to Engineering** (1 credit 2011; 2 credits 2012) Created and taught the five-week module on Civil Engineering and the Engineering Grand Challenges. *FCQ 4.5/5.1*	2	45-128
GEEN 3024 **Materials Science for Engineers** (3 credits), 2021-2022 Included hands-on laboratory and student projects; blended online/in-person	2	20-24
SUST 2800 **Introduction to Sustainability** (1 credit), 2015, 2016 Seminar course of readings and discussion for RAP. Humanities & social science elective for engineering. **New course developed.** *FCQ 4.3/5.3*	2	22-30

2013 teaching at the University of Canterbury: ENNR 322 Ecological Engineering (17 students; one-third of the course on groundwater and contaminant transport); ENCN 481 Environmental Engineering Design (16 students; one-half of the course on remediation design).

2018 in CVEN/EVEN 4434: I was the primary advisor for 7 teams. Team of 5 students won the Rocky Mountain Regional Water Environment Federation / American Water Works Association student design competition and went on to win the national competition at WEFTEC in wastewater treatment.

2013 in CVEN 4434: Twelve teams of students in the course. I was primary advisor for 6 teams. Team of 5 students won the Rocky Mountain Regional Water Environment Federation / American Water Works Association student design competition; the other CU team of 4 students placed second. In the National Competition at WEFTEC the CU team placed third.

A team of five students placed second in the Federal Aviation Administration (FAA) University Design Competition in the area of Airport Environmental Interactions. An additional team of 5 CU students (primarily advised by my co-instructor Prof. Linden) tied for second place in the same competition.

2012 in CVEN 4434: Seven teams in the course. Team of 5 students won the AECOM Water/Wastewater National Design Competition and a second team of 5 students made the semi-finals. 16 teams from universities around the U.S. and Canada competed and 6 teams advanced to the semi-finals.

A team of 5 students won the Rocky Mountain Regional Water Environment Federation / American Water Works Association student design competition. They beat out 5 teams from other universities. They went on to win the national competition at WEFTEC in wastewater treatment.

A team of six students placed second in the Federal Aviation Administration (FAA) University Design Competition in the area of Airport Environmental Interactions. Two additional teams of 5 students each tied for third place in the same competition.

2011 in CVEN 4434: Team of 4 students won the AECOM Water/Wastewater National Design Competition. 15 teams from universities around the U.S. and Canada competed. A team of 5 students placed second in the Rocky Mountain Regional Water Environment Federation / American Water Works Association student design competition.

2010 in CVEN 4434: Team of 5 students reached the semi-finals of the AECOM Water/Wastewater National Design Competition.

2009 in CVEN 4434: Team of 6 students won the Rocky Mountain Regional Water Environment Federation / American Water Works Association student design competition, beating teams from Colorado State University, Colorado School of Mines, and the University of Wyoming. They competed in the National competition at WEFTEC in Orlando, FL, in Oct. and won.

Two teams of 4 students each in the Environmental Engineering Design course competed in the Halliburton Environmental Footprint Challenge in the College of Engineering at CU-Boulder. Four total teams competed. The teams in my course won first and fourth place.

Taught part of Solid Waste course at UNESCO-IHE in Delft, Netherlands. July 2006. 21 students.

Professional Development Highlights

EDUC 8165/8175 Special Topics: Research on Equity Focused Programs in STEM. Prof. Edd Taylor. Fall 2020. Audited course.

EDUC 8165/8175 Special Topics: Theories of Mathematics and Science Learning. Prof. Victoria Hand. Spring 2020. Audited course.

Research on Engineering Practice (REP) Workshop. Funded by the National Science Foundation. Oct. 2-3, 2018. Santa Clara University, CA. [Facilitated by Brunhaver, Jesiek, Korte, Coso Strong.]

Integrating Design and Community Engagement within the Curriculum Workshop. Sponsored by EPICS, EWB-USA, and EFELTS. West Lafayette, Indiana. June 19-20, 2014. [Facilitated by Bielefeldt, Kazmer, Leslie, Oakes, Paterson, Pierrakos, Swan, Zoltowski]

Engineering Education Research Leader Networkshops: Mentoring, Communicating, and Power Brokering for the Next Generation (NSF EEC-1314725 and 1314868). Online collaborative. Oct. 2013 – July 2016.

EDUC 8804 Qualitative Research Methods in Science and Engineering Education. Prof. Kevin O'Connor. Fall 2015. Audited course.

Engineering Education for a Sustainable Future. Pre-conference workshop (U264D) at the American Society for Engineering Education (ASEE) Annual Conference. Atlanta, GA. June 23, 2013, 9 am – 4 pm. [Led by W.E. Kelly, J.R. Seay, L. Haselbach, M.W. Roberts, A.R. Bielefeldt]

Frontiers in Environmental Engineering Education. St. Louis, MO. Oct. 18-19, 2012. [Led by Joel Burken from Missouri University of Science & Technology, co-organized by Bielefeldt, Hughes, Reinhart; NSF sponsored; 35 attendees from around the U.S.]

Engineering Faculty Engagement in Learning Through Service Workshop. University of Colorado Boulder. Sept. 18-19, 2012. [Organized by Bielefeldt, Swan, Paterson. 20 faculty and staff from institutions across the U.S.]

Engineering Faculty Engagement in Learning Through Service: Summit and Distillery. University of Colorado Boulder. Sept. 22-24, 2011. [Organized by Bielefeldt, Swan, Paterson, Duffy, Pierrakos. 24 invited faculty participants from North America.]

Peak-to-Peak Workshop – Teaching Sustainability. University of Colorado Boulder. Aug. 15-16, 2011.

Exploring how people Learn Engineering, NSF-sponsored workshop at Colorado School of Mines, Aug. 2-4, 2010.

University of Colorado's Emerging Leaders Program Fellow. 2008-2009 academic year.

Frontiers in Environmental Engineering Education Workshop. Jan. 8-10, 2007. Arizona State University.

Selected as a 2006-2007 Institute for Scholarship on Engineering Education (ISEE) scholar. The Institute is part of the Center for the Advancement of Engineering Education which is funded by the National Science Foundation. Attended the 1-week workshop in Washington D.C. July 2006.

Leadership Education for Advancement and Promotion (LEAP) Introductory Leadership Workshop. University of Colorado – Boulder. January 5-8, 2004.

Women's Engineering Leadership Institute (WELI) Conference. Nov. 5-8, 2003. Snowbird, Utah.

National Science Foundation Engineering Education Scholars Workshop. July 1997. Carnegie Mellon University.

Professional Organizations and Related Service Activities

American Society for Engineering Education (ASEE). Member 1999 to 2001; 2003 to present.
Presider of various sessions at the 2005, 2006, 2007, 2008, 2010, 2012, and 2013 conferences.
Environmental Engineering division: treasurer 2006-2007, secretary 2007-2008, program chair 2008-2009, Division Chair 2009-2010, director 2010-2013.
Constituent Committee for Community Engagement in Engineering Education, Chair-Elect 2011-13.
Community Engagement Division: secretary 2015-2016, Division Chair 2018-2020. Past chair 2020-2023. Judge for video competition 2021-2022.
Best Paper Committee for PICIII, 2013 and 2015.
Representative of ASEE on Project Teams as part of the *Mobilizing Disciplinary Societies on Behalf of Our Students … and our Planet*. Project Kaleidoscope (PKAL), Mobilizing STEM Education for a Sustainable Future, and Disciplinary Associations Network for Sustainability (DANS), http://www.aacu.org/pkal/disciplinarysocietypartnerships/mobilizing/index.cfm, 2011-12.
Rocky Mountain Section: Vice Chair East, Chair, Past Chair. Fall 2016 - 2020.
Zone IV ASEE Conference Chair. 2017-2018.
CU Boulder Campus Representative. 2022-present.

American Society of Civil Engineers (ASCE), Member. 2011 to present.
Corresponding member of the Civil Engineering Program Criteria Task Committee (CEPCTC), 2013.
Member of the Body of Knowledge 3 Task Committee, 2016 – 2018.
Civil Engineering Program Criteria Task Committee (CEPCTC), 2020-2023.
Education Committee, 2022 - present.

American Association for the Advancement of Science (AAAS), Committee on Scientific Freedom and Responsibility. 2017 – 2023.
Reviewer for AAAS Science and Human Rights Coalition Student Essay Competition. 2017, 2018.

Association of Environmental Engineering and Science Professors (AEESP). Member 2002 to present.
Elected to the Board of Directors. Term: Fall 2006 – 2009.
Elected Treasurer. Term: Fall 2007 – Dec. 2009.
Audit committee. Term: 2010 – 2014.
Treasurer of AEESP Foundation. Jan. 2008 – Dec. 2009. Foundation board – Dec. 2010.
Education committee: 2010 – 2022, Liaison to ASEE Environmental division: 2010 – present.
Co-organized 2013 Conference. One of 3 individuals to organize the 50th Anniversary Conference held at Colorado School of Mines in July. The conference attracted over 400 registered attendees from institutions in 14 different countries, over 200 abstracts for ~100 oral presentations and over 200 posters, and was, based on feedback received, a resounding success.
Body of Knowledge Committee. Spring 2018.
Community Engaged Research Task Force. 2022-2023.

American Academy of Environmental Engineers & Scientists (AAEES)
Editorial board for Environmental Engineer Magazine. Sept. 2006 to 2014.
Tau Chi Alpha, student honor society, committee. Spring 2013.
Code of Ethics and Diversity Statement committee. 2021-2022.

Engineers Without Borders – USA and EWB-CU. Fall 2003 to 2013.

International Association of Water Quality (IAWQ). Member 1998 to 2003, 2005 to 2014.

Water Environment Federation (WEF). Member 1998 to 2013.
Research Symposium Program Committee. Oct. 1998 to Oct. 2002.
Presider of various research symposia sessions at the WEF Annual Conference and

Exposition in 1996, 1998, 1999, 2001, 2002.
Judge of oral and poster presentations at the WEF/AWWA Rocky Mountain Regional Student Conference; 2006; Colorado State University.
Faculty advisor for the CU student chapter of Rocky Mountain WEF/AWWA, 2010 – 2013.

ASCE Journal of Professional Issues in Engineering Education and Practice. Associate Editor. June 2017 – 2019.
ASCE Journal of Civil Engineering Education. Deputy Editor. 2020 – present.

International Journal for Service Learning in Engineering (IJSLE): Humanitarian Engineering and Social Entrepreneurship, publisher Faculty of Applied Science at Queen's University and sponsored by the NCIIA. Editorial Board, 2011 – present. Senior editor, 2018 – present.

Reviews in Environmental Science and Biotechnology, publisher Springer Netherlands, ISSN 1569-1705 (print) and 1572-9826 (online); Editorial Board, 2009 – 2019.

Jim Lehrer / PBS NewsHour, Science Team (NSF-funded), technical advisory board. 2007-2009; 2012-2014. Yearly meeting. Recommendations for topics for science reports and review of coverage. http://www.pbs.org/newshour/science/

Graduate Research Fellowship Program, National Science Foundation, Review Panel, 2003, 2004, 2007.

Science, Mathematics, & Research for Transformation (SMART) Defense Scholarship for Service Program, applicant reviews, 2015.

Taught review course for Civil Engineering Professional Engineering (PE) exam, Environmental topics. Spring 2007. ~100 students total. University of Colorado – Denver.

Proposal reviews for:
- Arkansas Science and Technology Authority
- DoD SERDP Program
- Dutch Technology Foundation STW
- Environmental Research & Education Foundation (EREF)
- Hong Kong Research Grant Council (RGC)
- Israel Science Foundation
- National Institutes of Water Resources (NIWR)
- National Science Foundation: Small Business Innovation Research (SBIR), REU Program, Engineering Education Division, Division of Undergraduate Education, International Research Experience for Students (IRES) Program
- Water Resources Center at the University of Wisconsin
- Western Region's Water Resources Research Competitive Grants Program
- U.S. Environmental Protection Agency SBIR

Journal paper reviews for:
- Advances in Engineering Education
- Advances in Environmental Research
- Australasian Journal of Engineering Education
- Biodegradation
- Biologia
- Biotechnology and Bioengineering
- Chemical Engineering Journal
- Chemosphere
- Civil Engineering and Environmental Systems

Engineering Studies
Environmental Engineer Magazine
Environmental Engineering Science
Environmental Monitoring and Assessment Journal
Environmental Science and Technology
Environmental Technology
European Journal of Engineering Education
Global Environmental Change
International Journal of Engineering Education
International Journal of Environment and Pollution
International Journal of Environment and Waste Management
International Journal of STEM Education
International Journal of Water
Journal of Civil Engineering Education
Journal of Cleaner Production
Journal of Contaminant Hydrology
Journal of Engineering Education
Journal of Engineering for Sustainable Development: Energy, Environment, and Health
Journal of Environmental Chemical Engineering
Journal of Environmental Engineering – ASCE
Journal of Environmental Engineering and Science
Journal of Environmental Management
Journal of Environmental Quality
Journal of Geotechnical and Geoenvironmental Engineering
Journal of Hazardous Materials
Journal of Professional Issues in Engineering Education and Practice
Journal of Science and Engineering Ethics
Journal of Soil and Sediment Contamination
Journal of Women and Minorities in Science and Engineering
Reviews in Environmental Science and Biotechnology
Science and Engineering Ethics
Structure and Infrastructure Engineering: Maint, Mgmt, Life-Cycle Dsn & Perform.
Studies in Educational Evaluation
Studies in Higher Education
Transactions on Education
Waste Management
Water Environment Research
Water Research

Book and book chapter reviews for:
Arnold Publishers (Water Technology)
John Wiley publishers (Introduction to Engineering, 2nd edition; Introduction to Infrastructure: Civil Engineering, Environmental Engineering, and the Built Environment).
McGraw-Hill (Environmental Biotechnology; Biology for Environmental Engineers; Concepts in Engineering)
Oxford University Press (Service-Learning: Engineering in Your Community)

University Service

Department of Civil, Environmental, and Architectural Engineering (CEAE)
Teaching Quality Framework (TQF) committee and teaching evaluations, 2020-2022.
Associate Chair for Undergraduate Education. Fall 2012 to spring 2013, fall 2014 to spring 2015.

Curriculum Committee. Fall 2000/spring 2001, fall 2002 to 2003, Chair fall 2003 to summer 2005, fall 2006 to summer 2007, fall 2008 to spring 2013, Chair fall 2011 to spring 2013, fall 2014 to spring 2015, fall 2018 - present.
ABET assessment and evaluation coordinator. Spring 2008 to summer 2018.
Primary author of ABET self-study for Civil Engineering. 2010/2011, 2016/2017
Contributed to ABET self-study for Environmental Engineering. Fall 2016.
Contributed to ABET self-study for Architectural Engineering. 2016/2017.
Executive Committee. Fall 2015 – Spring 2018.
Personnel Committee. Fall 2012 – present.
PUEC for Julie Korak's reappointment (with Amy Javernick-Will). Fall 2022.
PUEC for Sherri Cook's tenure case (with Roseanna Neupauer). Fall 2022.
PUEC for Lupita Montoya's tenure case (with JoAnn Silverstein). Fall 2016 – spring 2017.
PUEC for Sherri Cook's reappointment (with JoAnn Silverstein). Fall 2017 – spring 2018.
Mentoring Committee. Spring 2018 – present. Mentor for Cook, Livneh, and Korak.
Task force on High School Recruiting for CEAE. Fall 2011 to spring 2013.
Undergraduate advising, average 12 undergraduate students and 5 graduate students per term. 1997 through Spring 2005; Fall 2006 to present.
Search Committee for faculty hire. 2004/2005, 2006/2007, 2012/2013 academic years.
Faculty Goal Setting / Annual Review Committee. Spring 2013, 2016, 2017.
Fundamentals of Engineering (FE) review for environmental. Spring 2008 to 2011.
Freshman advisor. Spring 1999 to fall 2002.
Operations Committee. Fall 2001 to summer 2002.

<u>Integrated Design Engineering / Engineering Plus Program</u>
Program Director. July 2019 to present.
Transfer credit approval, all petitions from undergraduate students.
Faculty search chair 2020-2021, 2022.
Program coordinator search chair, 2022.
Mentor for Katherine Ramos, 2021 to present.
Promotion for Zarske to Senior Instructor (2019) and Principal Instructor (2022).
Promotion for Soltys to Senior Instructor (2020).
Promotion for Segil to Senior Instructor (2020).
All annual performance ratings for instructors and staff.
All Admitted Students Days, Explore Engineering Days, 2019 to present.
Led program renaming initiative; re-name accepted April 2022.
Developed merit review criteria and promotion / reappointment criteria. 2020-2022.
Teaching Quality Framework (TQF) for unit teaching evaluation. 2022.
Nominations of faculty and staff for College and University awards.
Represent program on Administrative Council and Undergraduate Education Council.
ABET assessment and evaluation coordination
Lead assessment and evaluation activities for GEEN 1400 and GEEN 2010.

<u>Environmental Engineering (EVEN) cross-disciplinary degree program</u>
Program Director. Sept. 2006 to June 2010.
During this time enrollment in the program grew from ~45 students to ~160 students, U.S. News & World Report ranked the program 18th among undergraduate environmental engineering specialties at PhD granting universities (11th among publics).
Participated in College outreach activities: Engineering Open House Oct. 2006, WIEP Discover Engineering Day Feb. 2007 & 2008, Explore Engineering Day Mar 2007, 2008, 2009
Represented EVEN in freshman orientation August 2007, 2008, 2009
Supervisor for undergraduate Earn Learn Students assisting the program: Anna Herring (fall 2007-spring 2008); Nicole Seminara (fall 2008 – fall 2009); Timothy Mendt (fall 2009).
Associate Director. August 2014 to December 2016.

Curriculum Committee. August 2014 to December 2016.
ABET assessment and evaluation coordinator. July 2014 to December 2016.
Web master. Fall 2006 to spring 2011.
Faculty member. Fall 1998 to present.
Student advisor for 5-15 undergraduate students, fall 1999 to spring 2004, fall 2010 to present.
Advisor for all freshmen and transfer students, 20-60/yr, fall 2006 to spring 2010.
On Dean's task force to review EVEN degree, May – July, 2006.
High School Honors Institute, Summer 2007 and 2008.

College of Engineering at the University of Colorado - Boulder
First-Level Review Committee (FLRC). Evaluates reappointment, tenure, and promotion cases. 2017 – present. (Assistant Chair spring 2018; Chair fall 2018 – 2020)
Member of the group that led the Engineering for Developing Communities (EDC) program. Three key faculty and 1 staff person. 2004-2009.
Member of the Women in Engineering Program (WIEP) faculty advisory board. 1997 - 2005.
Representative to the Educational Policy and Planning committee (EP&P) for EVEN, College of Engineering, University of Colorado. 1998 - 2002.
Representative for CVEN to the Strategic Futures Council for the College of Engineering. 1999-2000.
Bioengineering Committee. 1998-1999, 2002-2005, 2006-2008.
Undergraduate Education Council. 2003-2005, 2006-2010, 2012-2013, 2014 – 2016, 2019-present. Sub-committee to review GEEN 1400 fall 2014.
Assessment Committee. Spring 2008 – Summer 2018.
Scholarship Committee. 2007-2010.
First Year Task Force. Spring 2010.
Faculty co-mentor for the Engineers Without Borders (EWB) CU student chapter. 2003 - 2005.
Search committee for Director of Student Engagement & Community Building Programs. Spring 2009.
Search committee for Director of Assessment & Accreditation. Fall 2016.
Guest lectures in GEEN 1500 Introduction to Engineering on behalf of EVEN (2006, 2007, 2008, 2009) and CVEN (2002, 2003, 2004); MEP leadership class (2004); EVEN 1000 class (2002, 2003).
Student interviews for BOLD Gold-Shirt program (spring 2010, 2011).

Graduate School at the University of Colorado – Boulder
Beverly Sears Fellowship Committee. 2004. Reviewed graduate student proposals.

Boulder Faculty Assembly. Reviewed nominees for BFA service award. 2013, 2016, 2017.

University of Colorado Boulder.
Vice Chancellor's Advisory Committee (review reappointment, promotion, tenure cases). 2023 – present.
Campus Sustainability Working Group. 2014-2015.
Faculty Teaching Excellence Program (FTEP), Faculty Associate. Spring 2017 – present.
Ad hoc reappointment committee, Environmental Design. Spring 2020.
SEED grant reviews for RIO. 2021, 2022.

University of Colorado (system). Privilege and Tenure Committee. 2018 – present.

Community Service

K-12 Outreach – Provided demonstrations for:
Eldorado K-8 School, Superior CO, second, third, and 6th grade classes, Dec. 2015

Eldorado K-8 School, Superior CO, second, 6th, and 7th grade classes, Dec. 2014
Engineering Career Day for High School Women sponsored by WIEP. Mar. & Oct. 1997
Expanding Your Horizons for junior high school girls sponsored by AAUW. Mar. 1999; Apr. 2003.
High School Success Institute for Minority Students. July 1999.
Energy Workshops for Middle School Girls sponsored by WIEP. July & Aug. 1999.

Assisted with EWB-University of Minnesota during sabbatical in Fall 2005.

Service learning projects in senior design course. Projects for: San Pablo and Mayapan, Belize (in association with EWB-CU, 2001; Jalapa, Nicaragua (in association with EWB-CU, 2002); Conejos County CO (in association with iCAST, 2002); University of Colorado (2003, 2010, 2011); Jemez Pueblo NM (in association with iCAST 2003); Center and Canon City, CO (in association with iCAST in 2004); a sustainable goat dairy and community-scale biodiesel production near Holyoke, CA (in association with iCAST in 2006); Pesqueira, Mexico (in 2006); Belen, Peru (in association with the CU Engineering for Developing Communities Program in 2010); Delta Timber, Big B's, and microhydro power in CO (as a partner with iCAST in 2011); San Miguel County CO waste-to-energy facility (as a partner with iCAST in 2012); solar thermal cooling for Tunisia (as a partner with iCAST in 2013); indoor air quality in low income multi-family housing (as a partner with iCAST in 2013).

Outreach research projects to evaluate remediation feasibility: dry cleaning site in Thornton, CO (2007-2010); NDMA remediation at site north of Boulder (2007-2009); chromium contamination in Denver (2000-2003).