

APPENDIX B: ABET FACULTY VITAE

Faculty	Page
Amburgey.....	263
Bowen.....	265
Braxtan.....	265
Chen.....	269
Daniels.....	271
Fan.....	273
Gergely.....	275
Janardhanam.....	277
Kane.....	279
Keen.....	281
Kernicky.....	283
Khire.....	285
Munir.....	287
Naylor.....	289
Ogunro.....	291
Pulugurtha.....	293
Saunders.....	295
Sun.....	296
Tempest.....	298
Warren.....	300
Weber.....	302
Weggel.....	303
Whelan.....	305
Wu.....	307

APPENDIX B: ABET FACULTY VITAE

JAMES AMBURGEY

EDUCATION:

Ph.D., Georgia Institute of Technology, Civil and Environmental Engineering, 2002
M.S., Georgia Institute of Technology, Civil and Environmental Engineering, 2000
B.S.C.E., University of North Carolina at Charlotte, Civil Engineering, 1998

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor, Department of Civil and Environmental Engineering, May 2012 – Current, Full-Time
- UNC Charlotte, Assistant Professor, August 2006 – May 2012, Full-Time
- UNC Charlotte, Visiting Assistant Professor, August 2005 – August 2006, Full-Time
- Centers for Disease Control and Prevention, Emerging Infectious Diseases Postdoctoral Research Fellow, August 2003 – August 2005
- Georgia Institute of Technology, Graduate Research Assistant, September 1998 – May 2002
- UNC Charlotte, Undergraduate Research Assistant, September 1996 – August 1998

NON-ACADEMIC EXPERIENCE:

- Water Treatment Research, Inc., President, January 2002 – Present, Part-Time

CERTIFICATIONS/REGISTRATIONS:

- P.E., State of North Carolina

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Water Works Association (AWWA)

HONORS AND AWARDS:

None

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- University Patent Committee (2015-present)

IMPORTANT PUBLICATIONS (past five years):

1. Alansari, A., and J.E. Amburgey. (2020). Critical elements of flocculation in drinking water treatment. *AWWA Water Science* 6(2): e1213.
2. Polaczyk A.L., Amburgey, J.E., Alansari, A., Poler, J.C., Propato, M., and V.R. Hill. (2020). Comparison of techniques to calculate zeta potential from electrophoretic mobility measurements of environmental colloids. *Colloids and Surfaces A* 586(2020):124097 (DOI: 10.1016/j.colsurfa.2019.124097)
3. Simmonds, L.P., Simmonds, G.E., Wood, M., Marjoribanks, T.I., and J.E. Amburgey. (2021). Revisiting the Gage–Bidwell Law of Dilution in Relation to the Effectiveness of Swimming Pool Filtration and the Risk to Swimming Pool Users from *Cryptosporidium*. *Water* 13(17): 2350. (<https://doi.org/10.3390/w13172350>)
4. Alansari, A., Amburgey, J.E., and N. Madding. (2018). A Quantitative Analysis of Swimming Pool Recirculation System Efficiency. *Journal of Water and Health* 16(3):449-459. (DOI: 10.2166/wh.2018.223).
5. Sahu, A., Blackburn, K., Durkin, K., Eldred, T.B., Johnson, B.R., Sheikh, R., Amburgey, J.E., and J.C. Poler. (2018). Green synthesis of nanoscale anion exchange resin for

APPENDIX B: ABET FACULTY VITAE

- sustainable water purification. *Environmental Science: Water Research & Technology* 4(10): 1685-1694.
7. Lu, P. and J.E. Amburgey. (2016). A pilot-scale study of Cryptosporidium-sized microsphere removals from swimming pools via sand filtration. *Journal of Water and Health* 14(1): 109-120.
 8. Selbes, M., Amburgey, J.E., Peeler, C., Alansari, A., and T. Karanfil. (2016). Evaluation of Seasonal Performance of Conventional and Phosphate Amended Biofilters. *Journal American Water Works Association* 108(10):E523-E532.
 9. Lu, P., Amburgey, J.E., Hill, V.R., Murphy, J.L., Schneeberger, C.L., and M.J. Arrowood. (2017). A full-scale study of Cryptosporidium parvum oocyst and Cryptosporidium-sized microsphere removals from swimming pools via sand filtration. *Water Quality Research Journal* 51(1): 18-25. (DOI: 10.2166/wqrjc.2016.015).
 10. Lu, P., Amburgey, J.E., Hill, V.R., Murphy, J.L., Schneeberger, C.L., Arrowood, M.J., and T. Yuan. (2017). Removals of Cryptosporidium parvum Oocysts and Cryptosporidium-Sized Polystyrene Microspheres from Swimming Pool Water by Diatomaceous Earth Filtration and Perlite-Sand Filtration. *Journal of Water and Health* (DOI: 10.2166/wh.2017.221).
 11. "Systems and methods for bromide separation and reuse." 2021. US Patent Issued: US 11,040,896 B2 (Co-inventors: Drs. Keen, and Sun)
 12. "System and Method for Testing Firearm Operating Characteristics." 2020. US Patent Issued: US 10,704,855 B2.
 13. "System and Process for Filtering Water with Ultrafine Granular Media." 2019. Patent Pending. (Co-inventor: Derek French (Wateropolis Corp.)). Publication Number: US2019/0099704 A1
 14. "Separation Media, Devices, and Applications Thereof." 2020. Patent Pending. Publication Number: US 2020/0360914 A1. (Co-inventors: Dr. Jordan Poler, Abhispa Sahu, and Tim Eldred).
 15. "Computer Implemented Methods for Using Artificial Intelligence (AI) to Predict the Treatability of Water." 2021. Patent Pending. Application Number: 63/147,590. (Co-inventors: Drs. Amir Alansari and Ben Radford)
 16. "Devices, Systems, and Methods of Measuring Water Quality Parameters and Using them with Artificial Intelligence (AI) to Predict the Treatability of Water." 2021. Patent Pending. Application Number: 63/257,642. (Co-inventors: Drs. Amir Alansari and Ben Radford)

PROFESSIONAL DEVELOPMENT (most recent):

- Associate Editor, American Water Works Association Water Science. (2020-Present)
- Member of the Technical Review Committee (TRC) in charge of changes to the Model Aquatic Health Code (MAHC) for the CDC. Document made available for regulatory guidance to all US States for use with Public Swimming Pools (2020)

APPENDIX B: ABET FACULTY VITAE

JAMES BOWEN

EDUCATION:

Ph.D., Civil Engineering, Massachusetts Institute of Technology, 1990

M.S., Civil Engineering, Vanderbilt University, 1983

A.B., Botany, Duke University, 1979

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor 2003-2020, Interim Chair 2017-2018, Graduate Program Director & Associate Chair 2018-2020, Full-Time; 2020-present, Part-Time.
- UNC Charlotte, Civil & Environmental Engineering Department, Assistant Professor, 2000 – 2003, Full-Time.
- North Carolina State University, Adjunct Professor, Department Civil, Construction, and Environmental Engineering, 2001- 2005, Part-Time
- Duke University, Lecturer, Nicholas School of the Environment, 1999-2000, Part-Time
- UNC Charlotte, Assistant Professor, Engineering Technology Department, 1996-2000, Full-Time.
- Massachusetts Institute of Technology, Lecturer, Department of Civil Engineering, 1994-1995, Part-Time
- Tufts University, Instructor, Center for Environmental Management, 1992-1994, Part -Time.

NON-ACADEMIC EXPERIENCE:

- ENSR Consulting and Engineering, Acton MA, Senior Hydrologist, Project Manager/Surface Water Quality Section Manager, 1990-1996, Full-Time.
- Massachusetts Institute of Technology, Cambridge MA, Graduate Research Assistant, Department of Civil Engineering, 1984-1989, Full-Time.
- Vanderbilt University, Nashville TN, Research Instructor and Research Assistant, Department of Civil and Environmental Engineering, 1981-1984, Full-Time.
- Engelhard Industries, Newark NJ, Quality Control Technician, 1980-1981, Full-Time.

CERTIFICATIONS/REGISTRATIONS:

- EIT, 1983

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers
- Water Environment Federation
- Sigma Xi, Scientific Research Society
- Tau Beta Pi, Engineering Honor Society
- Chi Epsilon, Civil Engineering Honor Society

HONORS AND AWARDS:

- UNC Charlotte, William States Lee College of Engineering

APPENDIX B: ABET FACULTY VITAE

- Teaching Excellence Award, 2007, Undergraduate Education.
- UNC Charlotte, William States Lee College of Engineering Teaching Excellence Award, 2004, Graduate Education.
- National Science Foundation, New Century Scholar, 1998.
- M.I.T. Hugh Hampton Young Fellowship, 1986-1989.
- Tau Beta Pi Engineering Honor Society, 1983.
- Vanderbilt Summer Research Fellowship, 1983.
- Magna Cum Laude, Duke University, 1979.

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Chair, Civil and Environmental Engineering Department, Undergraduate and Graduate Student Advisor Search Committee, 2019, 2020.
- Chair, Civil and Environmental Engineering Department Chair Search Committee, 2013-2014.
- College of Engineering Faculty Organization (CEFO) President-Elect and President, 2008-2010.
- College of Engineering Faculty Organization (CEFO) Secretary, 2005-2007.
- Chair, College Review Committee on Promotion and Tenure 2010-2011, 2012-2013.
- Chair, Department Review Committee for Promotion and Tenure, 2015-2016.
- Chair, College of Engineering Reassignment of Duties Committee, 2011-2013.
-

IMPORTANT PUBLICATIONS (past five years):

1. Burbes, Daniel, and James D. Bowen. 2021. Using ADCIRC to Extend the Time Period of the Neuse River Estuary Eutrophication Model. Report to Water Resources Research Institute of the University of North Carolina, Raleigh, NC.
2. Bowen, James D., William Langley, and Babatunde Adeyeye. 2019. Jordan Lake Responses to Reduced Nutrient Loading: Results from a New Three-Dimensional Mechanistic Water Quality Model. Technical Report Submitted to the North Carolina Policy Collaboratory, December 2019.
3. Bowen, James D., and Noyes B. Harrigan. 2018. Water quality model calibration via a full-factorial analysis of algal growth kinetic parameters. *J. Mar. Sci. Eng.* 6(4), 137; <https://doi.org/10.3390/jmse6040137>.
4. Bowen, James D., and Noyes B. Harrigan. 2017. Comparing the impact of organic versus inorganic nitrogen loading to the Neuse River Estuary with a mechanistic eutrophication model. Report 470, Water Resources Research Institute of the University of North Carolina, Raleigh, NC.

PROFESSIONAL DEVELOPMENT (most recent):

- UNC System Initiative to Develop Online Course Materials, June 2020
- Instructor at a UNC Charlotte sponsored faculty development workshop to develop sustainability related coursework, May 2015.
- Estuarine and Coastal Modeling Conference, San Diego CA, October 2017, November 2019.

APPENDIX B: ABET FACULTY VITAE

NICOLE BRAXTAN

EDUCATION:

Ph.D., Structural Engineering, Lehigh University, 2010

M.S., Civil Engineering, Princeton University, 2004

B.S., Civil Engineering, Rutgers University, 2002

ACADEMIC EXPERIENCE:

- UNC Charlotte, Assistant Professor, 2016 – Current, Full-Time
- Manhattan College, Assistant Professor, 2010 – 2015, Full-Time

NON-ACADEMIC EXPERIENCE:

- DMJM Harris, Structural Engineer, Bridge Design Group, January 2005 – August 2005
- French & Parrello Associates, P.A., Summers 2001 and 2002
- Structural Engineering Intern, December 2001 – January 2002
- Groundwater & Environmental Services, Inc., Engineering Intern, Summer 2000

CERTIFICATIONS/REGISTRATIONS:

- EIT, New Jersey, 2001

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (ASCE), 2016 - present; 2008-2010
- Structural Engineering Institute (SEI), 2016 - present
- International Network for Structural Art (INSA), 2011-present
- American Institute of Steel Construction Member (AISC), 2008-2010, 2017- present
- American Concrete Institute Member (ACI), 2008-2010, 2017-present

HONORS AND AWARDS:

- William States Lee Excellence in Teaching Award – Graduate Teaching Awardee, 2020
- Gerald R. Seeley Award – ASEE Civil Engineering Division, 2015
- Rossin Doctoral Fellow, 2008 – 2010
- Yen Fellowship, 2009; Hoppes Fellowship, 2007 – 2008
- Brink Fellowship, 2007 – 2008; Gibson Fellowship, 2005 – 2007
- ACI New Jersey Chapter Award, 2002
- Garretson Hageman 1968 Memorial Award, 2001
- Ernest R. Schultz 1930 Scholarship, 2001
- Bloustein Distinguished Scholar, 1998–2002
- National Merit Scholar- Outstanding Scholar, 1998

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- UNCC COE, B.S. in Construction Engineering Committee, May-August 2018
- UNCC CEE, CEE Curriculum Committee, 2021-2022
- UNCC CEE, EPIC Research Assistant Professor Search Committee, 2019
- UNCC CEE, Undergraduate Academic Appeals Committee, 2018-2022
- UNCC CEE, Computing Committee, 2018-2019

APPENDIX B: ABET FACULTY VITAE

- UNCC CEE, ASCE Carolinas Conference Committee, 2016-2017
- International Building Code (IBC) Fire Code Action Committee, 2020-2021
- ASCE/SEI Fire Protection Committee – 2016-2022; Fire Following Earthquake Subcommittee, 2018-2022; Educational Subcommittee, 2020-2021
- National Science Foundation Proposal Review Panel, 2017, 2018
- 10th Int. Conf. on Structures in Fire - Session Moderator, Princeton University, June 2016
- Girls in Science and Engineering Day at the Intrepid Air and Space Museum – 2012: MC Faculty Organizer
- Manhattan College Summer Outreach Programs – 2011 and 2013: Presenter for Women and Minorities in Engineering Program and Yonkers Summer Program
- Faculty mentor for AISC Steel Bridge Competition – 2011 and 2013

IMPORTANT PUBLICATIONS (past five years):

1. Shabaniyan, M. and Braxtan, N. (2021) "Thermo-mechanical Behavior of Glulam Beam-to-girder Assemblies with Steel Doweled Connections Before, During, and After Fire." *Journal of Structural Fire Engineering*.
2. Elhami-Khorasani, N., Braxtan, N., Carlton, A., Dalton, J., Farshadmanesh, P., Kamath, P., Ketabdar, M., LaMalva, K., and Memari, M. (2021) "Post-earthquake fire assessment of buildings: Evaluation framework." *ASCE/SEI*
3. Zhou, A., Smith, M., Braxtan, N., Smith, C., and LaMalva, K. (2017) "Chapter 11: Structural Acceptance Criteria" *Structural Fire Engineering*, K. LaMalva (editor), *ASCE/SEI Manual of Practice*.
4. Whelan, M., Braxtan, N., Mayo, G., Tempest, B. (2020). "Experimental Modal Analysis of Double Tee Floors in a Fire Damaged Parking Deck for Post-Fire Vibration-Based Condition Assessment." *IMAC-XXXVIII Conference & Exposition*. February 10-13, 2020. Houston, TX.
5. Bahrani, B., Saunders, C., Shabaniyan, M., Braxtan, N., Rockwell, S. and Zhou, A. (2018) "Performance-Based Design of a High-Rise Residential Building Using Cross-Laminated Timber." Case Study presented at *SFPE 12th International Performance-Based Codes and Fire Safety Design Methods*. April 25-27, Oahu, Hawaii, 155 pp.
6. Whitney, R. Braxtan, N.L., Alsayed, H. (2018) "Recommendations for Improving Fire Performance of Steel Bridge Girders." *Proceedings of the Structures Congress 2018*. April 19-21, Fort Worth, TX.

PROFESSIONAL DEVELOPMENT (most recent):

- NSF: Making the Leap to Large – Workshops April-May 2021 (7 x 1.5-hr sessions)
- Woodworks Southeast Wood Solutions Fair, Charlotte, NC November 2, 2017
- Woodworks Mid-Atlantic Wood Solutions Fair, Washington, DC, August 29, 2017
- UNCC Center for Teaching and learning – Mid-day Mini Conference on Active Learning, April 8, 2016

APPENDIX B: ABET FACULTY VITAE

SHEN-EN CHEN

EDUCATION:

Ph.D., Civil Engineering, West Virginia University, 1996
M.S.C. E., Civil Engineering, West Virginia University, 1992
B.S.C.E., Civil Engineering, West Virginia University, 1989

ACADEMIC EXPERIENCE:

- UNC Charlotte, Professor, August 2014 – Present
- 2019 – China National High-End Forensic Expert – Sichuan University, China
- 2016 – 2018 – China National High-End Foreign Expert – Tongji University, China
- Academia Sinica, Taiwan, Visiting Professor, September 2015 – December 2015
- National Institute of Technology, Fulbright-Nehru Research Scholar, August 2014 – December 2014
- Nanjing University, China, Visiting Professor, October 2014
- UNC Charlotte, Associate Professor, August 2009 – August 2013
- UNC Charlotte, Assistant Professor, August 2005 – August 2009
- University of Alabama at Birmingham, Associate Professor, September 1999 – August 2005
- West Virginia University, Research Scientist, October 1995 – September 1999
- West Virginia University, Graduate Research and Teaching Assistant, 1989 – 1995

NON-ACADEMIC EXPERIENCE:

- Retained forensic engineer: PEG Inc. Birmingham, AL (2000-present).

CERTIFICATIONS/REGISTRATIONS:

- Registered Professional Engineer since 1998, W.Va. #13427

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (ASCE)
- Society of Experimental Mechanics (SEM)
- American Society of Professional Engineers (ASPE)
- International Society of Optical Engineering (SPIE)
- American Society of Nondestructive Testing (ASNT)
- American Society of Engineering Education (ASEE)
- National Earthquake Engineering Society (NEES)
- Society of Petroleum Engineers (SPE)

HONORS AND AWARDS:

- Best Student Paper Award, Lead: Xiwen Xu, Co-authors: Luocheng Wang, Karl Lin, Tiefu Zhao, Shen-en Chen, Dave Cook and Derek Ward, IEEE, iTEC2021, June 23- June 25, 2021, Chicago, IL.
- International Faculty, Indian National Global Initiative of Academic Networks (GIAN), Ministry of Human Resource Development, Government of India, host institute: National Institute of Technology at Trichy, Tiruchirappalli, Tamil Nadu, India, 2019.

APPENDIX B: ABET FACULTY VITAE

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Technical organizing committee, Geochina 2018.
- EPIC Transportation Energy Cluster Leader, 2016-2019.
- UNC Charlotte Faculty Senate: 2018-2019.
- College Policy Committee, Research Subcommittee Leader, 2021.
- College diversity committee, member, 2019-2020.
- Department Review Committee (DRC), 2020-2021.

IMPORTANT PUBLICATIONS (past five years):

1. Mira, J., Braxtan, N.L., Chen, S.E., Zhao, T.F., Harris, L. and Cook, D. (2021) "Battery Train Fire Risk on a Steel Warehouse Structure," *Journal of Architectural Environment and Structural Engineering Research*, 4(3), 9-19.
2. Chen, S.E., Shanmugam, N.S., Boyajian, D., Chavan, V.S., Weber, E. and Baarson, K. (2021) "Prototyping Rail Track for Micro-People Movers Using Additive Manufacturing: Failure Topology Characterization," *Construction and Building Materials*, 281, 122623, <https://doi.org/10.1016/j.conbuildmat.2021.122623>.
3. Chen, S.E., Murugan, B., Sai, R., Satyanarayana, P., Waran, L., Kumar, S., Alhaider, I., Natarajan, C., Calvo, J. and Janardhanam, R. (2020) "Structural Assessment of Cyclone Hudhud in Vizag, Andhra Pradesh," *ASCE Journal of Performance of Constructed Facilities*, 34(5).
4. Chen, S.E., Tang, W.W., Irizarry, A.A., Baez-Rivera, Y., Pando, M.A., Majerekar, M., Young, D.T. and Ng, Y. (2020) "Post-Hurricane Investigations A Critical Component towards Improved Grid Resiliency-Hurricane Maria in the Puerto Rico," *ASCE Journal of Performance of Constructed Facilities*, 34(4).
5. Hu, M.S., Pan, D.M., Zhou, F.B., Li, J.J., Wang, Y.Z., Chen, S.E. and Xu, Y.Z. (2020) "Multi-Hole Acquisition of a 3D-RVSP in a Karst Area: Case Study in the Wulunshan Coal Field, China," *Applied Geophysics*, 17(1), 37-53.
6. Hu, M.S., Pan, D.M., Li, J.J., Zhang, H., Dong, S., Chen, S.E. and Xu, Y. (2019) "3D-RVSP Experimental Study above a Carbonate Outcrop for Coal Resource Exploration," *Acta Geophysica*, 67, 95-107.
7. Tang, H.Z., Yang, H.Y., Lu, G.Y., Chen, S.E., Yue, J.H. and Zhu, Z.Q. (2019) "Small Multi-Turn Coils Based on Transient Electromagnetic Method for Coal Mine Detection," *Journal of Applied Geophysics*, 169, 165-173.
8. Yang, Y.H., Chen, S.E., Yue, J.H., Li, F.P. and Zhang, H. (2019) "Transient Electromagnetic Response with a Ramp Current Excitation Using Conical Source," *Digital Object Identifier*, IEEE Transactions, 7, 63829-63836.
9. Wang, P., Mao, X.B. and Chen, S.E. (2019) "CO₂ Sequestration Characteristics in the Cementitious Material Based on Gangue Backfilling Mining Method," *International Journal of Mining Science and Technology*, 29, 721-729.

PROFESSIONAL DEVELOPMENT (most recent): None

APPENDIX B: ABET FACULTY VITAE

JOHN DANIELS

EDUCATION:

D. Eng., Civil Engineering, University of Massachusetts Lowell, 2001
M.S.C.E., Civil Engineering, University of Massachusetts Lowell, 1998
B.S.C.E., Civil Engineering, Lehigh University, 1996

ACADEMIC EXPERIENCE:

- UNC Charlotte, Professor, Department Chair Civil and Environmental Engineering, 2014 – Present, Full-Time
- UNC Charlotte, Associate Professor and Interim Chair, 2012 – 2014, Full-Time
- UNC Charlotte, Associate Professor, 2010 – 2012, Full-Time
- UNC Charlotte, Associate Professor, 2007 – 2010, Part-Time
- UNC Charlotte, Assistant Professor, 2001 – 2007, Full-Time
- UNC Charlotte, Visiting Assistant Professor, 2001, Full-Time

NON-ACADEMIC EXPERIENCE:

- S&ME, Inc., URS Corp. (now AECOM), HDR, Inc., Duke Energy, Industry Subcontractor, Laboratory/field testing and groundwater modeling, 2002 – Present, Part-Time
- NSF, Directorate for Engineering, Division of Civil, Mechanical and Manufacturing Innovation (CMMI), Program Director, Geomechanics and Geomaterials (GEO MM) and Geotechnical Engineering Programs (GTE), 2009-2010
- NSF, Division of Engineering Education and Centers, Program Director and AAAS Science and Technology Policy Fellow, 2007-2009
- TRC Companies, Inc., part-time, Project Engineer, 1999-2000

CERTIFICATIONS/REGISTRATIONS:

- Registered Professional Engineer, State of North Carolina, License No. 028018

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (Grade: Fellow)
- Professional Engineers of North Carolina
- American Society for Engineering Education
- ASTM International (D18 and E50 Committee Member)

HONORS AND AWARDS:

- Outstanding Technical Achievement Award, Professional Engineers of North Carolina, 2015
- Awarded Young Engineer of the Year, Professional Engineers of North Carolina, 2006
- Service Medal, International Society of Environmental Geotechnology, August 2005
- Recipient of a Certificate in recognition of contributions to the International Society of Environmental Geotechnology, July 2002

APPENDIX B: ABET FACULTY VITAE

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- ABET, Inc., Program Evaluator (performed B.S. civil engineering program reviews of other universities in 2017, 2018, 2020, and 2021)
- Duke Energy, Chair of National Ash Management Advisory Board (2014-2020).
- World of Coal Ash Conference (May 2022), Technical Program Committee

IMPORTANT PUBLICATIONS (past five years):

1. Mahedi, M., Satvati, S., Cetin, B., and Daniels, J.L. (2020) "Chemically Induced Soil Water Repellency and the Freeze-Thaw Durability of Soils", *ASCE Journal of Cold Regions Engineering*, 34(3) pp. 1-7.
2. Zhang, Y., Daniels, J.L., Cetin, B., Baucom, I.K. (2020) "Effect of Temperature on pH, Conductivity, and Strength of Lime-Stabilized Soil" *ASCE Journal of Materials in Civil Engineering* Vol. 32 (3), pp. 1-12.
3. Feyyisa, J.L. and Daniels, J.L. (2019) "The role of ash mineralogy on breakthrough pressure and contact angle: a statistical evaluation" *Coal Combustion and Gasification Products*, Vol. 11, pp. 45-58
4. Feyyisa, J.L., Daniels, J.L., Pando, M.A., Ogunro, V.O. (2019) "Relationship between breakthrough pressure and contact angle for organo-silane treated coal fly ash" *Environmental Technology and Innovation*, 14, 1-20.
5. Daniels, J.L. and Das, G.P. (2018) "Influence of Flowrate on Leachability, Coal Combustion and Gasification Products" Vol. 10, pp. 34-40.
6. Keatts, M.I., Daniels, J.L., Langley, W.G., Pando, M.A. and Ogunro, V.O. (2018) "Apparent Contact Angle and Water Entry Head Measurements for Organo-Silane Modified Sand and Coal Fly Ash", *ASCE Journal of Geotechnical and Geoenvironmental Engineering* 144 (6) 1-9.
7. Feyyisa, J.L., Daniels, J.L., and Pando, M.P. (2017) "Contact Angle Measurements for use in Specifying Organo-Silane Modified Coal Combustion Fly Ash, *ASCE Journal of Materials in Civil Engineering*, 29(9) 1-14.
8. Jordan, C.S., Daniels, J.L., Langley, W. (2017) "The Effects of Temperature and Wet-Dry Cycling on Water Repellent Soils", *Environmental Geotechnics*, 4 (4), Institution of Civil Engineers Publishing, United Kingdom,
9. <http://www.icevirtuallibrary.com/content/article/10.1680/envgeo.14.00032>
10. Daniels, J.L. (2016) "Coal Ash and Groundwater: Past, Present and Future Implications of Regulation". *William & Mary Environmental Law and Policy Review*, 40 (2), 535-555.

PROFESSIONAL DEVELOPMENT (most recent):

- Collaborative Research: Engineered Water Repellency to Mitigate Frost Susceptibility: Decoupling Osmotic and Matric Potential, PI (100%), U.S. National Science Foundation, \$335,315, 8/1/19 - 7/31/22, Data Science Supplement March 2021 (\$67,062, PI 100%)
- Use of Organosilanes to Mitigate the Impact Of Freeze-Thaw Damage to the Granular Roadways In Iowa, PI (100%), Iowa Highway Research Board via Michigan State University, \$90,259, 11/5/2019-10/31/22.

APPENDIX B: ABET FACULTY VITAE

WEI FAN

EDUCATION:

Ph.D., Civil Engineering, The University of Texas at Austin, 2004

M.S., Transportation Engineering, Tongji University, 1999

B.S., Civil and Mechanical Engineering, Tongji University, 1995

ACADEMIC EXPERIENCE:

- UNC Charlotte, Professor, August 2018 – Present, Full-Time
- UNC Charlotte, Associate Professor, August 2013 – July 2018, Full-Time
- University of Texas at Tyler, Associate Professor, August 2011 – August 2013, Full-Time
- University of Texas at Tyler, Assistant Professor, August 2006 – July 2011, Full-Time
- University of Texas at Austin, Graduate Research Assistant, August 1999- May 2004, Part-Time

NON-ACADEMIC EXPERIENCE:

- SAS Institute Inc., Senior Analytical Optimization Solution Software Developer, R&D Division, June 2004 – August 2006

CERTIFICATIONS/REGISTRATIONS:

- Registered Professional Civil Engineer, State of Texas, Registration No. 103500

CURRENT PROFESSIONAL MEMBERSHIPS:

- Member, American Society of Civil Engineers (ASCE)
- Member, Transportation Research Board (TRB), National Academy of Sciences and National Academy of Engineering

HONORS AND AWARDS:

- Most Cited Article for the Year 2020 Award, International Journal of Transportation Science and Technology, January 2021
- Affiliate Faculty of the School of Data Science, UNC Charlotte, August 15, 2020 - August 14, 2022
- Best Area Editor Award, Autonomous Vehicles and Intelligent Infrastructure, The 19th COTA International Conference of Transportation Professionals (CICTP2019), July 2019
- Excellent Paper Award, 2018 World Transport Convention, 2018
- 2016 College of Engineering Graduate Teaching Award Nominee, UNC Charlotte, April 2016

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Member, UNC Charlotte CEE Graduate Committee, 2021-present
- Handling Editor, TRR Inaugural Editorial Board, Transportation Research Record, 2019-present
- Associate Editor, ASCE Journal of Transportation Engineering, Part A: Systems, 2017-Present
- Associate Editor, International Journal of Transportation Science and Technology, 2015-Present
- Associate Editor, IEEE Transactions on Intelligent Transportation Systems, 2007-Present

APPENDIX B: ABET FACULTY VITAE

- Member, ASCE Connected & Autonomous Vehicles Impacts Committee, 08/15/2017-Present
- Member, ASCE Public Transport Committee, 08/25/2011 – Present
- Member, ASCE Rail Transportation Committee, 07/2011 – Present
- Member, TRB Committee on Access Management (ACP60), 4/15/2021 – Present
- Member, TRB Committee on Light Rail Transit Systems (AP075), 4/15/2021 – Present

IMPORTANT PUBLICATIONS (past five years):

1. Qiu, B. and Fan, W., Machine Learning Based Short-Term Travel Time Prediction: Numerical Results and Comparative Analyses, *Sustainability*, 13(13), 7454, 2021.
2. Liu, P. and Fan, W., Analysis of Head-On Crash Severity Using A Partial Proportional Odds Model, *Journal of Transportation Safety & Security*, Volume 13, Issue 7, pp. 714-734, 2021.
3. Song, L., Fan, W. and Liu, P., Exploring the Effects of Connected and Automated Vehicles at Fixed and Actuated Signalized Intersections with Different Market Penetration Rates, *Transportation Planning and Technology*, Volume 44, Issue 6, pp. 577-593, 2021.
4. Liu, S. and Fan, W., Investigating Operational Performance of Connected and Autonomous Vehicles on Signalized Superstreets, *Transportation Planning and Technology*, Volume 44, Issue 6, pp. 594-607, 2021.
5. Li, Y. and Fan, W., Optimizing Transit Equity and Accessibility of the City of Charlotte by Integrating Transit Gap Index, A General Transit Feed Specification (GTFS) Data Relevant Performance Metric, *ASCE Journal of Transportation Engineering, Part A: Systems*, Volume 147, Issue 4, 2021.
6. Li, Y., Song, L. and Fan, W., Day-of-the-Week Variations and Temporal Instability of Factors Influencing Pedestrian Injury Severity in Pedestrian-Vehicle Crashes: A Random Parameters Logit Approach with Heterogeneity in Means and Variances, *Analytic Methods in Accident Research*, Volume 29, 100152, 2021.
7. Song, L., Fan, W., Li, Y. and Wu, P., Exploring Pedestrian Injury Severities at Pedestrian-Vehicle Crash Hotspots with An Annual Upward Trend: A Spatiotemporal Analysis with Latent Class Random Parameter Approach, *Journal of Safety Research*, Volume 76, pp. 184-196, 2021.
8. Lin, Z. and Fan, W., Exploring Bicyclist Injury Severity in Bicycle-vehicle Crashes Using Latent Class Clustering Analysis and Partial Proportional Odds Models, *Journal of Safety Research*, Volume 76, pp. 101-117, 2021.
9. Liu, P. and Fan, W., Exploring the Impact of Connected and Autonomous Vehicles on Mobility and Environment at Signalized Intersections through Vehicle-to-Infrastructure (V2I) and Infrastructure-to-Vehicle (I2V) Communications, *Transportation Planning and Technology*, Volume 44, Issue 2, pp. 129-138, 2021.

PROFESSIONAL DEVELOPMENT (most recent):

- Participant, Fundamentals of Leadership: An Immersive Experience, 2020.
- Participant, Leadership UNC Charlotte, UNC Charlotte ADVANCE Faculty Training Workshop, Charlotte, NC, Fall 2019 - Spring 2020.
- Participant, Graduate Faculty Mentor Training Workshop, UNC Charlotte Graduate School, Charlotte, NC, October 8, 2019.

APPENDIX B: ABET FACULTY VITAE

JANOS GERGELY

EDUCATION:

Ph.D., Civil Engineering, University of Utah, 1998

M.S., Civil Engineering, University of Utah, 1996

Diploma de Inginer, Civil Engineering, Polytechnic Institute of Cluj-Napoca, 1990

ACADEMIC EXPERIENCE:

- The University of North Carolina at Charlotte, Associate Professor, 2004 – Present, Full-Time
- The University of North Carolina at Charlotte, Assistant Professor, 1998 – 2004, Full-Time

NON-ACADEMIC EXPERIENCE:

- Structural Engineering Consultant, 1995 – Present, Part-Time
- University of Utah, Teaching and Research Assistant, 1994 – 1998, Full-Time
- Marco GmbH (Germany), Field then Project Engineer, 1992 – 1994, Full-Time
- Braunsteiner GmbH (Austria), Construction Supervisor, 1991 – 1992, Full-Time
- Vaileanu SRL (Romania), Field Engineer, 1990 – 1991, Part-Time

CERTIFICATIONS/REGISTRATIONS:

- Registered Professional Engineer in North Carolina
- Registered Structural Engineer in Illinois
- Post-disaster Safety Assessment Evaluator (structural evaluations)
- Urban Search and Rescue – Structures Specialist
- Emergency Medical Technician
- Firefighter I and II
- Technician level certificates in: Technical and Rope Rescue, Vehicular Rescue, Water Rescue, Mountain Rescue

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers
- American Institute of Steel Construction
- Structural Engineers Association of North Carolina

HONORS AND AWARDS:

- Finalist for the Bank of America Teaching Award (2010, 2016)
- Nominated (several times) for, and winner (once) of, the College of Engineering Undergraduate and Graduate Teaching Awards

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Scholarship of Teaching and Learning Grants Committee (most recently)
- Reappointment, Promotion and Tenure Committee (most recently)
- Curriculum Committee Chair
- Structures Group Coordinator
- ASCE Student Chapter Adviser

APPENDIX B: ABET FACULTY VITAE

- Reviewer and frequent Panelist for the National Science Foundation
- Book and Journal reviewer for several publishers
- Judge for the Carolinas Excellence in Construction Award
- Reviewed several codes for ACI Technical Activities Committee
- Organizing Team member for ACI and ASCE conferences in CLT
- Current and former member of committees in TMS, ACI, PCA
- Led or assisted local schools with their Balsa Wood Bridge Competition, Science Olympiad, and Odyssey of the Mind, and judged Science Fair exhibits
- Assisted one of the local school boards and several local churches in structural assessment
- Volunteer on construction missions in the Dominican Republic
- Regular participant at Habitat for Humanity work days
- Member of St. Aquinas Church Building and Facilities Committee
- Volunteer with All Hands And Hearts (Abaco Island, Bahamas)
- Volunteer firefighter (Long Creek Fire Department)
- First responder as urban search and rescue structures specialist (several deployments)
- Second responder as structural damage assessor (several deployments)

IMPORTANT PUBLICATIONS (past five years):

1. Sanusi, O., Tempest, B., Ogunro, V., and Gergely, J. (2016). "Leaching Characteristics of Geopolymer Cement Concrete Containing Recycled Concrete Aggregates." J. Hazard. Toxic Radioactive Waste, 10.1061/(ASCE)
2. Tempest, B., Gergely, J., Weggel, D. (2015) "Engineering Characterization of Strength and Elastic Properties of Geopolymer Cement Concrete Materials" Journal of Green Building V10 N4.
3. Tempest, B., Gergely, J., Skipper, A. (2016) "Reinforced Geopolymer Concrete in Flexure: a Closer Look at Stress-Strain Performance and Equivalent Stress Block." Accepted by the PCI Journal.
4. Tempest, B., Cavalline, T., Gergely, J. (2016) "Predicting Corrosion-Related Bridge Durability With Lab-Measured Permeability Results." In preparation.

PROFESSIONAL DEVELOPMENT (most recent):

- California Office of Emergency Services Post-Disaster Safety Assessment Program, One-day Evaluator Training seminar
- AISC – 8 week long night school on the Seismic Design Manual (web based)
- Numerous webinars presented by ATC, FEMA, AISC, and ASCE
- Attended several local and regional conferences and seminars

RESEARCH ACTIVITIES (past five years):

- "Mechanical Testing of 115 kV T-Pylon Post Insulator Assembly – Phase II," EPRI, 2019 [PI Dr. D.T. Young] (\$39,196).
- "Mechanical Testing of Composite Insulated Cross-Arm," EPRI, 2021 [PI Dr. Y. Park] (\$52,460).

APPENDIX B: ABET FACULTY VITAE

RAJARAM JANARDHANAM

EDUCATION:

Ph.D., Civil Engineering, Virginia Polytechnic Institute and State University, 1981

M.S.C.E., Civil Engineering, Annamalai University, India, 1968

B.S.C.E., Civil Engineering, Annamalai University, India, 1964

ACADEMIC EXPERIENCE:

- UNC Charlotte, Civil Engineering, Professor, July 1993 – Present, Full-Time
- UNC Charlotte, Civil Engineering, Associate Professor, July 1984 – June 1993, Full-Time
- UNC Charlotte, Civil Engineering, Assistant Professor, August 1981 – June 1984, Full-Time
- UNC Charlotte, Urban and Environmental Engineering, Lecturer, August 1980 – May 1981, Full-Time

NON-ACADEMIC EXPERIENCE:

None

CERTIFICATIONS/REGISTRATIONS:

None

CURRENT PROFESSIONAL MEMBERSHIPS:

- Member ASCE
- Member ASEE
- Member Phi Kappa Phi
- Member Chi Epsilon
- Member Sigma Xi

HONORS AND AWARDS:

- Bonnie E. Cone Distinguished Professor in Teaching (Finalist), 1998 and 2003
- Tau Beta Pi- UNCC Student Chapter Outstanding Professor Award, 1998
- UNCC-ALCOA Foundation Outstanding Faculty Award (Graduate), 1998
- Tau Beta Pi - UNCC Student Chapter Outstanding Professor Award, 1994 and 1996
- UNCC - ALCOA Foundation Outstanding Faculty Award (Undergraduate), 1992
- Bank of America UNCC University Teaching Excellence Award, 1991
- Tau Beta Pi - UNCC Student Chapter Outstanding Professor Award, 1988 and 1991
- ASCE - UNCC Student Chapter Outstanding Professor Award, 1986

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- With NSF funding, offered a Summer Institute for “REU” (Research Experience for Undergraduate students), Summer 1987, Summer 1989, Summer 2006.
- With NSF funding, developed a scheme and introduced computer integration in Geotechnical (civil) Engineering laboratory courses through work stations for

APPENDIX B: ABET FACULTY VITAE

- conducting experiments on-line from local and remote sites (1986 - 1988)
- With support from various public and private sectors (NSF, Z. Smith Reynolds Foundation, ASME, IBM, Verbatim, and Duke Energy) and in collaboration with faculty from several disciplinary areas of engineering launched and participated an “Engineering Outreach” program to introduce core engineering topics to regional secondary school science and mathematics teachers through specially designed lectures, tutorials and laboratory projects. (1990 - 1998)
- With support from internal (UNCC) and external (FIPSE) and in collaboration with engineering and education faculty, launched and participated in "the learning centered" course assessment project at UNC-Charlotte. (1998 - 2002)
- Chairperson: College of Engineering, Strategic Planning and Assessment Resource Team (SPART). (1994 - 2000)

IMPORTANT PUBLICATIONS (past five years):

1. “Indo-U.S. Forensic Practices” (Edited by Chen, Janardhanam, Natarajan, and Schmidt), Proc. Of the 1st Indo-U.S. Forensic Engineering Workshop, Tiruchirappalli, India, December 2010.
2. “Static Liquefaction of Compacted Flyash” (with Ayaola), Proc. of 4th International Conference on Earthquake Geotechnical Engineering, Greece 2007.
3. “Dynamic Behavior of Sheer buildings”, Proc. of 22nd International conference on CAD/CAM & FOF, Vellore, India. July 2006
4. “Multi - Method evaluation of instruction in engineering classes” (with Gretes, Algozzine, Mohanty, et.al), Journal of Engineering Education, ASEE, June 2002.
5. “A Learning - Centered approach to coursework and teaching evaluation in engineering classes’ (with Algozzine, Mohanty et.al) Proc of International Conference on Technology and Education, Tallahassee, FL, May 2001.

PROFESSIONAL DEVELOPMENT (most recent):

- Principal Investigator of an NCDOT Project: “Improvement of Material Criteria for Highway Embankment Construction”, 2016-2019.

APPENDIX B: ABET FACULTY VITAE

MARTIN KANE

EDUCATION:

Ph.D., Civil Engineering, Michigan State University, 1995

M.S., Civil Engineering, Michigan State University, 1991

B.S., Civil Engineering, Michigan State University, 1990

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor, 2020 – Present, Half-Time
- UNC Charlotte, Associate Professor, 2015 – 2020, Full-Time
- UNC Charlotte, Associate Professor and Undergraduate Director, 2006 – 2014, Full-Time
- UNC Charlotte, Associate Professor, 2001 – 2006, Full-Time
- UNC Charlotte, Assistant Professor, 1995 – 2001, Full-Time

NON-ACADEMIC EXPERIENCE:

- U.S. Navy. Fire Control Technician, 6 years
- Field Engineer, Burroughs Corp. [Unisys], 8 years

CERTIFICATIONS/REGISTRATIONS:

- Licensed Professional Engineer, North Carolina

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (ASCE)
- Institute of Transportation Engineers (ITE); National, North Carolina, Michigan
- American Society of Engineering Education (ASEE)
- National Society of Professional Engineers (NSPE) and Professional Engineers of North Carolina (PENC)
- Chi-Epsilon

HONORS AND AWARDS:

- College of Engineering Undergraduate Teaching Award, 2016
- Vice-Chair, ASCE Annual Meeting Committee 2013
- President, South Piedmont Chapter, Professional Engineers of North Carolina, 2013
- College of Engineering Faculty President, 2006
- Chi-Epsilon, Chapter Honor Member, 2003

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- University Admissions Advisory Committee, 2014 – Present
- University Academic Integrity Board, 2011 – 2015, reappointed 2015 – 2019
- Faculty representative, Campus Accessibility Advisory Committee, appointed by Chancellor, August 2014 – 2018
- University Hearing Committee (hears faculty appeals related to decisions on reappointment, Tenure, and promotion). 2003 – 2007, 2008 – 2012
- University Graduation Program Committee, 2005 – 2016

APPENDIX B: ABET FACULTY VITAE

- Gerontology Advisory Committee, 2002 – 2020
- University Faculty Committee for the Levine Scholars Program (LSP). Advise program.
- Direct and participate in Levine Scholar activities for the LSP, 2010-Present
- PENC State Board Member, 2014-2020
- PENC South Piedmont [Charlotte] Chapter Secretary 2010, Treasurer 2011, Vice President 2012
- NSPE UNC Charlotte Student Chapter Faculty Advisor, 2011-present

IMPORTANT PUBLICATIONS (past five years):

1. Fan, W., Kane, M., Guo, T and Haile, E.W. (2015). Predicting the Severity of Pedestrian Crashes on Highway-Rail Grade Crossings. To be presented at the 2015 TRB 94th Annual Meeting of the Transportation Research Board, Washington D.C., January 11-15.

PROFESSIONAL DEVELOPMENT (most recent):

- CAMMSE Transportation Summer Camp [June 2017, 2018, 2019, 2021]. Road Design, Road Operation, Smart Vehicles, Smart Streets, Aviation, Rail Transit.
- North Carolina 4-H Annual Meeting August 12-15, 2020. Presented “How to be a Safer Driver and Passenger.”
- Rowan County Driver Education, August 5, 2019. Presented “The Rules of the Road and How to Safely Navigate the Driving Environment.”
- Professional Engineers of North Carolina, 2017 Annual Meeting. Presented “Civil Engineering Curriculum at UNC Charlotte.”

APPENDIX B: ABET FACULTY VITAE

OLYA KEEN

EDUCATION:

Ph.D., Civil Engineering, University of Colorado-Boulder, 2012
M.S., Environmental Engineering, University of South Florida, 2008
B.S., Civil Engineering, University of South Florida, 2008

ACADEMIC EXPERIENCE:

- UNC Charlotte, Graduate Program Director, January 2020 – Present, Full-Time
- UNC Charlotte, Associate Professor, July 2019 – Present, Full-Time
- UNC Charlotte, Assistant Professor, July 2013 – July 2019, Full-Time
- UNC Charlotte, Visiting Assistant Professor, January 2013 – June 2013, Full-Time

NON-ACADEMIC EXPERIENCE:

- Waterline Construction, Inc., AutoCAD Drafter and Environmental Permitting Specialist, April 2005 – January 2007, Part-Time

CERTIFICATIONS/REGISTRATIONS:

- Professional Engineer, State of North Carolina, License No.045745
- E.I., State of Florida, License No. 1100015412
- Certificate in College Teaching from Graduate Teacher Program at CU Boulder

CURRENT PROFESSIONAL MEMBERSHIPS:

- International Ultraviolet Association (IUVA), April 2012 – Present
- International Water Association (IWA), May 2011 – Present
- Water Environment Federation (WEF), February 2011 – Present
- American Chemical Society (ACS), January 2010 – Present
- American Water Works Association (AWWA), September 2007 – Present

HONORS AND AWARDS:

- John H. Maxheim Faculty Fellowship, 2018
- Best Conference Paper Award by Water Environment Federation, 2014

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Session moderator and/or organizer for 5 conferences and workshops in the past 5 years (IUVA World Congress 2016, AWWA ACE'16, ACS 2016, AEESP 2017, USDA SWM workshop at UNC Charlotte 2018)
- Committee Service: UNCC CEE Department: Graduate Committee; Strategic Planning; RPT; UNCC College of Engineering: Advisor For Society of Women Engineers; Visibility and Rankings; Graduate Committee (Chair for 2020-2021); University: Biosafety.

IMPORTANT PUBLICATIONS (past five years):

1. Clinton, S., Johnson, J., Lambirth, K.C., Sun, S., Brouwer, C., Keen, O., Redmond, M., Fodor, A. and Gibas, C. (2020) Sediment microbial diversity in urban Piedmont North Carolina watersheds receiving wastewater input. *Water* 12(6), 1557

APPENDIX B: ABET FACULTY VITAE

2. Mapara, S., Patel, U.D., Keen, O.S. and Ruparelia, J.P. (2019) Significant improvement in biodegradability of a real optical brightening agent (OBA) wastewater using small doses of Fenton's reagent. *Environmental Technology*, 42(13), 2112-2121
3. Kennedy Neth, N. L., Carlin, C.M. and Keen, O.S. (2019) Transformation of common antibiotics during water disinfection with chlorine and formation of antibacterially active products. *Environmental Science: Water Research and Technology* 5, 1222-1233
4. Kennedy Neth, N.L. and Keen, O.S. (2019) Using size-exclusion for improved extraction of trace organic compounds from landfill leachate. *Waste Management and Research* 37(6), 651-655
5. Lambirth, K.C., Tsilimigras, M.C.B., Johnson, J., Al-shaer, A., Wynblatt, O., Sypolt, S., Brouwer, C., Clinton, S., Keen, O., Redmond, M., Fodor, A. and Gibas, C. (2018) Impact of treated wastewater release on antibiotic concentrations and antibiotic resistance markers in urban stream microbial communities. *Water (special issue)* 10(11), 1539-1560
6. Keen, O., Bolton, J., Litter, M., Bircher, K. and Oppenlaender, T. (2018) Standard reporting of Electrical Energy per Order (E_{EO}) for UV/H₂O₂ reactors. *Pure and Applied Chemistry* 90(9), 1487-1499
7. Lucas, D. Petty, S., Keen, O., Luedeka, B., Schlummer, Weber, R., M., Barlaz, M., Yazdani, R., Riise, B., Rhodes, J., Nightingale, D., Diamond, M., Vijgen, J., Lindeman, A., Blum A., and Koshland, C. (2017) Methods of responsibly managing end-of-life foams and plastics containing flame retardants: Parts I-II. *Environmental Engineering Science* 35(6), 573-602
8. Kennedy Neth, N. L., Carlin, C.M. and Keen, O.S. (2017) Doxycycline transformation and emergence of antibacterially active products during water disinfection with chlorine. *Environmental Science: Water Research and Technology* 3, 1086-1094

PROFESSIONAL DEVELOPMENT (most recent):

- PI, Collimated beam and water quality testing for design of UV system upgrades at Sugar Creek and Irwin Creek wastewater treatment plants, HDR, Inc, 2019-20
- PI, Environmental Services and Student Experiential Learning, Charlotte Water 2018-21
- PI, Treatment of algal toxins in drinking water with UV/Cl₂ and UV/H₂O₂ advanced oxidation: toxicity of transformation products and effect on disinfection byproduct formation, NC Urban Water Consortium, 2019
- Invited talks on the topics of emerging contaminants or on the application of advanced oxidation and UV-based water treatment processes: NC AWWA-WEA Seminar in Huntersville, NC, 2018; PENC Charlotte Seminar, Charlotte, NC, 2016; North American Hazardous Materials Management National Conference, Portland, OR, 2016; Virginia Institute of Technology, Civil and Environmental Engineering Department Seminar Blacksburg, VA, 2016; WaterReuse Symposium, Workshop, Tampa, FL, 2016; Memphis University, Chemistry Department Seminar, Memphis, TN, 2016
- Two presentations at the IUVA Americas Meeting in Orlando, FL, March 2020

APPENDIX B: ABET FACULTY VITAE

TIMOTHY KERNICKY

EDUCATION:

Ph.D., Infrastructure and Environmental Systems, UNC Charlotte, 2018

M.S., Engineering, UNC Charlotte, 2013

B.S., Mathematics, Gardner-Webb University, 2009

ACADEMIC EXPERIENCE:

- UNC Charlotte, Assistant Research Professor, 2020 – Present, Full-Time
- UNC Charlotte, Post-Doc 2018 – 2020, Full-Time
- UNC Charlotte, Lecturer, 2018 - 2020, Part-Time

NON-ACADEMIC EXPERIENCE:

- None

CURRENT PROFESSIONAL MEMBERSHIPS:

- Chi Epsilon – The Civil Engineering Honor Society
- Alpha Chi – The National Academic Honor Society
- Mathematics Honor Society
- American Society of Civil Engineers (ASCE)
- Structural Engineers Association of North Carolina (SEA of NC)

HONORS AND AWARDS:

- NC Space Grant Graduate Research Fellowship, 2013-2014
- Outstanding Graduate Research Assistant, Dept. of Civil and Env. Eng.
- Member of Who's Who Among Students in American Universities and Colleges, 2010
- University Fellows Scholarship for Academics, 2006

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Technical Writing Committee, May 2020 - Present

IMPORTANT PUBLICATIONS (past five years):

1. Kernicky, T., Whelan, M., Al-Shaer, E. (2018) "Vibration-based Damage Detection with Uncertainty Quantification by Structural Identification using Nonlinear Constraint Satisfaction with Interval Arithmetic," *Structural Health Monitoring*.
2. Kernicky, T., Whelan, M., Al-Shaer, E. (2018) "Dynamic identification of axial force and boundary restraints in tie rods and cables with uncertainty quantification using Set Inversion Via Interval Analysis," *Sound and Vibration*, 426(9).
3. Whelan, M.J., Salas, N., Kernicky, T. (2018) "Structural Identification of a Tied Arch Bridge Using Genetic Algorithms and Ambient Vibration Monitoring with a Wireless Sensor Network," *Journal of Civil Structural Health Monitoring*.
4. Kernicky, T., Whelan, M., Rauf, U., Al-Shaer, E. (2017) "Structural Identification using a Nonlinear Constraint Satisfaction Processor with Interval Arithmetic and Contractor Programming," *Computers and Structures*, 188.

APPENDIX B: ABET FACULTY VITAE

5. Kernicky, Timothy P., Tedeschi, Michael, and Whelan, Matthew J. (2016) "Leveraging Hybrid Simulation for Vibration-Based Damage Detection Studies," *International Modal Analysis Conference XXXIV*, Orlando, FL, January 25-28.

PROFESSIONAL DEVELOPMENT (most recent):

- Development of a Low-Cost, Portable, and Rapid Nondestructive Inspection Tool for Timber Distribution Poles - Phase III, Co-PI, Duke Energy, April 2020-Present
- Advanced Construction Technology Initiative, Co-PI, DOE/GE Hitachi, September 2021-Present
- Development of a low-cost, portable, and rapid nondestructive inspection tool for timber distribution poles - Phase IIb, Post-Doc, Duke Energy, January 2019-December 2021
- Full Scale Testing Program for Tindall T-SLAB System, Co-PI, May 2020 – May 2021

APPENDIX B: ABET FACULTY VITAE

MILIND KHIRE

EDUCATION:

Ph.D., Civil and Environmental Engineering, University of Wisconsin-Madison, 1995

M.S., Civil & Architectural Engineering, University of Miami, Florida, 1992

B.E., Civil & Sanitary Engineering, University of Bombay, Mumbai, India, 1988

ACADEMIC EXPERIENCE:

- UNC Charlotte, Assistant Director, Environment & Construction vertical, 2019 – Present, Full-Time
- UNC Charlotte, Technical Director of CALM Office, 2015 – 2018, Full-Time
- UNC Charlotte, Professor, 2013 – Present, Full-Time
- Michigan State University, Associate Professor, 2008 – 2013, Full-Time
- Michigan State University, Assistant Professor, 2002- 2007, Full-Time

NON-ACADEMIC EXPERIENCE:

- Tonkin & Taylor, Senior Geoenvironmental Engineer, 1999-2001, Full-Time
- Geosyntec Consultants, Project Engineer, 1998-1999, Full-Time
- Geosyntec Consultants, Assistant Project Engineer, 1995-1997, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- Registered Professional Engineer (P.E.), Michigan
- Board Certified Environmental Engineer (BCEE), American Academy of Environmental Engineers & Scientists (AAEES)

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineer (ASCE)
- Technical Committee Member, Engineering Society of Detroit
- American Academy of Environmental Engineers & Scientists (AAEES)

HONORS AND AWARDS:

- Severson Geotechnical Award, UW-Madison, 1995
- Sigma Xi Honorary Student Member, UW-Madison, 1995
- Chi Epsilon Honorary Student Member, UW-Madison,, 1995
- James Croes Medal, American Society of Civil Engineers, 1998
- Exemplary Service Award, American Society of Civil Engineers, 2006
- Lilly Teaching Fellowship, Michigan State University, 2006
- Chi Epsilon Honorary Faculty Member, Michigan State University, 2009
- Alpha Technological Award, Engineering Society of Detroit, 2011

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Associate Co-Editor of Environmental Geotechnics, Special Issue on Environmental Barriers
- Associate Co-Editor of ASCE Journal of Hazardous, Toxic, and Radioactive Waste

APPENDIX B: ABET FACULTY VITAE

- Management (Special Issue: Bioreactor Landfills, 2013)
- Technical Session Co-Chair, GeoFlorida 2010, GeoCongress 2012, and GeoCongress2014, GeoFrontiers 2017, GeoCongress 2020, GeoCongress 2022
 - Conference Technical Committee, Annual Waste Conference, Engineering Society of Detroit
 - Proposal Panelist, NSF, CMMI, Geoenvironmental and Geohazards Program
 - Proposal Panelist, DOE, Environmental Science and Technology Program
 - Proposal Panelist for EPA's SBIR – Phase I Grant Program, Proposal Reviewer for U.S. Civilian Research & Development Foundation (CRDF)
 - Kingdom of Saudi Arabia, Strategic Technology Program, Lead Research Panelist, King Abdulaziz City for Science and Technology, 2013.
 - Geo Group Coordinator, 2019 - current
 - College Review Committee, 2017- current

IMPORTANT PUBLICATIONS (past five years):

1. Khire, M., Johnson, T. and Holt, R. (2020), "Geothermal modeling of elevated temperature landfills," Proceedings of *ASCE GeoCongress 2020*, Minneapolis, Geotechnical Special Publication 317, Pages 417-424.
2. Khire, M., Saghaei, B, and Grohol, B. (2020), "Saturated and Unsaturated Hydraulic Properties of Ponded Coal Ash," Proceedings of *ASCE GeoCongress 2020*, Minneapolis, Geotechnical Special Publication 319, Pages 430-438.
3. Reddy, K.R., Kulkarni, H.S., Giri, R.K., and Khire, M. (2017), "Horizontal trench system effects on leachate recirculation in bioreactor landfills." *Geomechanics and Geoengineering*, 12(2), Pages 115-136.
4. Khire, M., Saghaei, B, Daniels, J., and Langley, W. (2017), "Water Balance of Coal Ash Ponds," *ASCE Geotechnical Frontiers 2017*, Orlando, Geotechnical Special Publication 276, Pages 397-402.
5. Duraisamy, S. and Khire, M. (2017), "Effect of Temperature on Field Water Content Measurements Using Water Content Reflectometers," *ASCE PanAm Unsaturated Soils 2017*, Dallas, 12-15 Nov, Geotechnical Special Publication 302, Pages 49-58.

PROFESSIONAL DEVELOPMENT (most recent):

- Attendee and presenter at biennial Global Waste Management Conferences (2008-2020)
- PI, Landfill hydraulics, Waste Management, Inc, 2016-2021
- PI , Water balance covers for landfills, TxSWANA, 2012-2016
- US delegate of Connex, a US-Israel trade connections organization, for a visit to Israel's water treatment and water conservation infrastructure (Oct. 2015) and attendee at Watec 2015, a water technology conference
- Visited South Africa as part of a Coal Energy resource management visit (Nov. 2014)
- Attendee and presenter at WOCA 2015, Nashville, May 2015

APPENDIX B: ABET FACULTY VITAE

MARIYA MUNIR

EDUCATION:

Ph.D., Environmental Engineering, Michigan State University, 2014

M.S., Environmental Engineering, Michigan State University, 2010

B-Tech, Biotechnology, Integral University, India, 2008

ACADEMIC EXPERIENCE:

- UNC Charlotte, Assistant Professor, July 2016 – Present, Full-Time
- UNC Charlotte, Visiting Assistant Professor, January – June 2016, Full-Time
- Virginia Tech, Postdoctoral Research Associate, 2015, Full-Time
- Michigan State University, Research Assistant, 2008-2014, Full-Time
- Michigan State University, Civil Engineering Teaching Assistant, 2014, Full-Time
- Michigan State University, Instructor, Environmental Measurements Laboratory, 2013, Full-Time

NON-ACADEMIC EXPERIENCE:

- Bioinformatics Center, Biotech Park, Lucknow, India, Research Assistant, 2008, Full-Time

CERTIFICATIONS/REGISTRATIONS: None

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society for Microbiology (ASM)
- ACS (American Chemical Society)

HONORS AND AWARDS:

- Outstanding PhD student award (2014/2015) in Environmental Engineering, Civil and Environmental Engineering Department, Michigan State University, MI, based on research, teaching and service accomplishments.
- Outstanding M.S. student Award (2010) in Environmental Engineering, Civil and Environmental Engineering Department, Michigan State University, MI.
- First Place poster presentation award (2014) at Sixth Annual Graduate Academic Conference (GAC) and Third Place poster award (2015) for a poster presented at Engineering Research Symposium Michigan State University, MI.

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Community Service: actively involved as co-PI on the UNC Charlotte Wastewater COVID-19 Monitoring Task Team to conduct wastewater surveillance for COVID 19 to control community transmission on campus (Summer 2020-present).
- Institutional Biosafety Committee (IBC) member at UNC Charlotte (2016-present)
- CEE Laboratory/Writing Committee (2018-current), CEE Graduate Academic Appeal Committee (2018-current).
- Editorial board member/ reviewer for journals: Applied Microbiology, Journal Environmental Science and Pollution Research, Environmental Science & Technology Letters, Water Science and Technology, Science of the Total Environment

APPENDIX B: ABET FACULTY VITAE

- National Science Foundation (NSF) CAREER Award proposal Review Panelist (2016), NSF INFEWS: Food-Energy-Water Nexus proposal Review Panelist (2019)

IMPORTANT PUBLICATIONS (past five years):

1. Gibas, C., Lambirth, K., Mittal, N., Juel, M. A. I., Barua, V. B., Brazell, L. R., ... & Munir, M. (2021). Implementing building-level SARS-CoV-2 wastewater surveillance on a university campus. *Science of The Total Environment*, 782, 146749.
2. Juel, M. A. I., Stark, N., Nicolosi, B., Lontai, J., Lambirth, K., Schlueter, J., ... & Munir, M. (2021). Performance evaluation of virus concentration methods for implementing SARS-CoV-2 Wastewater-based epidemiology emphasizing quick data turnaround. *Science of The Total Environment*, 801, 149656
<https://doi.org/10.1016/j.scitotenv.2021.149656>
3. Brazell, L.R., Stetz, S., Hipp, A., Taylor, S., Stark, N., Jensen, K., Juel, M.A.I., Deegan, P., Munir, M., Schlueter, J. and Weller, J.W., Gibas, C. (2021). Environmental Screening for Surface SARS-CoV-2 Contamination in Urban High-Touch Areas. *medRxiv*.
4. Mamun, M. M., Sorinolu, A. J., Munir, M., & Vejerano, E. P. (2021). Nanoantibiotics: Functions and Properties at the Nanoscale to Combat Antibiotic Resistance. *Frontiers in chemistry*, 9, 348.
5. Sorinolu, A.J., Tyagi, N., Kumar, A. and Munir, M. (2020). Antibiotic Resistance Development and Human Health Risks during Wastewater Reuse and Biosolids Application in Agriculture. *Chemosphere*, p.129032.
6. Barancheshme, F.; Munir, M. (2019). Development of Antibiotic Resistance in Wastewater Treatment Plants. Book Chapter in *Antimicrobial Resistance-A Global Threat*, IntechOpen.
7. Barancheshme, F.; Munir, M. (2018). Strategies to Combat Antibiotic Resistance in the Wastewater Treatment Plants. *Frontiers in Microbiology*, 8, 2603.
8. O'Brien, E., Munir, M., Marsh, T., Heran, M., Lesage, G., Tarabara, V. V., & Xagorarakis, I. (2017). Diversity of DNA viruses in effluents of membrane bioreactors in Traverse City, MI (USA) and La Grande Motte (France). *Water research*, 111, 338-345.
9. Gu, C., Gao, P., Yang, F., An, D., Munir, M., Jia, H., Xue, G. and Ma, C., (2017). Characterization of extracellular polymeric substances in biofilms under long-term exposure to ciprofloxacin antibiotic using fluorescence excitation-emission matrix and parallel factor analysis. *Environmental Science and Pollution Research*, 24(15), pp.13536-13545.

PROFESSIONAL DEVELOPMENT (most recent):

- Participated in Communication Across the Curriculum (CxC) W/O Teaching Academy (Summer 2017), designed to support faculty in the development of excellent teaching and learning practices for Writing Intensive and Oral Communication courses.

APPENDIX B: ABET FACULTY VITAE

DAVID NAYLOR

EDUCATION:

M.S., Civil Engineering, UNC Charlotte, 1995

B.S., Civil Engineering, UNC Charlotte, 1993

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor of Practice, July 2018 – Present, Full-Time
- UNC Charlotte, Lecturer, July 2007 – June 2018, Full-Time
- UNC Charlotte, Adjunct Faculty, January 2003 – May 2007, Part-Time

NON-ACADEMIC EXPERIENCE:

- Naylor Transportation Engineering, Transportation Consultant, July 2007 – Present, Part-Time
- NC Department of Transportation, Division 10 Traffic Engineer, March 2006–June 2007, Full-Time
- NC Department of Transportation, Division 10 Deputy Traffic Engineer, July 2001 - March 2006, Full-Time
- City of Concord, Transportation Director, August 1998 – June 2001, Full-Time
- City of Charlotte, Transportation Engineer, April 1998 – August 1998, Full-Time
- City of High Point, Transportation Engineer, February 1995 – April 1998, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- Registered Professional Engineer in the State of North Carolina, 1999 – Present.
- Certified Stormwater Maintenance and Inspections in the State of North Carolina, 2018 – Present.

CURRENT PROFESSIONAL MEMBERSHIPS:

- Professional Engineers of North Carolina (PENC), Member, 2019 - Present
- Institute of Transportation Engineers, Member, 1992 – Present

HONORS AND AWARDS:

- College of Engineering Undergraduate Faculty Member of the Year Nominee, 2020
- College of Engineering Undergraduate Faculty Member of the Year Nominee, 2018
- College of Engineering Undergraduate Faculty Member of the Year Nominee, 2017
- College of Engineering Undergraduate Faculty Member of the Year Nominee, 2014
- College of Engineering Undergraduate Faculty Member of the Year Nominee, 2012
- Chi Epsilon Faculty Member of the year, 2010
- College of Engineering Undergraduate Faculty Member of the Year Nominee, 2009
- Chi Epsilon Faculty Member of the year, 2008

APPENDIX B: ABET FACULTY VITAE

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Faculty Mentor for Chi Epsilon Honor Society
- Member of the Departmental Lab Committee
- Member of the Departmental FE Committee
- Teaching surveying and economics portion of Fundamentals of Engineering review course
- Associate Member of the Graduate Faculty

IMPORTANT PUBLICATIONS (past five years):

None

PROFESSIONAL DEVELOPMENT (most recent):

None

APPENDIX B: ABET FACULTY VITAE

VINCENT OGUNRO

EDUCATION:

Ph.D., Civil Engineering, Institut National des Sciences Appliquées de Lyon (INSA-Lyon), Lyon, 1996

Diplome d'Etude Approfondie, Civil Engineering, INSA-Lyon, Lyon, 1991

M.S., Civil Engineering, University of Lagos, Lagos, Nigeria, January, 1988

B.S., Civil Engineering, Obafemi Awolowo University (OAU) (formerly University of Ife), Ile-Ife, Nigeria, August, 1982

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor, 2006 – Present, Full-Time
- UNC Charlotte, Assistant Professor, 2001 –2006, Full-Time
- UNC Charlotte, Visiting Assistant Professor, 2001 – 2001, Full-Time

NON-ACADEMIC EXPERIENCE:

- University of Massachusetts at Lowell, Research Assistant Professor, 1998 - 2000, Full-Time
- University of Massachusetts at Lowell, Post-Doc Research Associate , 1997 - 1997, Full-Time
- Médiatéc Ingénierie, Ecully, France, Technical Translator and Program Localization, 1995 – 1996, Part-Time
- Institut National des Sciences Appliquées (INSA), Lyon, France, Graduate Research Assistant, 1990 – 1995, Full-Time
- National Electric Power Authority (N.E.P.A.), Lagos, Nigeria, Senior Project Engineer, 1988 – 1990, Full-Time
- National Electric Power Authority (N.E.P.A.), Lagos, Nigeria, Project Engineer, 1983 – 1987, Full-Time
- National Soil Conservation College (2-year College), Jos, Nigeria, Civil Engineering Instructor, 1982 – 1983, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- None

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers
- TRB Committee member of AFP40
- International Society of Environmental Geotechnology

HONORS AND AWARDS:

- Fulbright US Scholar Fellowship to Covenant University, Nigeria, 2021-2022
- Carnegie African Diaspora Fellowship to FUTA, Nigeria, May – July, 2019
- Graduate Teaching Award, College of Engineering, UNC Charlotte, 2005-2006
- February, 2002, Initial patent filed for “Advanced aerobic landfill bioreactor systems” (with: J.L. Daniels, H.A. Hilger, S.R. Patterson, C.J.L. Stahl S&ME)
- February, 2002, Initial Patent filed for “Vertical well design for landfill zone control” (with: J.L. Daniels, H.A. Hilger, S.R. Patterson, C.J.L. Stahl S&ME)

APPENDIX B: ABET FACULTY VITAE

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Graduate Committee, Scholarships and Awards Committee, DRC Committee
- TRB Committee member of AFP40
- External Assessor, Promotion (Readers and Professors), Federal University of Technology, Akure, (FUTA), Ondo State, Nigeria
- External Tenure and Promotions Reviewer for the New Jersey Institute of Technology (NJIT)
- Board Member, Hope Worldwide Charlotte Chapter
- Member, Planning and International Technical Committee, International Symposia on Environmental Geotechnology
- International Visiting Scholar (Virtual Teaching), Covenant University, Ota, Ogun State, Nigeria

IMPORTANT PUBLICATIONS (past five years):

1. He, R., Ogunro, V. O. and Ellison, K. M. (2019) "Application of coal fly ash-lime paste encapsulation technology to mine reclamation", in Proceedings of the International Conference on Energy, Resources, Environment and Sustainable Development. Xuzhou, China: China University of Mining and Technology Press, pp. 289–304
2. Manikonda, A., Ogunro, V., Ellison, K. M., and Moo-Young, K. (2019) "Synthesis of Friedel's Salt for Application in Halide Sequestration Using Paste Encapsulation Technology" Geo-Congress 2019, GSP 312: Eighth International Conference on Case Histories in Geotechnical Engineering. ASCE, Reston, VA: 167-176
3. Feyyisa, J., Daniels, J.L., Pando, M.A., and Ogunro, V.O. (2019), "Relationship between breakthrough pressure and contact angle for organo-silane treated coal fly ash", *J. Environmental Technology & Innovation*, Elsevier, Vol. 14, <https://doi.org/10.1016/j.eti.2019.100332>
4. Keatts, M.I., Daniels, J.L., Langley, W.G., Pando, M.A., and Ogunro, V.O. (2018), "Apparent Contact Angle and Water Entry Head Measurements for Organo-Silane Modified Sand and Coal Fly Ash." *ASCE J. Geotechnical & Geoenvironmental Engineering*, 144(6): <https://ascelibrary.org/doi/10.1061/%28ASCE%29GT.1943-5606.0001887>
5. Busari, A., Akinmusuru, J., Ogunro, V., and Ofuyatan, O. (2017). "Synergistic Effect of Cement and Mucilage of *Optunia ficus indica* Cladodes on the Strength Properties of Lateritic Soil". *ASCE Airfield and Highway Pavement 2017: Pavement Innovation and Sustainability*. ASCE, Reston, VA: 22-33.
6. Dumenu, L., Pando, M., Ogunro, V.O., Daniels, J.L., Moid, M.I., and Rodriguez, C. (2017) "Water Retention Characteristics of Compacted Coal Combustion Residuals", *Geotechnical Frontier 2017, GSP 279*. ASCE, Reston, VA: 403 – 413.

PROFESSIONAL DEVELOPMENT (most recent):

- Weekly Geoenvironmental Engineering webinar organized by Prof. Krishna R. Reddy, University of Illinois at Chicago, January 15, 2021 – present
- Professor Asphalt Training Course, National Center for Asphalt Technology (NCAT), Auburn, AL, June 14 -18, 2021

APPENDIX B: ABET FACULTY VITAE

SRINIVAS PULUGURTHA

EDUCATION:

Ph.D., Civil Engineering, University of Nevada, Las Vegas (UNLV), 1998
M.Tech., Civil Engineering, Indian Institute of Technology Kanpur-India, 1995
B.Tech., Civil Engineering, Nagarjuna University-India, 1992

ACADEMIC EXPERIENCE:

- UNC Charlotte, Professor, July 2014 – Present, Full-Time
- UNC Charlotte, Research Director, August 2018 – Present, Full-Time
- UNC Charlotte, Director IDEAS Center, October 2013 – Present, Full-Time
- UNC Charlotte, Graduate Program Director, July 2012 – August, Full-Time
- UNC Charlotte, Associate Professor, July 2009 – June 2014, Full-Time
- UNC Charlotte, Assistant Professor, July 2005 – June 2009, Full-Time
- UNC Charlotte, Assistant Director (until 2014) and Senior Research Associate CTPS, 2005 – 2017, Full-Time
- UNLV, Assistant Director (from 2002) and Assistant Research Professor of Transportation Research, September 1998 – August 2005, Full-Time

NON-ACADEMIC EXPERIENCE:

- Consulting Engineering Services (India) Private Limited, Transportation Analyst, January 1995 – August 1995, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- Registered Professional Engineer – North Carolina (License #: 031890)

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (ASCE) (since 1998)
- American Society for Engineering Education (ASEE) (since 2005)
- Chi Epsilon, National Civil Engineering Honor Society (since 2005)
- Institute of Transportation Engineers (ITE) (since 1995)
- Intelligent Transportation Systems (ITS) America & Nevada Chapter (2000 - 2005)
- Transportation Research Board (TRB) (since 1998)

HONORS AND AWARDS:

- Best Research Paper Award (Paper Title: Spatial Variations in Pedestrian and Bicycle Level-of-Service (LOS) for Infrastructure Planning and Resource Allocation) by American Society of Civil Engineers (ASCE) Transportation & Development Institute (T&DI) hosted Green Streets, Highway, and Development Conference, Austin, TX (2013)
- William States Lee College of Engineering Teaching Excellence Award at Graduate Level, UNC Charlotte (2010)
- Best Paper Award (Paper Title: Evaluating Ground Holding Policy Implications in Real-Time Using Genetic Algorithms), Student Paper Competition held in Conjunction with the 25th ASCE International Air Transportation Conference, Austin, TX (1998)
- Best Paper Award (Paper Title: Optimal Scheduling of Urban Transit Systems Using Genetic Algorithms), ASCE Journal of Transportation Engineering (1996)

APPENDIX B: ABET FACULTY VITAE

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- University Committees (5 different committees; Campus Sustainability Executive Committee; Faculty Council)
- College of Engineering (COE) Committees (5 different committees; Policy and Procedures Committee; Engineering Graduate Committee; Graduate Teaching Award Committee).
- Civil & Environmental Engineering (CEE) Department Committees (13 different committees; Chaired Department Review Committee in 2017 and 2021; Chaired Academic Adviser Search Committee in 2017; Focus Area Improvement Team (FAIT) Coordinator / Leader 2006-2019; Faculty Advisor of ITE Student Chapter 2006-2016).
- Professional Organizations / Societies and Committees (9 different professional organizations / societies; 13 professional committees and 6 task force committees; 18 conference organizing / steering / scientific committees - Chaired or co-Chaired 7 of them;).
- Editorial / Advisory Board and Reviewer (Editorial Board of five Journals; Executive Committee of a Journal; Board of Directors of an association of transportation professionals; Executive Board of a non-profit organization; Several conferences; Reviewed 400+ journal papers for 40 different journals, 90+ conference papers for 29 different conferences, several abstracts, and 46 proposals/reports for 11 different agencies).

IMPORTANT PUBLICATIONS (past five years):

1. Pulugurtha, S. S. and S. Mathew. (2021). Modeling AADT on Local Functionally Classified Roads Using Land Use, Road Density, and Nearest Nonlocal Road Data. *Journal of Transport Geography*, (in press).
2. S. S. Pulugurtha and Md. S. Imran. (2021). Average Travel Time, Planning Time Index, and Buffer Time Index Thresholds for Freeway Weaving Sections, Merging Areas, and Diverging Areas. *ASCE Journal of Transportation Engineering, Part A: Systems*, (in press).
3. Kukkapalli, V. M. and S. S. Pulugurtha. (2021). Modeling the Effect of a Freeway Road Construction Project on Link-Level Travel Times. *Journal of Traffic and Transportation Engineering (English Edition)*, 8(2), 267-281.
4. Preston, A. and S. S. Pulugurtha. (2021). Simulating and Assessing the Effect of a Protected Intersection Design for Bicyclists on Traffic Operational Performance and Safety. *Transportation Research Interdisciplinary Perspectives Journal*, 9, 100329.
5. Penmetsa, P. and S. S. Pulugurtha. (2020). Risk Perceptions of Crash Related Traffic Rule Violations. *Journal of the Australasian College of Road Safety*, 31(4), 4-12.

PROFESSIONAL DEVELOPMENT (most recent):

- 2018, 2019, 2020, & 2021 TRB Annual Meetings, Washington, DC
- ASCE International Conference on Transportation and Development, 2018

APPENDIX B: ABET FACULTY VITAE

WILLIAM SAUNDERS

EDUCATION:

- Ph.D., Civil Engineering, North Carolina State University/University of North Carolina at Charlotte, Interinstitutional Program, 2007
- M.S.C.E., Civil Engineering, University of North Carolina Charlotte, 1994
- B.S.C.E., Civil Engineering, University of North Carolina Charlotte, 1978

ACADEMIC EXPERIENCE:

- UNC Charlotte, Undergraduate Director and Lecturer, 2014 – Present, Full-Time
- UNC Charlotte, Lecturer, 2007 – 2014, Full-Time

NON-ACADEMIC EXPERIENCE:

- Theatrical Electronics Corporation, President, 1985 –1992, Full-Time
- Theatrical Electronics Corporation, Vice President, 1981 –1985, Full-Time
- Theatrical Electronics Corporation, Design Engineer, 1978 –1981, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- Professional Engineer in the State of North Carolina

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Engineering Educators

HONORS AND AWARDS:

- None

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Curriculum, Laboratory, and Workload committees
- Undergraduate Academic Council.
- Submitting request for new Bachelors in Environmental Engineering program

IMPORTANT PUBLICATIONS (past five years):

None

PROFESSIONAL DEVELOPMENT (most recent):

Attended software and content training as needed

Attended professional development seminars and presentations to maintain PE license

APPENDIX B: ABET FACULTY VITAE

MEI SUN

EDUCATION:

Ph.D., Civil and Environmental Engineering, Carnegie Mellon University, 2012
M.S., Civil and Environmental Engineering, Carnegie Mellon University, 2008
B.E., Environmental Science and Engineering, Tsinghua University-China, 2007

ACADEMIC EXPERIENCE:

- UNC Charlotte, Assistant Professor, January 2016 – Present, Full-Time
- North Carolina State University, Postdoctoral Researcher, April 2013 – December 2015, Full-Time
- Carnegie Mellon University, Research Assistant, July 2008 – December 2012

NON-ACADEMIC EXPERIENCE:

- Xi'an Zhengde Environmental Protection Engineering Corporation, Environmental Engineer Intern, July 2006 – August 2006, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- E.I., State of North Carolina

CURRENT PROFESSIONAL MEMBERSHIPS:

- Association of Environmental Engineering and Science Professors (AEESP)
- American Chemical Society (ACS)
- American Water Works Association (AWWA)

HONORS AND AWARDS:

- ASCE ExCEEEd Fellow, American Society of Civil Engineers, 2019
- Best Paper Award, Environmental Science & Technology Letters, 2016

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Member of Joint Section Research Committee of American Water Association
- Member of the Executive Advisory Committee for North Carolina Per- and Poly-fluoroalkyl Substance Testing Network
- Committee member of the CEE Graduate Academic Appeals at UNC Charlotte

IMPORTANT PUBLICATIONS (past five years):

1. Han, Y., Pulikkal, V.F., Sun, M. "Comprehensive Validation of the Adsorbable Organic Fluorine Analysis and Performance Comparison of Current Methods for Total Per-and Polyfluoroalkyl Substances in Water Samples", *ACS ES&T Water*, 2021
2. Liu, Z., Bentel, M.J., Yu, Y., Ren, C., Gao, J., Pulikkal, V.F., Sun, M., Men, Y., Liu, J. "Near-Quantitative Defluorination of Perfluorinated and Fluorotelomer Carboxylates and Sulfonates with Integrated Oxidation and Reduction", *Environmental Science & Technology*, 2021, 55 (10), 7052-7062
3. Zhou, J., Baumann, K., Mead, R.N., Skrabal, S., Kieber, R., Avery, G., Shimizu, M.S., DeWitt, J.C., Sun, M., Vance, S.A., Bodnar, W., Zhang, Z., Collins, L.B., Surratt, J.D., Turpin, B.J., "PFOS Dominates PFAS Composition in Ambient Fine

APPENDIX B: ABET FACULTY VITAE

- Particulate Matter (PM 2.5) Collected Across North Carolina Nearly 20 Years After the End of Its US Production”, *Environmental Science: Processes & Impacts*, 2021, 23 (4), 580-587
4. Silva, A.O.D, Armitage, J.M., Bruton, T.A., Dassuncao, C., Heiger-Bernays, W., Hu, X.C., Kärrman, A., Kelly, B., Ng, C., Robuck, A., Sun, M., Webster, T.F., Sunderland, E.M., “PFAS Exposure Pathways for Humans and Wildlife: A Synthesis of Current Knowledge and Key Gaps in Understanding”, *Environmental Toxicology and Chemistry*, 2021, 40 (3), 631-657
 5. He, H., Sun, M., Wu, D., Di, G., Fei, X. “Cu(III) generation and air sparging extend catalytic effectiveness of Cu₂S/H₂O₂ from neutral to acidic condition: performance and mechanism in comparison with CuS/ H₂O₂”, *Journal of Cleaner Production*, 2021, 278(1), 123572
 6. Zhang, C., Maness, J.C., Cuthbertson, A.A., Kimura, S.Y., Liberatore, H.K., Richardson, S.D., Stanford, B.D., Sun, M., Knappe, D.R.U. “Treating water containing elevated bromide and iodide levels with granular activated carbon and free chlorine: impacts on disinfection byproduct formation and calculated toxicity”, *Environmental Science: Water Research & Technology*, 2020,6, 3460-3475
 7. Lou, Z., Zhou, J., Sun, M., Xu, J., Yang, K., Lv, D. Zhao, Y., Xu, X., “MnO₂ enhances electrocatalytic hydrodechlorination by Pd/Ni foam electrodes and reduces Pd needs”, *Chemical Engineering Journal*, 2018, 352 (15), 549-557
 8. Hopkins, Z.R., Sun M., DeWitt, J.C., Knappe, D.R.U. “Recently Detected Drinking Water Contaminants: GenX and Other Per- and Polyfluoroalkyl Ether Acids” *Journal of the American Water Works Association*, 2018, 110 (7), 13-28
 9. Hao Z., Sun M., Ducoste J., Benson C.H., Luettich S., Castaldi M.J., Barlaz M.A. “Heat Generation and Accumulation in Municipal Solid Waste Landfills” *Environmental Science & Technology*, 2017, 51 (21), 12434-12442
 10. Sun, M., Arevalo, E., Strynar, M., Lindstrom, A., Richardson, M., Kearns, B., Smith, C., Pickett, A., and Knappe, D.R.U. "Legacy and emerging perfluoroalkyl substances are important drinking water contaminants in the Cape Fear River Watershed of North Carolina." *Environmental Science & Technology Letters*, 2016, 3 (12), 415–419.
 11. Sun, W., Sun, M. and Barlaz, M.A., “Characterizing the Biotransformation of Sulfur-Containing Wastes in Simulated Landfill Reactors.” *Waste Management*, 2016, 53, 82–91.
 12. Sun, M., Lopez-Velandia, C. and Knappe, D.R.U. “Determination of 1,4-dioxane in the Cape Fear River watershed by heated purge-and-trap preconcentration and gas chromatography–mass spectrometry.” *Environmental Science & Technology*, 2016. 50 (5), 2246–2254

PROFESSIONAL DEVELOPMENT (most recent):

- Workshop: Excellence in Civil Engineering Education (ExCEED), American Society of Civil Engineers, West Point Military Academy, 2019
- Workshop: How to Engineer Engineering Education, Bucknell University, 2016

APPENDIX B: ABET FACULTY VITAE

BRETT TEMPEST

EDUCATION:

Ph.D., Infrastructure and Environmental Systems, UNC Charlotte, 2010
M.S.C.E., Civil Engineering, UNC Charlotte, 2007
B.S.C.E., Civil Engineering, UNC Charlotte, 2004
B.A., International Studies, UNC Chapel Hill, 2001

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor, May 2016 – Present, Full-Time
- UNC Charlotte, Assistant Professor, January 2010 – May 2016, Full-Time

NON-ACADEMIC EXPERIENCE:

- Habitat for Humanity International Tsunami Reconstruction Initiative, Pondicherry, India, Construction Manager, 2005 – 2006, Full-Time
- AmeriCorp NCC, Team Leader, 2004 – 2005
- UNC Charlotte, Research Assistant, 2002 – 2004
- AmeriCorp NCC, Corps Member, 2000 – 2001
- UNC Chapel Hill, Research Assistant, 1998 – 2000

CERTIFICATIONS/REGISTRATIONS:

- PE, State of North Carolina

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers

HONORS AND AWARDS:

- UNC Charlotte Outstanding Young Alumnus Award, 2016
- William States Lee College of Engineering Outstanding Graduate Teaching Assistant 2008
- William States Lee College of Engineering Outstanding Teaching Assistant, 2007
- Nish Jamgotch Student Humanitarian Award, 2007

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Board Chair: Sustain Charlotte (2021-Present)
- Member: Civil Engineering Sustainability Committee (2014-Present)
- Member: Renaissance West STEAM Academy Advisory Committee (2016-Present)
- Member: College of Engineering Reassignment of Duties Committee (2014-Present)

IMPORTANT PUBLICATIONS (past five years):

1. Whelan, M., Braxtan, N., Mayo, G., & Tempest, B. (2021). Experimental Modal Analysis of Double Tee Floors in a Fire Damaged Parking Deck for Post-Fire Vibration-Based Condition Assessment. In Dynamics of Civil Structures, Volume 2 (pp. 113-120): Springer, Cham.

APPENDIX B: ABET FACULTY VITAE

2. Cavalline, T. L., Newsome, R. A., Tempest, B. Q., & Leach, J. W. (2020). Autogenous Shrinkage of Internally Cured Conventional, Latex-Modified, and Very High Early Strength Latex-Modified Concrete and Mortar. *Advances in Civil Engineering Materials*, 9(1), 557-573.
3. Cavalline, T. L., Tempest, B. Q., Biggers, R. B., Lukavsky, A. J., McEntyre, M. S., & Newsome, R. A. (2020). Durable and Sustainable Concrete Through Performance Engineered Concrete Mixtures.
4. Dika, S. L., Green, C. S., Smith, A. C., Pando, M. A., Tempest, B. Q., & Foxx, K. A. (2020). Navigating Support Networks to Reach the Prize: Perceptions of Success among Engineering Persisters of Color. *Journal of Women and Minorities in Science and Engineering*, 26(6).
5. Dika, S. L., Hunt, B. D., Pando, M. A., Tempest, B. Q., & Allen, M. E. (2019). Self-efficacy of engineering transfer students: Links to faculty interaction and other forms of capital. *International Journal of Engineering, Science, and Technology*, 1(1), 1-15.
6. Cavalline, T. L., Tempest, B. Q., Blanchard, E. H., Medlin, C. D., Chimmula, R. R., & Morrison, C. S. (2018). Impact of Local Calibration Using Sustainable Materials for Rigid Pavement Analysis and Design. *Journal of Transportation Engineering, Part B: Pavements*, 144(4), 04018044.
7. Dika, S. L., Pando, M. A., Tempest, B. Q., & Allen, M. E. (2018). Examining the cultural wealth of underrepresented minority engineering persisters. *Journal of Professional Issues in Engineering Education and Practice*, 144(2), 05017008.
8. Snell, C., Tempest, B., & Gentry, T. (2017). Comparison of the thermal characteristics of portland cement and geopolymer cement concrete mixes. *Journal of Architectural Engineering*, 23(2), 04017002.
9. Tempest, B., Cavalline, T., & Gergely, J. (2017). Predicting Corrosion-Related Bridge Durability with Laboratory-Measured Permeability Results. *Journal of Performance of Constructed Facilities*, 31(5), 04017069.
10. Snell, C., Tempest, B., Gentry, T. "Comparison of the Thermal Characteristics of Portland Cement and Geopolymer Cement Concrete Mixes. Accepted for publication in ASCE Journal of Architectural Engineering.
11. Tempest, B., Gergely, J., Skipper, A. (2016) "Reinforced Geopolymer Concrete in Flexure: a Closer Look at Stress-Strain Performance and Equivalent Stress Block." Accepted by the PCI Journal.
12. Sanusi, O., Tempest, B., Ogunro, V., and Gergely, J. (2016). "Leaching Characteristics of Geopolymer Cement Concrete Containing Recycled Concrete Aggregates." *J. Hazard. Toxic Radioact. Waste*, 10.1061/(ASCE)HZ.2153-5515.0000312 , 04016002.

PROFESSIONAL DEVELOPMENT (most recent):

- Participant CBI Leadership Development Initiative, Class 20, 2021-2022
- Assistant Mentor for ASCE ExCEED at US Military Academy, 2015-2018
- Annually, 15 hours of professional development hours as required by NCBELS

APPENDIX B: ABET FACULTY VITAE

KIMBERLY WARREN

EDUCATION:

Ph.D., Civil Engineering, North Carolina State University, 2003

M.S., Civil Engineering, North Carolina State University, 1999

B.S., Civil Engineering, Virginia Polytechnic Institute and State University, 1996

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor, Director of Student Learning and Assessment, January 2016 – Current, Full-Time
- UNC Charlotte, Associate Professor, July 2015 – January 2016, Full-Time
- UNC Charlotte, Associate Professor, July 2013 – July 2015, Part-Time
- UNC Charlotte, Assistant Professor, July 2005 – July 2013, Full-Time
- University of Arkansas, Assistant Professor, January 2003- July 2005, Full-Time

NON-ACADEMIC EXPERIENCE:

- Law Engineering, Project Engineer, Geotechnical Engineering Group, January 1997 – August 1997, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- E.I., State of Virginia, No. 0420 045920
- 40 Hour HAZWOPER Safety Training, Compliance Solutions, No. 8870
- Nuclear Gage Testing, Troxler Electronic Laboratories, No. 084027

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (ASCE)
- American Society of Civil Engineers (ASCE) Geo-Institute
- American Society of Engineering Education (ASEE)
- United States Universities Council on Geotechnical Education and Research (USUCGER)
- Society of Women Engineers (SWE)
- Order of the Engineer

HONORS AND AWARDS:

- College of Engineering Undergraduate Teaching Award, UNC Charlotte, 2022
- College of Engineering Graduate Teaching Award, UNC Charlotte, 2009
- Member of Chi Epsilon National Civil Engineering Honor Society
- Member of Tau Beta Pi National Engineering Honor Society

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Director of Student Learning and Assessment – Oversees Assessment and Evaluation for ABET, SACS, FE Exam Data, and Graduation and Retention Data
- College of Engineering Strategic Planning Assessment Resource Team (2016-Present)
- CEE Curriculum Committee (2016 – Present)

APPENDIX B: ABET FACULTY VITAE

- CEE Department Review Committee (2016-2017), (Chair, 2017-2018), (2018-2019)
- CEE Search Committee for a Professional Undergraduate Advisor (Fall 2016)
- Chair and Founding Member, CEE FE Exam Success Committee (2008-Present)
- Geotechnical Focus Area Improvement Team Committee, 2005-Present

IMPORTANT PUBLICATIONS (past five years):

1. Eppes, Magi, Scheff, Warren, Ching, Feng (2020) "Warmer, Wetter Climates Accelerate Mechanical Weathering in Field Data, Independent of Stress-Loading", *Geophysical Research Letters*, 47, 2020GL089062, pp. 1-11.
2. Warren, K.A., Padro, M., Wang, C. (2020) "Highlights and Lessons Learned from a Partially Flipped Civil Engineering Classroom Study", *Conference Proceedings from the 127th ASEE Annual Conference and Exposition (Paper ID #30640)*, Montreal, Canada, June 2020, 19 pp.
3. Warren, K.A., Padro, M. (2019) "Design and Preliminary Data from a Partially Flipped Classroom (PFC) Study in a Geotechnical Engineering Course", *Conference Proceedings from the 126th ASEE Annual Conference and Exposition (Paper ID #25602)*, Tampa, Florida, June 2019, 26 pp.
4. Warren, K.A., Whelan, M.J., Hite, J., and Adams, M. (2014) "Three Year Evaluation of Thermally Induced Strain and Corresponding Lateral End Pressures for a GRS IBS in Ohio", *Proceedings of the GeoCongress 2014: Geo-Characterization and Modeling for Sustainability*, Atlanta, Georgia, February 2014, 14 pp.
5. Warren, K.A., Wang, C. (2013) "Use of Interactive Classroom Models and Activities to Increase Comprehension of Geotechnical Engineering Concepts", *Conference Proceedings from the ASEE Annual Conference and Exposition*, Atlanta, Georgia, June 2013, 20 pp.
6. Wang, C., Warren, K.A. (2013) "Inquiry-Based Approach for Civil Engineering Students: A Case Study", *Conference Proceedings from the ASEE Annual Conference and Exposition*, Atlanta, Georgia, June 2013, 11 pp.
7. Warren, K.A., Whelan, Adams, M., and Nicks, J. (2013) "Preliminary Evaluation of Thermally Induced Strains and Pressures Developed in a GRS Integrated Bridge System", *Proceedings from the Geosynthetics 2013 Conference*, Long Beach, California, April 2013, 10 pp.
8. Howard, I.L. and Warren K.A. (2011) "Finite Element Analysis of Instrumented Thin Flexible Pavement to Quantify Variability", *International Journal of Pavement Research and Technology*, 4 (6), pp. 337-346.

PROFESSIONAL DEVELOPMENT (most recent):

- Fundamentals of Program Assessment, January 20 – February 24, 2022
- ASEE Annual Conference and Exposition, 2020, 2019, 2018, 2017
- ABET Symposium, San Diego, California, April 2018
- ABET Symposium, Baltimore, Maryland, April 2017

APPENDIX B: ABET FACULTY VITAE

ERIKA WEBER

EDUCATION:

Ph.D., Civil Engineering, University of Utah, Salt Lake City, 2014
M.S., Civil Engineering, Brigham Young University, 2005
B.S., Civil Engineering, Brigham Young University, 2004
A.S., Civil Engineering, Ricks College, 2001

ACADEMIC EXPERIENCE:

- UNC Charlotte, Lecturer, 2014 – Present, Full-Time
- University of Utah, Instructor, 2013 – 2014, Part-Time
- University of Utah, Teaching Assistant, 2011, Part-Time
- University of Utah, Research Assistant, 2010 – 2011, Part-Time

NON-ACADEMIC EXPERIENCE:

- MJ Structural Engineers, Project Engineer, 2012 – 2013, Full-Time
- John A. Martin & Associates of Nevada, Lead Engineer, 2008 – 2009
- Performance Plus Engineering, Structural Engineer, 2006 – 2008
- L.R. Nelson Consulting Engineers, Structural Engineer, 2004 – 2006

CERTIFICATIONS/REGISTRATIONS:

- Licensed as an S.E. in Illinois
- Licensed as a P.E. in Nevada and California

CURRENT PROFESSIONAL MEMBERSHIPS:

- ASCE

HONORS AND AWARDS:

- Outstanding Mentor Award, University of Utah, Department of Civil Engineering,

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Faculty Adviser, ASCE – 2019-present
- Faculty Adviser, Chi Epsilon – 2017-2020

IMPORTANT PUBLICATIONS (past five years):

1. Pantelides, C.P., and Weber, E. 2011. "Evaluation of Bridge Deck Seal Treatment for Accelerated Bridge Construction (ABC) Bridge Decks Using Precast Panels," Utah Department of Transportation, Salt Lake City, UT, Report No. UT-11.17
2. Weber, E.D., Pantelides, C.P., and Reavely L.D. 2015. "Performance of CFRP Post-tensioned Transverse Grouted Joints for Full-depth Precast Concrete Panels." PCI Journal 60 (3), pp 39-49.
3. Weber, E.D., and Pantelides, C.P. 2015. "Experimental Evaluation of Overlays for Precast Concrete Decks Used in Accelerated Bridge Construction." PCI Journal 60 (5), pp 65-75.

PROFESSIONAL DEVELOPMENT (most recent):

- ASEE, NETI 1 Conference, Montreal Canada, August 2015
- ASEE, NETI 2 Conference, Washington D.C., June 2016

APPENDIX B: ABET FACULTY VITAE

DAVID WEGGEL

EDUCATION:

Ph.D., Civil Engineering, University of Texas at Austin, 1997

M.S., Civil Engineering, Drexel University, 1992

B.S., Civil Engineering, Drexel University, 1992

B.S., Architectural Engineering, Drexel University, 1990

ACADEMIC EXPERIENCE:

- UNC Charlotte, Professor, 2014 – Present, Full-Time
- UNC Charlotte, Founder and Director the Infrastructure Security and Emergency Responder Research and Training (ISERRT) Center, 2010 – Present, Full-Time
- UNC Charlotte, Associate Professor, 2008 – 2014, Full-Time
- UNC Charlotte, Assistant Professor, 2002 – 2008, Full-Time
- California Polytechnic State University, Department of Architectural Engineering, Assistant Professor, 1997 – 2000, Full-Time

NON-ACADEMIC EXPERIENCE:

- Weidlinger Associates, Inc., Senior Anti-Terrorist Structural Engineer, 2000 – 2002
- Spars International, Inc., Research Engineer, 1997 – 1998, Part-Time

CERTIFICATIONS/REGISTRATIONS:

- Registered as a Professional Engineer in Texas

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (Structural Engineering Institute, Architectural Engineering Institute), Associate Member
- ASCE/SEI Blast Protection of Buildings Standards Committee (“Blast Protection of Buildings, ASCE/SEI 59), Member
- *International Journal of Computation Methods and Experimental Measurements (CMEM)*, Editorial Board Member
- AEI Building Rating Security Committee (BRSC), Member
- United States Association for Computation Mechanics (USACM), Member
- Society of Experimental Mechanics, Member
- Structural Engineers Association of North Carolina, Member

HONORS AND AWARDS:

- Member, Chi Epsilon civil engineering honorary fraternity
- Certificate of Appreciation from Special Agent Yvonne Becker of the ATF for outstanding contribution towards “ATF’s Advance Post Blast Investigations Course”
- Wesley O. Pipes CAEED Distinguished Alumni Lectureship (with honorarium), Civil, Architectural, and Environmental Engineering, Drexel University, Philadelphia, PA
- Invited presenter (with honorarium), 2005 Structural Forum, Structural Engineers Association of California, California Polytechnic State University, San Luis Obispo, CA
- Cited by Mayor Bloomberg (with certificate) for serving the Mayor’s Office of Emergency

APPENDIX B: ABET FACULTY VITAE

Management (Authorized A06065) by conducting structural inspections at Ground Zero, World Trade Center Emergency, New York, NY

SERVICE ACTIVITIES (inside and outside of UNC Charlotte):

- College of Engineering Policies & Procedures Coordination Committee (2021 – Present)
- UNC Charlotte Student Chapter of SEA of NC, Charter Faculty Adviser (2015 – Present)
- CEE Departmental Review Committee, Chair (2015 – 2016)
- Faculty Research Grant Proposal Committee (2014 – 2016)
- CEE Graduate Committee (2013 – Present)
- CEE Faculty Workload Committee, Chair (2003 – Present)
- CEE Strategic Planning Committee (2003 – Present)
- CE PhD Implementation Committee (2018 – 2019)

IMPORTANT PUBLICATIONS (past five years):

1. Blast Protection of Buildings, ASCE Standard, ASCE/SEI 59-22, American Society of Civil Engineers, 2022.
2. Palta, Emre, Fang, Howie, and Weggel, David C., “Effects of Projectile Characteristics on Ballistic Resistance Mechanisms of Multi-Ply Woven Fabrics”, submitted to *Composite Structures*.
3. Abdullah, Isha G. and Weggel, David C., “Exploiting the Equilibrium Matrix to Ensure the Geometric Stability of Trusses”, *Practice Periodical on Structural Design and Construction*, Vol. 27, No. 1, 2021.
4. Palta, Emre, Fang, Hongbing, and Weggel, David C., “Finite Element Analysis of the Advanced Combat Helmet under Various Ballistic Impacts”, *International Journal of Impact Engineering*, 112 (2018), pp. 125-143.
5. Christy, Carl W., Weggel, David C., and Smelser, Ronald E., “Closed-Form Solution for a Cantilevered Sectorial Plate Subjected to a Tip Concentrated Force”, *SpringerPlus*, 2016, 5:813, DOI 10.1186/s40064-016-2473-1.

PROFESSIONAL DEVELOPMENT (most recent):

- Involvement in two UNC Charlotte R1 Commission groups: “Transformational Energy” (Existing and Emerging Excellence), Leads: Mazzola, Tolone, Chowdhury; “Artificial Intelligence for Accelerated Material Design” (Future Opportunity and Investment), Leads: Tabarraei, Poler, Khan
- Assistant Director of Technology Transfer, Center for Advanced Multimodal Mobility Solutions and Education (CMMSE), USDOT Center, UNC Charlotte
- Developed computer codes to analyze and visualize geometrical instability and states of self-stress and to perform flexibility analyses (including prestressing) of 2-D and 3-D trusses
- Developed two new graduate courses: CEGR 6090/INES 8090 Forensic Investigations and CEGR 6090/INES 8090 Structural Systems (in collaboration with School of Architecture)

APPENDIX B: ABET FACULTY VITAE

MATTHEW WHELAN

EDUCATION:

Ph.D., Civil and Environmental Engineering, Clarkson University, 2009

M.S., Civil Engineering, Clarkson University, 2005

B.S., Civil and Environmental Engineering, Clarkson University, 2004

ACADEMIC EXPERIENCE:

- UNC Charlotte, Associate Professor, May 2016 – Present, Full-Time
- UNC Charlotte, Assistant Professor, 2010 – May 2016, Full-Time
- Clarkson University, Postdoctoral Research Associate, 2009 – 2010, Full-Time

NON-ACADEMIC EXPERIENCE:

- Timbre, Inc., Chief Executive Officer and Founder, 2009 – 2010, Full-Time

CERTIFICATIONS/REGISTRATIONS:

- P.E., State of North Carolina, License #050018

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers (ASCE)
- Society for Experimental Mechanics (SEM)
- International Society for Structural Health Monitoring of Intelligent Infrastructure (ISHMII)
- International Association for Bridge Maintenance and Safety (IABMAS)
- American Institute of Steel Construction (AISC)
- Precast/Prestressed Concrete Institute (PCI)
- The Structural Engineers Association of North Carolina (SEA of NC)
- Structural Engineering Institute (SEI)

HONORS AND AWARDS:

- Chi Epsilon - National Civil Engineering Honor Society
- William States Lee College of Engineering Graduate Award in Teaching Excellence, Recipient, 2013-2014, Nominee, 2020-2021
- William States Lee College of Engineering Undergraduate Award in Teaching Excellence, Nominee, 2012-2013

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Vice Chair, Technical Division on Dynamics of Civil Structures, Society for Experimental Mechanics
- Editorial Board, Journal of Shock and Vibration, 2017-Present
- Session organizer and chair for International Modal Analysis Conference (2020-present) and International Association for Bridge Maintenance and Safety Conference (2018, 2020)
- University Hearing Committee, 2019-present
- College of Engineering Policy Service Subcommittee, 2021-present
- CEE Department Area Coordinator for Structural Engineering, 2018-present

APPENDIX B: ABET FACULTY VITAE

- Faculty Advisor to the ASCE Student Steel Bridge Competition Team, 2011 – Present
- Computing Committee, 2011 – Present
- Faculty Workload Committee, 2014 – Present
- Master's Thesis Award Committee, 2012 – 2013

IMPORTANT PUBLICATIONS (past five years):

1. Whelan, M.J., Ivey, J., and Dulin, S. (2020) Nondestructive Inspection Tool for Timber Distribution Poles, and Related Methods, U.S. Patent 10,612,995, April 7.
2. Goyal, R., Whelan, M.J., and Cavalline, T. (2020) "Multivariable Proportional Hazards-Based Probabilistic Model for Bridge Deterioration Forecasting," *Journal of Infrastructure Systems*, 26(2), 04020007.
3. Whelan, M.J., Braxtan, N., Mayo, G., and Tempest, B. (2020) "Experimental Modal Analysis of Double Tee Floors in a Fire Damaged Parking Deck for Post-Fire Vibration-Based Condition Assessment," *International Modal Analysis Conference XXXVIII*, Houston, TX, February 11-13.
4. Kernicky, T., Whelan, M.J., and Al-Shaer, E. (2019) "Vibration-based Damage Detection with Uncertainty Quantification by Structural Identification using Nonlinear Constraint Satisfaction with Interval Arithmetic," *Structural Health Monitoring*, 18(5-6). 1569-1589.
5. Kernicky, T., Whelan, M.J., and Al-Shaer, E. (2018) "Dynamic Identification of Axial Force and Boundary Restraints in Tie Rods and Cables with Uncertainty Quantification using Set Inversion Via Interval Analysis," *Journal of Sound and Vibration*, Vol. 423, 401-420.
6. Whelan, M.J., Salas, N., and Kernicky, T. (2018) "Structural Identification of a Tied Arch Bridge using Genetic Algorithms and Ambient Vibration Monitoring with a Wireless Sensor Network," *Journal of Civil Structural Health Monitoring*, Vol. 8, No. 2, 315-330.
7. Gangone, M.V., Whelan, M.J., and Janoyan, K.D. (2017) "Effect of Sensor System Noise and Load Positioning on the Precision of Load Testing and Rating of Highway Bridges: A Case Study," *Journal of Structural Integrity and Maintenance*, Vol. 2, No. 4, 234-248.
8. Kernicky, T., Whelan, M.J., Rauf, U., and Al-Shaer, E. (2017) "Structural Identification using a Nonlinear Constraint Satisfaction Processor with Interval Arithmetic and Contractor Programming," *Computers and Structures*, Vol. 188, 1-16.
9. Goyal, R., Whelan, M.J., and Cavalline, T. (2017) "Characterizing the Effect of External Factors on Deterioration Rates of Bridge Components Using Multivariate Proportional Hazards Regression," *Structure and Infrastructure Engineering*, Vol. 13, No. 7, 894-905.

PROFESSIONAL DEVELOPMENT (most recent):

- PI, Development of a Low-Cost, Portable, and Rapid Nondestructive Inspection Tool for Wood Distribution Poles – Phase III, Duke Energy Corporation, March 2020-December 2021
- PI, Field Vibration Testing of Tindall T-Slab, Tindall Corporation, June 2021-December 2021
- PI, Instrumentation and Field Measurement of Tindall T-Slab Variant, Tindall Corporation, June 2021-December 2021
- Co-PI, Full Scale Testing Program of Tindall T-Slab System, April 2020-March 2021
- Co-PI, UNCC EPIC Support for GE Hitachi's BWRX-300 Construction LTR 5, GE Hitachi, May 2020-July 2020

APPENDIX B: ABET FACULTY VITAE

JY WU

EDUCATION:

Ph.D., Chemical and Environmental Engineering, Rutgers-State University, 1980
M.E., Environmental Engineering, Asian Institute of Technology, 1974
B.S., Chemical Engineering, National Taiwan University, 1971

ACADEMIC EXPERIENCE:

- UNC Charlotte, Director of Infrastructure and Environmental Systems (INES) Interdisciplinary Doctoral Program, 2012 – Present
- UNC Charlotte, Assistant Professor (1980-1984), Associate Professor (1984-1989), Professor (1989 – Present), Full-Time
- Asian Institute of Technology, Visiting Chair Professor, 1997-1998
- National Singapore University, Visiting Professor, 1998-1999.
- China University of Mining & Technology, Honorary Professor, current
- Rutgers University, Assistant Research Professor and Project Manager, 1979 – 1980

NON-ACADEMIC EXPERIENCE:

- Consulting Engineer, 1990 – Present
- Union Industrial Research Institute, Taiwan, Research Engineer, 1971 – 1972, Full-Time
- Taipei Envir. Sanitation Department, Senior Advisor and Section Chief, 1973 – 1974

CERTIFICATIONS/REGISTRATIONS:

- Professional Engineer (PE) - NC
- Professional Hydrologist (PH)

CURRENT PROFESSIONAL MEMBERSHIPS:

- Overseas Chinese Environmental Engineer and Scientist Association (OCEESA), Vice President, 2016, President, 2017.
- Western Economic Association International, Member, 2013 – Present
- American Society of Civil Engineer – current

HONORS AND AWARDS:

- Received major grants from US EPA, AWWARF, NSF, NC Division of Water Quality NC Department of Transportation and NJ pharmaceutical industries (>\$2.0 M)
- Invited by United Nations to speak on Water (Spain 2014) and Drought (NY 2015) Management Workshops
- Invited workshop instructor for flood management in Kaohsiung, Taiwan, 2013
- Recognized by Nissan American for research on renewables and energy efficiency, at the Ceremony of electric-vehicle charging stations donation to UNC-Charlotte, 2013
- AIT Distinguished Alumni, 2004
- Chair in New Technology, Fulbright Scholar, 1997-1998

APPENDIX B: ABET FACULTY VITAE

SERVICE ACTIVITIES (inside and outside of the UNC Charlotte):

- Senior Editor, Journal of Water Management and Modeling, 2015 – Present
- Guest editor - special issue titled “Energy Economy System and Risk Management. *Natural Hazards*. 2018
- Member of the Faculty Executive Committee, 2019-2021.

IMPORTANT PUBLICATIONS (Past five years plus several often cited papers)

1. Liu, Z., Tseng, H.K., Wu, J.S. & Ding, Z. (2020). Implied volatility relationships between crude oil and the U.S. stock markets: dynamic correlation and spillover effects. *Resources Policy*, 66.101637.
2. Malinowski, P.A., Schwarz, P.M. & Wu, J.S. (2020). Fee credits as an economic incentive for green infrastructure retrofits in stormwater-impaired urban watersheds. *Journal. of Sustainable Water in the Built Environment*, 6. 04020015.
3. Ding, Z., Wu, J.S., Shi, X. & Wang, Q. (2019). Energy economy system and risk management: a contribution toward China meeting its goals for the Paris Climate Accord. *Natural Hazards*, Editorial 1-5.
4. Liu, Z., Ding, Z., Lv, T., Wu, J.S. & Qiang, W. (2019). Financial factors affecting oil-price change and oil-stock interactions: a preview and future perspectives. *Natural Hazards*, 95(1-2), 207-225.
5. Malinowski, P.A., Wu, J.S., Pulugurtha, S.S. & Stillwell, A.S. (2018). Green infrastructure retrofits with impervious area reduction by property type: potential improvement to urban stream quality. *Journal of Sustainable Water in the Built Environment*. 4(4). 040180121.
6. Okioga, I.T., Wu, J.S., Sireli, Y. & Hendren, H. (2018). Renewable energy policy formulation for electricity generation in the United States. *Energy Strategy Reviews*, 22, 365-384.
7. Wu, J.S. & Allan, C.J. (2018). Vegetated swales for managing stormwater runoff from secondary roads. *Journal of Environmental Engineering, ASCE*, 144(10). DOI: 10.1061/(ASCE)EE.1943-7870.0001447
8. Wu, J.S., Tseng, H.K., Ferrell, J.C. & Liu, X. (2017). Transforming waste management operations to green energy initiatives: opportunities and challenges. *International Journal of Energy Economics and Policy*, 7(3), 50-57.
9. Liu, Z. Ding, Z, Li, R., Jiang, X., Wu, J.S. & Lv, T. (2017) Research on differences of spillover effects between international crude oil price and stock markets in China and America. *Natural Hazards*. DOI 10.1007/s11069-017-2881-8.
10. Malinowski, P.A., Stillwell, A., Wu, J.S. & Schwartz, P.M. (2015). Energy-water nexus: potential energy savings and implications for sustainable water management in urban areas from rainwater harvesting and gray-water reuse. *Journal of Water Resources Planning and Management*, 141(12). 10.1061/(ASCE)WR.1943-5452.0000528. <Cited by 54>

PROFESSIONAL DEVELOPMENT: None