

SUDEEP C. POPAT

Associate Professor

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EDUCATION

Ph.D., Chemical & Environmental Engineering, University of California, Riverside 2010
B.E., Chemical Engineering, Sardar Patel University, India 2006

PROFESSIONAL EXPERIENCE

Clemson University

Associate Professor

2022 – now

Assistant Professor

2016 – 2022

Arizona State University

Associate Research Scientist

2014 – 2016

Assistant Research Scientist

2012 – 2014

Postdoctoral Research Associate

2010 – 2012

TEACHING EXPERIENCE

Clemson University:

1. **EES 3040, Wastewater Treatment Systems**
Fall 2016 through 2024
2. **EES 3050, Water and Wastewater Treatment Laboratory**
Fall 2016 through 2024
3. **EES 4750, Capstone Design**
Spring 2019 through 2024
4. **EES 8610 / GEOL 8610 / BE 8610, Graduate Seminar**
Fall 2017 through 2024; Spring 2018 through 2024
5. **EES 8830, Electrochemistry for Engineers**
Fall 2022

Arizona State University:

6. **CHE 598, Fuel Cells & Biofuel Cells**
Fall 2014
7. **CHE 598, Electrochemical Energy Storage and Conversion**
Fall 2014

PEER-REVIEWED PUBLICATIONS

Citation metrics as per Google Scholar (08/24):

Total citations 2,066; h-index 28; i10-index 35

Advisees are denoted by an underline.

Book chapters:

1. J. A. Deaver, **S. C. Popat** (2022). Fats, oils, and grease (FOG): Opportunities, challenges, and economic approaches. In: *Handbook of Waste Biorefinery: Circular Economy of Renewable Energy*; ed. E. Jacob-Lopes; Springer Nature.
2. P. Parameswaran, J. A. Deaver, **S. C. Popat**, V. Khanna, M. Kratzer, M. Harclerode (2022). Energy and resource recovery using the anaerobic digestion platform. In: *Pathways to Water Sector Decarbonization, Carbon Capture and Utilization*; eds. Z. Ren, K. Pagilla; IWA Publishing, London, UK.
3. R. A. Yoho, **S. C. Popat**, F. Fabregat-Santiago, S. Giménez, A. ter Heijne, C. I. Torres (2015). Electrochemical impedance spectroscopy as a powerful analytical tool for the study of microbial electrochemical cells. In: *Electrochemically-Active Biofilms in Bioelectrochemical Systems: From Laboratory Practice to Data Interpretation*; eds. H. Beyenal, J. Babauta; John Wiley & Sons, Inc., Hoboken, NJ.
4. **S. C. Popat**, M. A. Deshusses (2009). Removal siloxanes from landfill and digester gases biologically. In: *Odours and VOCs: Measurement, Regulation and Control Technologies*; kassel university press GmbH, Kassel, Germany.

Refereed journal publications:

1. A. B. Alayande, W. Qi, R. Karthikeyan, **S. C. Popat**, D. A. Ladner, G. Amy (2024). Use of reclaimed municipal wastewater in agriculture: comparison of present practice versus an emerging paradigm of anaerobic membrane bioreactor treatment coupled with hydroponic controlled environment agriculture. *Water Research*, in press.
2. P. H. Arve, M. Mason, D. G. Randall, P. Simha, **S. C. Popat** (2024). Concomitant urea stabilization and phosphorus recovery from source-separated fresh urine in magnesium anode-based peroxide-producing electrochemical cells. *Water Research*, 256, 121638.
3. C. S. McMahan, D. Lewis, J. A. Deaver, D. Dean, L. Rennert, C. Kalbaugh, L. Shi, D. Kriebel, D. Graves, **S. C. Popat**, T. Karanfil, D. L. Freedman (2022). Predicting COVID-19 infected individuals in a defined population from wastewater RNA mass rates. *ACS ES&T Water*, 2, 2225-2232.
4. J. A. Deaver, C. Kerr, **S. C. Popat** (2022). Primary sludge-based blackwater favors electrical current over methane production in microbial electrochemical cells. *Journal of Water Process Engineering*, 47, 102848.
5. C. R. Raulerson, **S. C. Popat**, S. M. Husson (2022). Water recovery from bioreactor mixed liquors using forward osmosis with polyelectrolyte draw solutions. *Membranes*, 12, 61. (**Highlighted as journal cover**)

6. A. Xie, D. A. Ladner, **S. C. Popat** (2022). Electrocoagulation-electroflotation for primary treatment of animal rendering wastewater to enable recovery of fats. *Chemical Engineering Journal*, 431, 133910.
7. A. Xie, J. A. Deaver, E. Miller, **S. C. Popat** (2021). Effect of feed-to-inoculum ratio on anaerobic digestibility of high-fat content rendering wastewater. *Biochemical Engineering Journal*, 176, 108215.
8. P. H. Arve, **S. C. Popat** (2021). Stabilization of urea for potential recovery from urine using *in situ* electrochemically synthesized hydrogen peroxide. *ACS ES&T Engineering*, 1, 1642-1648. **(Highlighted as journal cover)**
9. C. S. McMahan, S. Self, L. Rennert, D. Kriebel, D. Graves, J. A. Deaver, **S. C. Popat**, T. Karanfil, D. L. Freedman (2021). COVID-19 Wastewater Epidemiology: A Model to Estimate Infected Populations. *Lancet Planetary Health*, 5, e874-e881.
10. A. Xie, J. A. Deaver, E. Miller, **S. C. Popat** (2021). Evaluation of electrical current production in microbial electrolysis cells fed with rendering wastewater. *Chemosphere*, 285, 131547.
11. J. A. Deaver, M. N. Soni, K. I. Diviesti, K. T. Finneran, V. Shankar, **S. C. Popat** (2021). Taxonomic and functional variations induced by an overloading event in anaerobic co-digestion of municipal wastewater sludge with fats, oils, and grease. *ACS ES&T Engineering*, 1, 1205-1216.
12. E. Murawski, N. Kananizadeh, S. A. Lindsay, A. M. Rao, **S. C. Popat** (2021). Decreased gas-diffusion electrode porosity due to increased electrocatalyst loading leads to diffusional limitations in cathodic H₂O₂ electrosynthesis. *Journal of Power Sources*, 481, 228992.
13. A. Xie, **S. C. Popat** (2020). Electrochemical ammonia stripping from non-nitrified animal rendering wastewater. *Chemical Engineering Journal Advances*, 3, 100020.
14. J. A. Deaver, K. I. Diviesti, M. N. Soni, B. J. Campbell, K. T. Finneran, **S. C. Popat** (2020). Palmitic acid accumulation limits methane production in anaerobic co-digestion of fats, oils, and grease with municipal wastewater sludge. *Chemical Engineering Journal*, 396, 125235.
15. B. G. Lusk, I. Peraza, G. Albal, A. K. Marcus, **S. C. Popat**, C. I. Torres (2018). pH dependency in anode biofilms of *Thermincola ferriacetica* suggests a proton-dependent electrochemical response. *Journal of the American Chemical Society*, 140, 5527-5534.
16. J. Madjarov, **S. C. Popat**, J. Erben, A. Gotze, R. Zengerle, S. Kerzenmacher (2017). Revisiting methods to characterize bioelectrochemical systems: the influence of uncompensated resistance (iR_u drop), double layer capacitance, and junction potential. *Journal of Power Sources*, 356, 408-418.
17. D. Ki, **S. C. Popat**, B. E. Rittmann, C. I. Torres (2017). H₂O₂ production in microbial electrochemical cells fed with primary sludge. *Environmental Science & Technology*, 51, 6139-6145.
18. M. N. Young, N. Chowdhury, E. Garver, P. J. Evans, **S. C. Popat**, B. E. Rittmann, C. I. Torres (2017). Understanding the impact of operational conditions on performance of microbial peroxide producing cells. *Journal of Power Sources*, 356, 448-458.
19. D. Ki, P. Parameswaran, **S. C. Popat**, B. E. Rittmann, C. I. Torres (2017). Maximizing Coulombic recovery and solids reduction from primary sludge by controlling

- retention time and pH in a flat-plate microbial electrolysis cell. *Environmental Science: Water Research & Technology*, 3, 333-339.
20. M. J. Patel, **S. C. Popat**, M. A. Deshusses (2017). Determination and correlation of the partition coefficients of 48 volatile organic and environmentally relevant compounds between air and silicone oil. *Chemical Engineering Journal*, 310, 72-78.
 21. M. N. Young, M. J. Links, **S. C. Popat**, B. E. Rittmann, C. I. Torres (2016). Tailoring microbial electrochemical cells for production of hydrogen peroxide at high concentrations and efficiencies. *ChemSusChem*, 9, 3345-3352.
 22. B. G. Lusk, P. Parameswaran, **S. C. Popat**, B. E. Rittmann, C. I. Torres (2016). The effect of pH and buffer concentration on anode biofilms of *Thermincola ferriacetica*. *Bioelectrochemistry*, 112, 47-52.
 23. **S. C. Popat**, C. I. Torres (2016). Critical transport rates that limit the performance of microbial electrochemistry technologies. *Bioresource Technology*, in press.
 24. D. Ki, **S. C. Popat**, C. I. Torres (2016). Reduced overpotentials in microbial electrolysis cells through improved design, operation, and electrochemical characterization. *Chemical Engineering Journal*, 287, 181-188.
 25. O. Sosa-Hernández, **S. C. Popat**, P. Parameswaran, G. S. Alemán-Nava, C. I. Torres, G. B. Méndez, R. P. Saldivar (2016). Application of microbial electrolysis cells to treat spent yeast from an alcoholic fermentation. *Bioresource Technology*, 200, 342-349.
 26. R. A. Yoho, **S. C. Popat**, L. Rago, A. Guisasola, C. I. Torres (2015). Anode biofilms of *Geoalkalibacter ferrihydriticus* exhibit electrochemical signatures of multiple electron transport pathways. *Langmuir*, 31, 12552-12559.
 27. D. Ki, P. Parameswaran, **S. C. Popat**, B. E. Rittmann, C. I. Torres (2015). Effects of pre-fermentation and pulsed-electric-field treatment of primary sludge in microbial electrochemical cells. *Bioresource Technology*, 195, 83-88.
 28. J. Hansen, J. Hogue, G. Sander, R. A. Renaut, **S. C. Popat** (2015). Non-negatively constrained least squares and parameter choice by the residual periodogram for the inversion of electrochemical impedance spectroscopy. *Journal of Computational and Applied Mathematics*, 278, 52-74.
 29. R. A. Yoho, **S. C. Popat**, C. I. Torres (2014). Dynamic potential-dependent electron transport pathway shifts in anode biofilms of *Geobacter sulfurreducens*. *ChemSusChem*, 7, 3413-3419.
 30. **S. C. Popat**, D. Ki, M. N. Young, B. E. Rittmann, C. I. Torres (2014). Buffer pKa and transport govern the concentration overpotential in electrochemical oxygen reduction at neutral pH. *ChemElectroChem*, 1, 1909-1915.
 31. A. G. Delgado, D. Kang, K. G. Nelson, D. Fajardo-Williams, J. F. Miceli, H. Y. Done, **S. C. Popat**, R. Krajmalnik-Brown (2014). Selective enrichment yields robust ethene-producing dechlorinating cultures from microcosms stalled at *cis*-dichloroethene. *PLOS One*, 9, e100654.
 32. A. G. Delgado, D. Fajardo-Williams, **S. C. Popat**, C. I. Torres, R. Krajmalnik-Brown (2014). Successful operation of continuous reactors at short retention times results in high-density, fast-rate *Dehalococcoides* dechlorinating cultures. *Applied Microbiology and Biotechnology*, 98, 2729-2737.
 33. P. Parameswaran, T. Bry, **S. C. Popat**, B. G. Lusk, B. E. Rittmann, C. I. Torres (2013). Kinetic, electrochemical, and microscopic characterization of the thermophilic,

- anode-respiring bacterium *Thermincola ferriacetica*. *Environmental Science & Technology*, 47, 4934-4940.
34. M. Ziv-El, **S. C. Popat**, P. Parameswaran, D. Kang, A. Polasko, R. U. Halden, B. E. Rittmann, R. Krajmalnik-Brown (2012). Using electron balances and molecular techniques to assess trichloroethene-induced shifts to a dechlorinating microbial community. *Biotechnology and Bioengineering*, 109, 2230-2239.
 35. M. Ziv-El, **S. C. Popat**, K. Cai, R. U. Halden, R. Krajmalnik-Brown, B. E. Rittmann (2012). Managing homoacetogens and methanogens to promote reductive dechlorination of trichloroethene with direct delivery of H₂ in a membrane biofilm reactor. *Biotechnology and Bioengineering*, 109, 2200-2210.
 36. **S. C. Popat**, D. Ki, B. E. Rittmann, C. I. Torres (2012). Importance of OH⁻ transport from cathodes in microbial fuel cells. *ChemSusChem*, 5, 1071-1079.
 37. **S. C. Popat**, K. Zhao, M. A. Deshusses (2012). Bioaugmentation of an anaerobic biotrickling filter for enhanced conversion of trichloroethene to ethene. *Chemical Engineering Journal*, 183, 98-103.
 38. **S. C. Popat**, M. A. Deshusses (2011). Kinetics and inhibition of reductive dechlorination of trichloroethene, *cis*-1,2-dichloroethene and vinyl chloride in a continuously fed anaerobic biofilm reactor. *Environmental Science & Technology*, 45, 1569-1578.
 39. **S. C. Popat**, M. V. Yates, M. A. Deshusses (2010). Kinetics of inactivation of indicator pathogens during thermophilic anaerobic digestion. *Water Research*, 44, 5965-5972.
 40. **S. C. Popat**, M. A. Deshusses (2010). Analysis of the rate-limiting step of an anaerobic biotrickling filter removing TCE vapors. *Process Biochemistry*, 45, 549-555.
 41. **S. C. Popat**, M. A. Deshusses (2009). Reductive dehalogenation of trichloroethene vapors in an anaerobic biotrickling filter. *Environmental Science & Technology*, 43, 7856-7861.
 42. O. J. Prado, **S. C. Popat**, G. Chen, S. L. Walker, J. Lafuente, D. Gabriel, M. A. Deshusses (2009). The effect of packing hydrophilization on bacterial attachment and the relationship with the performance of biotrickling filters. *Biotechnology and Bioengineering*, 103, 1060-1067.
 43. **S. C. Popat**, M. A. Deshusses (2008). Biological removal of siloxanes from landfill and digester gases: Opportunities and challenges. *Environmental Science & Technology*, 42, 8510-8515.

INVITED PRESENTATIONS

1. *Electrochemical processes for recovering nutrients from source-separated urine*. Department of Chemical Engineering, University of South Carolina, October 2023.
2. *World Environment Day keynote presentation on plastics pollution*. G. H. Patel College of Engineering and Technology, Vallabh Vidyanagar, India, June 2023 (virtual).
3. *Stabilization of source-separated urine using electrochemically synthesized hydrogen peroxide*. ACS Annual Fall Meeting, Atlanta, GA, August 2021.

4. *Anaerobic co-digestion of sludge with fats, oils, and grease.* WEASC Industrial Wastewater and Pre-treatment Workshop, December 2020 (virtual).
5. *Anaerobic treatment technologies for energy recovery from wastewater: Unraveling the missing links within the anaerobic food web.* Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame, South Bend, IN, October 2020 (virtual).
6. *Anaerobic treatment technologies for energy recovery from wastewater: Unraveling the missing links within the anaerobic food web.* Department of Civil and Environmental Engineering, New Jersey Institute of Technology, Newark, NJ, October 2020 (virtual).
7. *Anaerobic treatment technologies for energy recovery from wastewater: Unraveling the missing links within the anaerobic food web.* School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, AZ, October 2020 (virtual).
8. *Anaerobic treatment technologies for energy recovery from wastewater: Unraveling the missing links within the anaerobic food web.* School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA, September 2020 (virtual).
9. *Anaerobic technologies for energy recovery from waste organics: Understanding microbiomes to channel electrons to desired products.* Environmental Health Sciences, University of South Carolina, Columbia, SC, March 2020.
10. *On interpreting polarization curves for microbial fuel cells – how standard fuel cell interpretations do not apply.* 236th Electrochemical Society Meeting, Atlanta, GA, October 2019.
11. *Critical transport rates that limit the performance of microbial electrochemical technologies.* Department of Civil, Construction, and Environmental Engineering, North Carolina State University, Raleigh, NC, March 2019.
12. *Critical transport rates that limit the performance of microbial electrochemical technologies.* Department of Civil and Environmental Engineering, Duke University, Durham, NC, March 2019.
13. *Critical transport rates that limit the performance of microbial electrochemical technologies.* Naval Research Laboratory, Washington DC, August 2017.

PLATFORM PRESENTATIONS

Advisees are denoted by an underline. The presenter is denoted by *.

1. P. H. Arve, **S. C. Popat***. Electrochemical ammonia stripping from source-separated urine: cathode-fed vs. anode-fed operation. Rich Earth Summit, November 2023 (virtual).
2. T. Solon*, **S. C. Popat**. Anaerobic co-digestion of FOG and municipal solids enhances volatile solids destruction at a full-scale facility: how adding FOG improved digester performance and the microbial community that facilitated FOG destruction. WEF/IWA Residuals and Biosolids Conference, Charlotte, NC, May 2023.

3. **S. C. Popat***. Anaerobic co-digestion of wastewater sludge with fats, oils and grease (FOG): Insight from studies across multiple scales. SC EPSCoR State Conference, Summerville, SC, April 2023.
4. **T. Solon***, **S. C. Popat**. I can see clearly now the FOG is gone: how does adding FOG to full-scale anaerobic digestion influence performance and microbial communities? South Carolina Environmental Conference, Myrtle Beach, SC, March 2023.
5. **J. A. Funk-Morris***, J. A Deaver, G. Ram Mohan, G. Knight, **S. C. Popat**. Strategies to increase methane production in an anaerobic FOG co-digester: pH control and two-phase treatment. South Carolina Environmental Conference, Myrtle Beach, SC, March 2023.
6. **P. H. Arve**, P. Simha, D. G. Randall, **S. C. Popat***. Electrochemical stabilization and resource recovery from source-separated urine. MELiSSA Conference, November 2022 (virtual).
7. **P. H. Arve**, P. Simha, D. G. Randall, **S. C. Popat***. Electrochemical urine stabilization with concomitant phosphorus recovery using magnesium anodes and peroxide-producing cathodes. Rich Earth Summit, November 2022 (virtual).
8. **P. H. Arve**, **S. C. Popat***. Stabilization of source-separated urine using electrochemically synthesized hydrogen peroxide. Rich Earth Summit, November 2021 (virtual).
9. **P. H. Arve**, **S. C. Popat***. Stabilization of source-separated urine using electrochemically synthesized hydrogen peroxide. ECS Fall Meeting, Atlanta, GA, October 2021 (virtual).
10. **A. Xie**, D. A. Ladner, **S. C. Popat***. Electrocoagulation-electroflotation for primary treatment of animal rendering wastewater to enable recovery of fats. ACS Annual Fall Meeting, Atlanta, GA, August 2021.
11. **P. H. Arve***, **S. C. Popat**. Urine stabilization through electrochemically synthesized hydrogen peroxide. South Carolina Environmental Conference, Myrtle Beach, SC, August 2021.
12. **A. Xie***, **S. C. Popat**. Electrochemical ammonia stripping from non-nitrified animal rendering wastewater. South Carolina Environmental Conference, Myrtle Beach, SC, August 2021.
13. **J. A. Deaver***, **M. N. Soni**, **K. I. Diviesti**, K. T. Finneran, V. Shankar **S. C. Popat**. Co-digestion of municipal wastewater sludge with fats, oils and grease alters microbial communities in anaerobic digesters. South Carolina Environmental Conference, Myrtle Beach, SC, August 2021.
14. **S. C. Popat***. Microbial fuel cells with peroxide production for blackwater treatment. MELiSSA Conference, November 2020 (virtual).
15. **S. C. Popat***. Engineering the electrochemical ammonia stripping process for nitrogen recovery from source-separated urine. Rich Earth Summit, November 2020 (virtual).
16. **A. Xie**, **S. C. Popat***. Anaerobic treatment of high fat content wastewater in microbial electrochemical cells. 236th Electrochemical Society Meeting, Atlanta, GA, October 2019.

17. N. Kananizadeh*, S. Lindsay, A. Childress, M. Ateia, M. Naguib, A. M. Rao, **S. C. Popat**. Carbon-based air-cathodes for hydrogen peroxide production in microbial fuel cells. 236th Electrochemical Society Meeting, Atlanta, GA, October 2019.
18. A. Xie, N. Kananizadeh, **S. C. Popat***. Anaerobic treatment of high fat content wastewater in microbial electrochemical cells for peroxide production. Society for Industrial Microbiology and Biotechnology Annual Meeting, Washington DC, July 2019.
19. P. Taber, M. Ateia, O. Keen, **S. C. Popat***. Understanding the mechanism of removal of UV-quenching substances in landfill leachate via Fenton's oxidation. AEESP Conference, Tempe, AZ, May 2019.
20. S. M. Husson, D. A. Ladner*, **S. C. Popat***. AnMBRs as a next generation technology to address the food-energy-water nexus. SC EPSCoR State Conference, Greenville, SC, April 2019.
21. N. Kananizadeh*, E. Blair, C. Cash, S. M. Husson, D. A. Ladner, **S. C. Popat**. Anaerobic membrane bioreactors for treatment of domestic wastewater. South Carolina Environmental Conference, Myrtle Beach, SC, March 2019.
22. E. Murawski, N. Kananizadeh, **S. C. Popat***. Effect of catalyst loading on cathodic peroxide production in microbial fuel cells. Society for Industrial Microbiology and Biotechnology Annual Meeting, Chicago, IL, August 2018.
23. **S. C. Popat***. Anerobic biotechnologies for wastewater treatment and their central role in addressing the food-energy-water nexus. Clemson University Research Symposium, Clemson, SC, May 2018.
24. **S. C. Popat***. Anaerobic biodegradation of fats in wastewater and sludge: Managing the advantage of increased methane against the risk of inhibition. South Carolina Environmental Conference, Myrtle Beach, SC, March 2018.
25. **S. C. Popat***, M. N. Young, D. Ki, A. Xie, B. E. Rittmann, C. I. Torres. Factors that affect cathodic hydrogen peroxide production for water and wastewater treatment applications. ACS Annual Fall Meeting, Washington, DC, August 2017.
26. **S. C. Popat***. Microbes interfaced with electrodes: Applications in environmental engineering and beyond. Clemson University Research Symposium, Clemson, SC, May 2017.

Continuing list shows only select presentations from >30 presentations before joining Clemson.

27. **S. C. Popat***, R. A. Yoho, L. Rago, A. Guisasola, C. I. Torres. Unraveling the optimization of energy metabolism in members of *Geobacteraceae* during extracellular respiration. ASM General Meeting, Boston, MA, May 2014.
28. **S. C. Popat***, R. A. Yoho, O. Ajulo, C. I. Torres. Electrochemical characterization reveals multiple distinct electron transport pathways in anode biofilms of *Geobacter sulfurreducens*. 225th Electrochemical Society Meeting, Orlando, FL, May 2014.
29. **S. C. Popat***, D. Ki, B. E. Rittmann, C. I. Torres. On cathodic potential losses in microbial fuel cells. North American International Society for Microbial Electrochemistry and Technology meeting, Ithaca, NY, October 2012.

30. **S. C. Popat***. Understanding and overcoming potential losses in microbial fuel cells for practical application in wastewater treatment. AZ Water Annual Conference & Exhibition, Glendale, AZ, May 2012.
31. B. G. Lusk, **S. C. Popat***, P. Parameswaran, B. E. Rittmann, C. I. Torres. Characterization of the thermophilic anode-respiring *Thermincola ferriacetica*. ACS Annual Spring Meeting, Anaheim, CA, March 2011.
32. **S. C. Popat***, K. Zhao, M. A. Deshusses. Advances in treatment of trichloroethene-laden waste gases in anaerobic biotrickling filters containing *Dehalococcoides* spp. Duke-UAM Conference on Biofiltration for Air Pollution Control, Washington, DC, October 2010.
33. **S. C. Popat***, M. A. Deshusses. Anaerobic biotrickling filter trichloroethene removal from waste gases. Air & Waste Management Association's Annual Conference and Exhibition, Detroit, MI, June 2009.
34. **S. C. Popat***, M. A. Deshusses. Trichloroethene removal in an anaerobic biotrickling filter. USC-UAM Conference on Biofiltration for Air Pollution Control, Long Beach, CA, October 2008.
35. **S. C. Popat***, O. J. Prado, J. Lafuente, D. Gabriel, M. A. Deshusses. Packings for biotrickling filters: do surface properties matter? USC-UAM Conference on Biofiltration for Air Pollution Control, Long Beach, CA, October 2008.

POSTER PRESENTATIONS

Advisees are denoted by an underline. The presenter is denoted by *.

1. J. A. Funk-Morris*, **S. C. Popat**. The effect of pH on anaerobic palmitic acid degradation and growth of *Syntrophomonas* sp. AEESP Conference, Boston, MA, June 2023.
2. P. H. Arve*, **S. C. Popat**. Stabilization of urease in urine through the electrochemical generation of hydrogen peroxide. ECS Meeting, Atlanta, GA, October 2022.
3. P. H. Arve*, **S. C. Popat**. Stabilization of urease in urine through the electrochemical synthesis of hydrogen peroxide. AEESP Conference, St. Louis, MO, June 2022.
4. E. Spier Camposano, J. A. Deaver*, **S. C. Popat**. Effect of long and short chain fatty acids on methane yield and microbial community composition in anaerobic co-digestion. AEESP Conference, St. Louis, MO, June 2022.
5. J. A. Funk*, J. A. Deaver, G. Ram Mohan, G. Knight, **S. C. Popat**. The importance of buffering in anaerobic co-digestion of municipal solids with fats, oils, and grease waste (FOG) to increase methane yields. AEESP Conference, St. Louis, MO, June 2022.
6. J. A. Deaver*, **S. C. Popat**. The effect of HRT on microbial communities in microbial electrochemical cells treating synthetic wastewater. AEESP Conference, St. Louis, MO, June 2022.
7. J. A. Funk*, J. A. Deaver, G. Knight, G. Ram Mohan, **S. C. Popat**. The importance of buffering in anaerobic co-digestion of municipal solids with fats, oils, and grease

- waste (FOG) to increase methane yields. IWA 17th Congress on Anaerobic Digestion, Ann Arbor, MI, June 2022.
8. T. Solon*, **S. C. Popat**. The importance of buffering in anaerobic co-digestion of municipal solids with fats, oils, and grease waste (FOG) to increase methane yields. South Carolina Environmental Conference, Myrtle Beach, SC, March 2022, South Carolina Environmental Conference, Myrtle Beach, SC, March 2022.
 9. J. A. Funk*, J. A. Deaver, **S. C. Popat**. The importance of buffering in anaerobic co-digestion of municipal solids with fats, oils, and grease waste (FOG) to increase methane yields. South Carolina Environmental Conference, Myrtle Beach, SC, March 2022.
 10. J. A. Deaver*, E. F. Spier Camposano, J. Funk, **S. C. Popat**. The effect of FOG loading on methane production during anaerobic co-digestion of municipal wastewater sludge and FOG from the F. Wayne Hill Water Resources Center. South Carolina Environmental Conference, Myrtle Beach, SC, August 2021.
 11. R. Althouse, C. Cash, N. Kananizadeh, D. A. Ladner, **S. C. Popat***. Temperature effects on the fouling rate of flat-sheet membranes in anaerobic membrane bioreactors (AnMBRs). IWA Biofilms 2020 Conference, December 2020 (virtual).
 12. P. H. Arve*, **S. C. Popat**. Electrochemical nitrogen removal and recovery from source-separated urine. South Carolina Environmental Conference, Myrtle Beach, SC, March 2020 (virtual).
 13. S. Lindsay*, **S. C. Popat**. Effect of pH on electrosynthesis of hydrogen peroxide on carbon black-based gas diffusion electrodes. South Carolina Environmental Conference, Myrtle Beach, SC, March 2020 (virtual).
 14. J.A. Deaver*, C. Kerr, **S. C. Popat**. Blackwater treatment in microbial electrochemical cells: Evaluation of COD conversion to electrical current. South Carolina Environmental Conference, Myrtle Beach, SC, March 2020 (virtual).
 15. J. A. Deaver*, K. Diviesti, **S. C. Popat**. Conversion of blackwater COD in the anode chamber of microbial electrochemical cells for production of useful chemicals. Society for Industrial Microbiology and Biotechnology Annual Meeting, Washington DC, July 2019.
 16. E. Murawski, N. Kananizadeh, **S. C. Popat***. Effect of catalyst loading on cathodic peroxide production in electrochemical cells. AEESP Conference, Tempe, AZ, May 2019.
 17. N. Kananizadeh*, E. Blair, C. Cash, S. M. Husson, D. A. Ladner, **S. C. Popat**. Effect of temperature on the performance of anaerobic membrane bioreactors treating domestic wastewater. AEESP Conference, Tempe, AZ, May 2019.
 18. J. A. Deaver*, V. Shankar, **S. C. Popat**. Anaerobic digester microbial community dynamics during inhibition of methane production by fats, oils, and grease. AEESP Conference, Tempe, AZ, May 2019.
 19. A. Xie*, **S. C. Popat**. Anaerobic treatment of high fat content wastewater at various loading rates. AEESP Conference, Tempe, AZ, May 2019.
 20. E. Blair*, N. Kananizadeh, C. Cash, D. A. Ladner, **S. C. Popat**. The effect of temperature on the performance and microbial community of anaerobic membrane bioreactors for domestic wastewater treatment. Clemson GRADS Symposium, Clemson, SC, April 2019.

21. J. A. Deaver*, V. Shankar, K. T. Finneran, **S. C. Popat**. Anaerobic digester microbial community dynamics during inhibition of methane production by fats, oils, and grease. Clemson GRADS Symposium, Clemson, SC, April 2019.
22. A. Xie*, **S. C. Popat**. Anaerobic treatment of high fat content wastewater at various loading rates. South Carolina Environmental Conference, Myrtle Beach, SC, March 2019.
23. E. Blair*, N. Kananizadeh, C. Cash, D. A. Ladner, **S. C. Popat**. The effect of temperature on the performance and microbial community of anaerobic membrane bioreactors for domestic wastewater treatment. South Carolina Environmental Conference, Myrtle Beach, SC, March 2019.
24. J. Deaver*, V. Shankar, K. T. Finneran, **S. C. Popat**. Anaerobic digester microbial community dynamics during inhibition of methane production by fats, oils, and grease. South Carolina Environmental Conference, Myrtle Beach, SC, March 2019.
25. A. Xie*, **S. C. Popat**. Anaerobic treatment of wastewater with high fat content at various loading rates. South Carolina Environmental Conference, Myrtle Beach, SC, March 2018.
26. E. Murawski*, **S. C. Popat**. The effects of catalyst loading on hydrogen peroxide production in a microbial fuel cell. South Carolina Environmental Conference, Myrtle Beach, SC, March 2018.
27. M. N. Soni*, **S. C. Popat**. Investigating the microbial inhibitions in anaerobic co-digestion of fats, oils, and grease (FOG) with municipal sludge and their effect on process kinetics. South Carolina Environmental Conference, Myrtle Beach, SC, March 2018.
28. P. Taber*, A. Xie, **S. C. Popat**. Effect of peroxide-based advanced oxidation on the removal of UV-quenching substances in landfill leachate. South Carolina Environmental Conference, Myrtle Beach, SC, March 2018.

>50 poster presentations from before joining Clemson are not listed here.

PATENTS

1. P. Parameswaran, R. Krajmalnik-Brown, **S. C. Popat**, B. E. Rittmann, C. I. Torres. Membrane biofilm reactors, systems, and methods for producing organic products. U.S. patent #10435659, issued 10/09/2019.
2. **S. C. Popat**, P. Parameswaran, B. E. Rittmann, C. I. Torres. Microbial electrolysis cells and methods for production of chemical products. U.S. patent #9216919, issued 12/22/2015.

PRESS COVERAGE

Videos:

1. Waste to watts: improving microbial fuel cells
 - ASU News: <https://www.youtube.com/watch?v=s2WmedwLsyM>
2. How human waste can help make hydrogen peroxide
 - Clemson News: <https://www.youtube.com/watch?v=ctDcN71W-9o>

- WCBD News 2: <https://www.counton2.com/news/south-carolina-news/clemson-professor-receives-750000-grant-from-nasa>
- 3. SC InnoVision Awards nomination
 - <https://www.youtube.com/watch?v=y51CkWTb90o>

Articles:

1. Waste to watts: improving microbial fuel cells
 - ASU News: <https://news.asu.edu/content/waste-watts-improving-microbial-fuel-cells>
 - Phys.org: <https://phys.org/news/2012-07-watts-microbial-fuel-cells.html>
 - Innovation Toronto: <https://innovationtoronto.com/2012/07/waste-to-watts-improving-microbial-fuel-cells>
 - SciTechDaily: <https://scitechdaily.com/converting-waste-into-useful-energy-by-improving-microbial-fuel-cells>
2. Astronauts could turn waste into hydrogen peroxide with the help of Clemson University research
 - Clemson News: <https://news.clemson.edu/astronauts-could-turn-waste-into-hydrogen-peroxide-with-help-of-clemson-university-research/>
 - Lab Manager: <https://www.labmanager.com/news/astronauts-could-turn-waste-into-hydrogen-peroxide-1436>
 - The State: <https://www.thestate.com/news/local/education/article232745032.html>
 - Greenville Journal: <https://greenvillejournal.com/community/in-our-community-astronauts-greenville-royale-and-journey-to-waswillbeland>

SELECTED HONORS AND AWARDS

Young Investigator Oral Presentation, American Society for Microbiology General Meeting	2014
Discovery Award for Best Scientific Paper, International Society for Microbial Electrochemistry and Technology	2012
Air & Waste Management Association Scholarship	2009
Krieger & Stewart, Inc. Fellowship	2009
Dean's Distinguished Fellowship, University of California, Riverside	2006

AWARDS TO STUDENT ADVISEES

Philip Arve

SC Space Grant Consortium Graduate Student Scholarship	2021
Thomas Keinath Water Environment Association Fellowship	2022
Dissertation Completion Award, Clemson University	2022

Emily Blair Evans

A. Ray Abernathy Water Environment Association Fellowship	2019
2 nd place CECAS student poster, Clemson GRADS Symposium	2019

Brooke Covert	
SC Space Grant Consortium Graduate Student Scholarship	2023
Jessica Deaver	
SC Space Grant Consortium Graduate Student Scholarship	2018
Linvil G. Rich Water Environment Association Fellowship	2019
3 rd place student poster, SC Environmental Conference	2019
1 st place CECAS student poster, SC Environmental Conference	2019
1 st place student poster, SC Environmental Conference (virtual)	2020
A. Ray Abernathy Water Environment Association Fellowship	2022
Julia Ann Funk-Morris	
Linvil G. Rich Water Environment Association Fellowship	2022
3 rd place student poster, SC Environmental Conference	2022
Best poster award, 17 th World Congress on Anaerobic Digestion	2022
EREF Student Scholarship	2022
R. Kenneth Tinsley Fellowship	2023
Claire Funk	
Environmental Engineering and Science Foundation Scholarship	2023
Alex Gex	
Linvil G. Rich Water Environment Association Fellowship	2021
Spencer Lindsay	
3 rd place student poster, SC Environmental Conference (virtual)	2020
R. Ken Tinsley Water Environment Association Fellowship	2020
Emily Murawski	
A. Ray Abernathy Water Environment Association Fellowship	2018
3 rd place student poster, SC Environmental Conference	2018
Thomas Solon	
2 nd place student poster, SC Environmental Conference	2022
Mehul Soni	
2 nd place student poster, SC Environmental Conference	2018
Paige Taber	
1 st place student poster, SC Environmental Conference	2018
3 rd place Fresh Ideas poster, AWWA Annual Conference & Exposition	2018
Carl J. Apicella Scholarship, EREF	2018
Ao Xie	
1 st place student poster, SC Environmental Conference	2019

Linvil G. Rich Water Environment Association Fellowship
Dissertation Completion Award, Clemson University

2020
2020

SPONSORED RESEARCH

Category	Total	Share
External sponsors	\$20,596,616	\$1,923,898
Internal funding	\$320,879	\$107,759
Scholarships to student advisees	\$117,000	\$117,000
Cost share	\$1,008,397	\$504,009
Grand total	\$22,042,892	\$2,551,662

Cost share amounts are not shown in the individual projects listed below.

Ongoing externally funded projects:

- 1. Undergraduate Research Experience in Electrochemical Technology to Generate Fuel and Food from CO₂ and Urine to Support Life of Mars**
Sponsor: SC Space Grant Consortium
Principal Investigator: **S. C. Popat**
Duration: 2024
Amount awarded: \$23,500
Share: 100%
- 2. Disease Modeling and Analytics to inform Outbreak Preparedness, Response, Intervention, Mitigation, and Elimination in South Carolina (DMA-PRIME)**
Sponsor: Center for Disease Control and Prevention
Principal Investigator: L. M. Rennert
Co-Investigators: Several, including **S. C. Popat**
Duration: 2023-2028
Amount awarded: \$17,231,774
Share: 3%
- 3. Enabling the reuse of fruit and vegetable wastewater through electrification of nutrient removal (and recovery)**
Sponsor: S. C. Department of Agriculture
Principal Investigator: S. C. Popat
Duration: 2023-2024
Amount awarded: \$42,000
Share: 100%
- 4. Combined electrochemical removal and recovery of nitrogen and phosphorus from poultry processing wastewater**
Sponsor: S. C. Department of Agriculture
Principal Investigator: S. C. Popat
Duration: 2023-2024
Amount awarded: \$42,000
Share: 100%

5. **Climate resilient sustainable food production: Controlled environment hydroponic agriculture with novel wastewater treatment and reuse**
Sponsor: National Science Foundation
Principal Investigator: D. A. Ladner
Co-investigators: J. Adelberg, G. Amy, R. Karthikeyan, D. Vanegas, **S. C. Popat**, M. A. Dale
Duration: 2023-2025
Amount awarded: \$1,500,000
Share: 13%
6. **Reimagining rendering wastewater treatment – algal biofilms for protein production**
Sponsor: Fats and Proteins Research Foundation
Principal Investigator: **S. C. Popat**
Co-investigators: D. A. Ladner
Duration: 2022-2024
Amount awarded: \$44,000
Share: 70%
7. **On-site demonstration of electrocoagulation treatment of rendering wastewater**
Sponsor: Fats and Proteins Research Foundation
Principal Investigator: **S. C. Popat**
Duration: 2021-2024
Amount awarded: \$33,000
Share: 100%

Completed externally funded projects:

8. **Characterization of the performance of Smithfield Foods anaerobic digesters**
Sponsor: Smithfield Foods
Principal Investigator: **S. C. Popat**
Duration: 2022-2023
Amount awarded: \$15,300
Share: 100%
9. **Anaerobic co-digestion of wastewater sludge with fats, oils, and grease**
Sponsor: Renewable Water Resources, Greenville, SC
Principal Investigator: **S. C. Popat**
Duration: 2021-2023
Amount awarded: \$28,518
Share: 100%
10. **Methane as a source of income for South Carolina agribusinesses and farmers: Technical and economic feasibility study**
Sponsor: S. C. Department of Agriculture
Principal Investigator: **S. C. Popat**
Co-investigator: M. Carbajales-Dale
Duration: 2021-2022
Amount awarded: \$50,000
Share: 60%

- 11. Palmetto Academy: Stabilization of yellow water using electro-synthesized hydrogen peroxide for subsequent nitrogen recovery**
Sponsor: S. C. Space Grant Consortium
Principal Investigator: **S. C. Popat**
Duration: 2021-2022
Amount awarded: \$23,000
Share: 100%
- 12. Evaluation of two-phase anaerobic digestion for increased sludge handling capacity and energy production at the F. Wayne Hill Water Resources Center**
Sponsor: Black & Veatch / Gwinnett County Water Resources
Principal Investigator: **S. C. Popat**
Duration: 2020-2021
Amount awarded: \$97,579
Share: 100%
- 13. Demonstration of electrocoagulation as a viable alternative to dissolved air flotation for rendering wastewater treatment**
Sponsor: Fats and Proteins Research Foundation
Principal Investigator: **S. C. Popat**
Duration: 2020-2021
Amount awarded: \$27,500
Share: 100%
- 14. Palmetto Academy: Electrochemical ammonia stripping for nitrogen recovery from yellow water during space missions**
Sponsor: S. C. Space Grant Consortium
Principal Investigator: **S. C. Popat**
Duration: 2020-2021
Amount awarded: \$23,000
Share: 100%
- 15. Exploring the potential of anaerobic osmotic membrane bioreactors for regenerative water purification in space**
Sponsor: S. C. Space Grant Consortium
Principal Investigator: S. M. Husson
Co-investigator: **S. C. Popat**
Duration: 2020-2021
Amount awarded: \$20,000
Share: 50%
- 16. Improving nitrification performance for rendering wastewater treatment under low dissolved oxygen concentrations and inhibition from quaternary ammonium compounds**
Sponsor: S. C. Department of Agriculture
Principal Investigator: M. A. Schlautman
Co-investigator: **S. C. Popat**
Duration: 2020-2021
Amount awarded: \$44,394
Share: 50%

17. **Peroxide-producing microbial fuel cells for space life support systems applications**
Sponsor: National Aeronautics and Space Administration
Principal Investigator: **S. C. Popat**
Co-investigators: E. L. Cates, T. Karanfil, M. Carbajales-Dale, R. S. Norman (USC), J. Furrer (Benedict)
Duration: 2019-2024
Amount awarded: \$750,000
Share: 60%
18. **Electrochemical ammonia removal and recovery from rendering wastewater**
Sponsor: Fats and Proteins Research Foundation
Principal Investigator: **S. C. Popat**
Duration: 2019-2020
Amount awarded: \$38,500
Share: 100%
19. **Palmetto Academy: Anaerobic membrane bioreactors for wastewater treatment during space missions**
Sponsor: S. C. Space Grant Consortium
Principal Investigator: **S. C. Popat**
Duration: 2019-2020
Amount awarded: \$15,000
Share: 100%
20. **Palmetto Academy: Anaerobic membrane bioreactors for wastewater treatment during space missions**
Sponsor: S. C. Department of Agriculture
Principal Investigator: M. A. Schlautman
Co-investigator: **S. C. Popat**
Duration: 2019-2020
Amount awarded: \$50,000
Share: 50%
21. **Testing of a liter-scale microbial fuel cell with peroxide production for rendering wastewater treatment**
Sponsor: Fats and Proteins Research Foundation
Principal Investigator: **S. C. Popat**
Duration: 2018-2019
Amount awarded: \$38,500
Share: 100%
22. **Microbial peroxide-producing cells for blackwater and greywater treatment during space missions**
Sponsor: S. C. Space Grant Consortium
Principal Investigator: **S. C. Popat**
Duration: 2018-2019
Amount awarded: \$20,000
Share: 100%
23. **Palmetto Academy: Microbial peroxide-producing cells for blackwater treatment during space missions**
Sponsor: S. C. Space Grant Consortium

Principal Investigator: S. C. Popat

Duration: 2018-2019

Amount awarded: \$18,000

Share: 100%

24. Anaerobic membrane bioreactors as a next-generation technology to address the food-energy-water nexus

Sponsor: S. C. EPSCoR

Principal Investigator: S. M. Husson

Co-investigators: **S. C. Popat**, D. A. Ladner, G. Amy

Duration: 2018-2019

Amount awarded: \$300,000

Share: 25%

25. Microbial fuel cells with peroxide production for space life support systems applications

Sponsor: S. C. Space Grant Consortium

Principal Investigator: **S. C. Popat**

Duration: 2017-2018

Amount awarded: \$10,000

Share: 100%

26. Treatment of rendering wastewater in microbial fuel cells with nitrogen recovery and peroxide production

Sponsor: Fats and Proteins Research Foundation

Principal Investigator: **S. C. Popat**

Duration: 2017-2018

Amount awarded: \$38,498

Share: 100%

27. Development of substrate-loaded microbial fuel cells for powering remote sensors

Sponsor: Arizona State University / Office of Naval Research

Principal Investigator: **S. C. Popat**

Duration: 2017-2018

Amount awarded: \$22,543

Share: 100%

Ongoing internally funded projects:

28. SARS-CoV-2 wastewater-based epidemiology: Beyond correlations with total or new COVID-19 cases

Sponsor: Clemson CECAS Tiger Grant Program

Principal Investigator: **S. C. Popat**

Duration: 2021-2024

Amount awarded: \$15,000

Share: 100%

Completed internally funded projects:

29. CU-MRI: Acquisition of an LC/MS/MS to enhance research opportunities in characterization and remediation of polyfluorinated organic contaminants

Sponsor: Clemson Division of Research R-Initiatives

Principal Investigator: D. L. Freedman
Co-investigators: E. L. Cates, K. T. Finneran, **S. C. Popat**
Duration: 2019-2020
Amount awarded: \$240,759
Share: 25%

30. Anaerobic membrane bioreactors for wastewater treatment: Enhanced performance through novel process improvements and low-fouling membranes

Sponsor: Clemson Division of Research R-Initiatives
Principal Investigator: **S. C. Popat**
Co-investigators: D. A. Ladner, S. M. Husson, G. Amy
Duration: 2017-2019
Amount awarded: \$65,138
Share: 50%

Scholarships awarded to student advisees:

31. S. C. Space Grant Consortium Graduate Research Assistantship to Brooke Covert

Duration: 2023-2024
Amount awarded: \$16,000

32. EREF Ph. D. Student Scholarship to Julia Ann Funk

Duration: 2022-2024
Amount awarded: \$45,000

33. S. C. Space Grant Consortium Graduate Research Assistantship to Philip Arve

Duration: 2021-2022
Amount awarded: \$16,000

34. S. C. Space Grant Consortium Graduate Research Assistantship to Jessica Deaver

Duration: 2018-2020
Amount awarded: \$40,000

STUDENT ADVISING

of Ph. D. students advised: 5 (3 ongoing)
of M.S. students advised: 20 (3 ongoing)
of B.S. students advised (as research advisor): 24
of high school students advised (as research advisor): 8

Current Ph.D. students:

1. Philip Arve, expected graduation August 2024
2. Julia Ann Funk-Morris, expected graduation December 2024
3. Thomas Solon, part-time, expected graduation May 2027

Current M.S. students:

1. Katie Hardison, expected graduation August 2024
2. Chandler Neal, expected graduation December 2024
3. Brooke Covert, expected graduation August 2025

Previous postdoctoral research associates:

1. Negin Kananizadeh, 2017 – 2019
currently Project Environmental Engineer at NewFields, Atlanta, GA

Previous Ph.D. students:

1. Ao Xie, graduated August 2021
currently Postdoctoral Research Associate at Auburn University
2. Jessica Deaver, graduated May 2022
currently Postdoctoral Research Associate at North Carolina State University

Previous M.S. students:

1. Mehul Soni, graduated May 2018
currently Professional Engineer at Carollo Engineers, Kansas City, MO
2. Emily Hreha, graduated August 2018
currently Senior Staff Engineer at Geosyntec Consultants, Asheville, NC
3. Paige Taber, graduated May 2019
currently Process Engineer at Renewable Water Resources, Greenville, SC
4. Emily Blair Evans, graduated August 2019
currently Assistant Engineer at Hazen and Sawyer, Nashville, TN
5. Houston Rich, graduated May 2020
currently Environmental Engineer at Terracon, Greenville, SC
6. Spencer Lindsay, graduated August 2020
currently Engineer at Freese and Nichols, Dallas, TX
7. Lauren Schmidt, graduated December 2020
currently Design Engineer at J-U-B Engineers, Inc., Salt Lake City, UT
8. Julia Ann Funk-Morris graduated August 2021
currently Ph.D. student at Clemson University, Clemson, SC
9. Alex Gex, graduated August 2021
currently Environmental Engineer at Ardurra, Jacksonville, FL
10. Emmaline Spier Camposano, graduated December 2021
currently Environmental Engineer at U.S. Air Force
11. Mrinal Rama Thulasiram, graduated May 2022
currently Engineering Associate at Alliance Consulting Engineers, Inc., Greenville, SC
12. Clancy Kerr, graduated December 2022
currently Payload Operation Integration Specialist at Teledyne Brown Engineering, Huntsville, AL
13. Thomas Solon, graduated December 2022
currently Process Engineer at Renewable Water Resources, Greenville, SC, and Ph.D. student at Clemson University, Clemson, SC
14. Erik Rolfe, graduated August 2023
currently Engineer at Renewable Water Resources, Greenville, SC
15. Skyler Voisin, graduated August 2023
currently Assistant Engineer at Hazen and Sawyer, Atlanta, GA
16. Kaitlyn Davis, graduated December 2023
currently Engineer at Colliers Engineering & Design, Charlotte, NC

17. Claire Funk, graduated August 2024

Previous B.S. students:

1. Salley Reamer (Environmental Engineering)
currently Water Resources Engineer at Tennessee Valley Authority, Knoxville, TN
2. Emily Blair Evans (Environmental Engineering)
currently Assistant Engineer at Hazer and Sawyer, Nashville, TN
3. Emily Miller (Chemical Engineering)
currently Process Engineer at Eastman Chemical Company, Kingsport, TN
4. Karla Diviesti (Biosystems Engineering)
currently Ph.D. student at Colorado School of Mines
5. Emily Waud (Chemical Engineering)
currently Engineer at Samsung Austin Semiconductor, Austin, TX
6. Tejas Athavale (Environmental Engineering)
currently M.S. student at University of South Florida
7. Julia Ann Funk-Morris (Environmental Engineering)
currently Ph.D. student at Clemson University
8. Clancy Kerr (Microbiology)
currently part-time Project Manager at Coca-Cola
9. Nicholas Schirato (Environmental Engineering)
currently Water/Wastewater Designer at HDR, Charlotte, NC
10. Daniel Brandt (Environmental Engineering)
currently Project Professional at Goodwyn Mills Cawood, Greenville, SC
11. Curtis McClelland (Environmental Engineering)
12. Katie Hardison (Environmental Engineering)
currently M.S. student at Clemson University
13. Kaitlyn Davis (Environmental Engineering)
currently M.S. student at Clemson University
14. Jessica Glover (Chemistry)
currently Purification Chemist at AmbioPharma, North Augusta, SC
15. Julia Shashok, expected graduation May 2025
16. Hughes Clark, expected graduation May 2025
17. Coulter Friez, expected graduated May 2025
18. Allison Evans, expected graduation May 2026

Previous B.S. students from other institutions:

1. Nicholas Mitchell (University of South Carolina)
currently Program Manager at Regeneration, Washington, DC
2. Raven Althouse (Furman University)
currently Ph.D. student at the University of Southern California
3. Michael Ralph (Wofford College)
currently Client Systems Engineer at Epic
4. Laney Hayes (University of South Carolina)
currently Electromechanical Engineer at Lockheed Martin
5. Hannah Duncombe (Benedict College)
currently continuing student at Benedict College

6. Emily Schwendemann (Wofford College)
current continuing student at Wofford College

Previous high school students:

1. Winnie Zheng, SC Governor's School for Science & Mathematics
2. Zaria Jones, Greenville Technical Charter High School
3. Eli Hood, SC Governor's School for Science & Mathematics
4. Megan Craney, SC Governor's School for Science & Mathematics
5. Ashka Raval, T. L. Hanna High School
6. Meredith Morningstar, SC Governor's School for Science & Mathematics
7. Megh Patel, T. L. Hanna High School
8. Breana VanAtter, SC Governor's School for Science & Mathematics

Graduate student committees:

Ph.D. students:

1. Sheikh Moni, graduated May 2020
2. Alex Ramos, graduated December 2020
3. Hamed Torkzadeh, graduated August 2021
4. Rokhsana Mahmud, graduated August 2022
5. Zuo Zhou, graduated May 2023
6. Mojatoba Qanbarzadeh, graduated December 2023
7. Weiming Qi, expected graduation December 2024
8. Colby Cash, expected graduation May 2025
9. Ehsan Bouteh, expected graduation May 2027

M.S. students:

1. Matthew Vawter, graduated August 2017
2. Weiming Qi, graduated May 2018
3. Kameryn Mcgee, graduated May 2018
4. Joel Neuder, graduated May 2019
5. John Houston, graduated August 2020
6. Varun Chetan Kumar, graduated August 2020
7. Christopher Coskrey, graduated May 2021
8. Hao Zeng, expected graduated December 2021
9. Lingyun Peng, graduated May 2022
10. Reagan Gregory, graduated August 2023
11. Alyssa Costello, graduated May 2024
12. Harish Lakshmi Srinivasan, expected graduation December 2024
13. Tristan Veal, expected graduation May 2025

PROFESSIONAL MEMBERSHIPS

- Association of Environmental Engineering & Science Professors
- Water Environment Federation
- International Water Association

PROFESSIONAL ACTIVITIES

- *Ad hoc* reviewer for journals (reviewed >100 manuscripts): *ACS ES&T Engineering, AIChE Journal, Applied Biochemistry and Biotechnology, Applied and Environmental Microbiology, Analyst, Biodegradation, Bioelectrochemistry, Bioprocess and Biosystems Engineering, Bioresource Technology, Biotechnology and Bioengineering, Chemical Engineering Journal, Chemosphere, ChemSusChem, Electrochimica Acta, Energy & Environmental Science, Environmental Engineering Science, Environmental Science: Processes and Impacts, Environmental Science: Water Research & Technology, Environmental Science & Technology, International Journal of Hydrogen Energy, Journal of Power Sources, PLOS One, Proceedings of the National Academy of Sciences U.S.A., RSC Advances, Science of the Total Environment, Water Environment Research, Water Research, Water Science & Technology.*
- *Ad hoc* book proposal reviewer for ACS Books
- *Ad hoc* book chapter reviewer for ACS Books, Wiley Publications
- *Ad hoc* proposal reviewer for National Science Foundation, Department of Energy
- Member of Student and Post-doc Services Committee, Association of Environmental Engineering and Science Professors (2019-present)
- Reviewer for AEESP Navigating the Academic and Professional Job Search workshop (2017)
- Organizer for AEESP Future Faculty Seminar Series (2022)
- Organizer for AEESP Careers in Environmental Engineering and Science after Graduate School workshop (2023)
- Member of newsletter committee, International Society for Microbial Electrochemistry and Technology (2013-2019)
- Member of 2015 international conference organizing committee, International Society for Microbial Electrochemistry and Technology (2015)
- Member of the technical advisory board for Arbsource, LLC (2012-2015)