SYEED MD ISKANDER, Ph.D., PE

Assistant Professor
Department of Civil, Construction and Environmental Engineering
North Dakota State University
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EDUCATION

Ph.D. **Virginia Tech**, Blacksburg, USA
Civil Engineering, 2019

M.S. **Washington State University**, Pullman, USA
Environmental Engineering, 2014

B.S. **Bangladesh University of Engineering and Technology**, Dhaka, Bangladesh
Civil Engineering, 2012

PROFESSIONAL EXPERIENCE

08/2020 – Present	**Assistant Professor**, Department of Civil, Construction and Environmental Engineering, North Dakota State University
05/2019 – 07/2020	**Postdoctoral Research Associate**, Department of Civil and Environmental Engineering, University of Southern California
08/ 2015 – 05/2019	**Graduate Research Assistant**, Department of Civil and Environmental Engineering, Virginia Tech
08/2018 – 12/2018	**Instructor of Record**, Department of Civil and Environmental Engineering, Virginia Tech
08/2013 – 07/2015	**Graduate Teaching Assistant**, Department of Civil and Environmental Engineering, Washington State University
05/2012 – 07/2013	**Lecturer**, Department of Civil Engineering, University of Information Technology and Sciences, Ahsanullah University of Science and Technology, Bangladesh

RESEARCH INTERESTS

Non-recyclable municipal solid waste management, Plastics pollution, Landfilling, and Landfill leachate management.

ACADEMIC HONORS AND AWARDS

2019	First Place, flash talk, 1st annual Alpha Epsilon Honor Society Research Symposium, Virginia Tech

2019	Gold Award, oral presentation, 35th Annual Graduate Student Assembly Research Symposium, Virginia Tech
2019	Graduate Teaching Assistant Excellence Award, Departmental Nominee, Civil and Environmental Engineering, Virginia Tech
2019	Diversity Scholar, Office of Recruitment, Diversity, and Inclusion – Graduate School, Virginia Tech
2018	Civil and Environmental Engineering Teaching Fellow, Virginia Tech
2017	First Place, oral presentation, 33rd Annual Graduate Student Assembly Research Symposium, Virginia Tech
2016 – 2019	Environmental Research and Education Foundation Ph.D. Scholarship
2016 & 2017	Runner up, Environmental Challenge International Competition
2016	Jaqueline Shields Memorial Scholarship, Air & Waste Management Association
2016	Solid Waste Institute for Sustainability – International Solid Waste Association Scholarship, University of Texas, Arlington
2015	Pratt Graduate Fellowship, Virginia Tech
2007 – 2012	University Merit Scholarship, Bangladesh University of Engineering and Technology
2007 – 2012	Dean's List Award, Bangladesh University of Engineering and Technology

PEER REVIEWED PUBLICATIONS

12 Wang, P., Zarei Baygi, A., Sauceda, C., Iskander, S.M., Smith, A. L.* 2021. Long-Term Surveillance of Wastewater SARS-CoV-2 in Los Angeles County. ***Environmental Science: Water Research & Technology,*** https://doi.org/10.1039/D1EW00586C.

11 Iskander, S.M., Amha, Y.M., Wang, P., Dong, Q., Liu, J., Corbett, M., Smith, A.L.* 2021. Investigation of fats, oils, and grease co-digestion with food waste in anaerobic membrane bioreactors and the associated microbial community using MinION sequencing. ***Frontiers in Bioengineering and Biotechnology,*** 9, 206.

10 Golwala, H., Zhang, X., Iskander, S. M.*, Smith, A. L.*, 2021. Solid Waste: An Overlooked Source of Microplastics to the Environment. ***Science of The Total Environment***, 769, 144581.

9 Xu, B., Iskander, S.M., He, Z.*, 2020. Dominant formation of unregulated disinfection by-products during electrocoagulation treatment of landfill leachate. ***Environmental Research***, 182, 109006.

8 Iskander, S.M., Zeng, T., Smiley, E., Bolyard, S., Novak, J.T., He, Z.*, 2020. Formation of disinfection byproducts during Fenton's oxidation of chloride-rich landfill leachate. ***Journal of Hazardous Materials***, 382, 121213.

7 Iskander, S.M., Novak, J.T., He, Z.*, 2019. Reduction of reagent requirements and sludge generation in Fenton's oxidation of landfill leachate by synergistically incorporating forward osmosis and humic acid recovery. ***Water Research,*** 151, 310-317.

6 Iskander, S.M., Zhao, R., Pathak, A., Gupta, A., Pruden, A., Novak, J.T., He, Z.*, 2018. A review of landfill leachate induced ultraviolet quenching substances: Sources, characteristics, and treatment. ***Water Research***, 145, 297-311.

5 Iskander, S.M., Novak, J.T. and He, Z.*, 2018. Enhancing forward osmosis water recovery from landfill leachate by desalinating brine and recovering ammonia in a microbial desalination cell. ***Bioresource Technology***, 255, 276-282.

4 Iskander, S.M., Novak, J.T., Brazil, B., He, Z.*, 2017. Simultaneous energy generation and UV quencher removal from landfill leachate using a microbial fuel cell. ***Environmental Science and Pollution Research***, 24 (33), 26040–26048.

3 Iskander, S.M., Novak, J.T., Brazil, B., He, Z.*, 2017. Percarbonate oxidation of landfill leachates towards removal of ultraviolet quenchers. ***Environmental Science: Water Research & Technology***, 3(6), 1162-1170.

2 Iskander, S.M., Zou, S., Brazil, B., Novak, J.T., He, Z.*, 2017. Energy consumption by forward osmosis treatment of landfill leachate for water recovery. ***Waste Management***, 63, 284-291.

1 Iskander, S.M., Brazil, B., Novak, J.T., He, Z.*, 2016. Resource recovery from landfill leachate using bioelectrochemical systems: Opportunities, challenges, and perspectives. ***Bioresource Technology***, 201, 347-354.

CONFERENCE PROCEEDINGS

1. Iskander, S.M., 2016. A Broader Perspective of the Municipal Solid Waste Management Systems in Dhaka, Bangladesh. International Solid Waste Association (ISWA) – Solid Waste Institute for Sustainability (SWIS) Winter School Proceedings, pp 107-118.

TALK/CONFERENCE PRESENTATIONS

Oral Presentations

- Iskander, S.M. Reduction in required reagents and sludge generation in Fenton's oxidation of landfill leachate through forward osmosis and humic acid recovery, ND Environmental Conference, Bismarck, North Dakota, September 2021.
- Iskander, S.M. Recovering waste resources and addressing emerging contaminants for sustainability, North Dakota State University – Vellore Institute of Technology seminar series, March 2021.

- Iskander, S.M. Recovering wastewater resources for sustainability. American Water Works Association/Water Environment Federation Student Chapter Meeting, North Dakota State University, Jan 2021.
- Iskander, S.M. Recovering wastewater resources for sustainability. Department of Civil and Environmental Engineering, North Dakota State University, October 2020.
- Iskander, S.M. Recovering waste resources and addressing emerging contaminants for sustainability. Department of Civil and Environmental Engineering, North Dakota State University, April 2020.
- Iskander, S.M. Recovering wastewater resources and addressing emerging contaminants for sustainability. Astani Department of Civil and Environmental Engineering, University of Southern California, April 2020.
- Iskander, S.M. Recovering wastewater resources and addressing emerging contaminants for sustainability. Department of Civil and Environmental Engineering, Southern Illinois University, March 2020.
- Iskander, S.M. Recovering wastewater resources and addressing emerging contaminants for sustainability. Department of Civil, Environmental, and Construction Engineering, University of Central Florida, February 2020.
- Iskander, S.M., Novak, J.T., He, Z. Reduction of reagent requirements and sludge generation in Fenton's oxidation of landfill leachate by synergistically incorporating forward osmosis and humic acid recovery. Association of Environmental Engineering and Science Professors (AEESP) Conference, Tempe, AZ, May 2019.
- Iskander, S.M., Novak, J.T., He, Z. An Integrated forward osmosis - microbial desalination cell technique for enhanced water recovery from landfill leachate. Annual Alpha Epsilon Honor Society Research Symposium, Agricultural, Food, and Biological Engineering Department, Virginia Tech, VA, March 2019.
- Iskander, S.M., Novak, J.T., He, Z. Reduction in required reagents and sludge generation in Fenton's oxidation of landfill leachate through forward osmosis and humic acid recovery. 35th Graduate Student Assembly (GSA) Symposium, Virginia Tech, VA, March 2019.
- Iskander, S.M. Advanced oxidation for wastewater treatment. Annual Virginia Tech Wastewater Operator Short School, Blacksburg, VA, August 2018.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. Simultaneous energy generation and ultraviolet quenchers removal from landfill leachate using a microbial fuel cell. Global Waste Management Symposium, Palm Springs, CA, February 2018.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. An Integrated forward osmosis – microbial desalination cell technique for enhanced water recovery from landfill leachate. EREF WasteExpo, New Orleans, LA, May 2017.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. Integrating microbial desalination with forward osmosis to complement water recovery from landfill leachate. 33rd Graduate Student Assembly (GSA) Symposium, Virginia Tech, VA, March 2017.

- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. Pretreatment of landfill leachate for enhanced electricity generation in a microbial fuel cell. 32nd Graduate Student Assembly (GSA) Symposium, Virginia Tech, VA, March 2016.

Poster Presentations

- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. An Integrated forward osmosis – microbial desalination cell technique for enhanced water recovery from landfill leachate. Eighth annual CEE Research Day, Virginia Tech, VA, April 2018.
- Iskander, S.M., Novak, J.T., He, Z. Enhancing the recovery of humic acids from landfill leachate using forward osmosis and its application in the Fenton's oxidation of Benzene. 34th Graduate Student Assembly (GSA) Symposium, Virginia Tech, VA, March 2018.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. An Integrated forward osmosis – microbial desalination cell technique for enhanced water recovery from landfill leachate. Association of Environmental Engineering and Science Professors (AEESP) Conference, Ann Arbor, MI, June 2017.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. Peroxygen oxidation towards understanding the ultraviolet quenchers transformation in landfill leachate. Borchardt Conference, Ann Arbor, MI, February 2017.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. Recovery of organics and water from landfill leachate. WaterJam Conference, Virginia Beach, VA, September 2016.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. Oxidation pretreatment of landfill leachate for enhanced electricity generation in a microbial fuel cell. Air and Waste Management Association (A&WMA) Conference, New Orleans, LA, June 2016.
- Iskander, S.M., Novak, J.T., Brazil, B., He, Z. Resource recovery from landfill leachate using bioelectrochemical systems. Sixth annual CEE Research Day, Virginia Tech, VA, April 2016.
- Zha, Q., Iskander, S.M., He, Z. Nitrification of landfill leachate for ammonia removal and effects of inhibiting factors on biomass growth. Sixth annual CEE Research Day, Virginia Tech, VA, April 2016.

TEACHING EXPERIENCE

North Dakota State University

Instructor of Record, Fall 2021
Course: Solid Waste Management
Responsibilities: 100% teaching responsibility
Student evaluation: TBD

Instructor of Record, Spring 2021
Course: Introduction to Environmental Engineering
Responsibilities: 100% teaching responsibility
Student evaluation: 4.24/5.00

Virginia Tech

Instructor of Record, Fall 2018
Course: Introduction to Environmental Engineering
Responsibilities: 100% teaching responsibility
Student evaluation: 4.80/6.00

Washington State University

Graduate Teaching Assistant, Fall 2013 – Spring 2015
Courses: Water Resources Engineering, Hazardous Waste Engineering
Responsibilities: Grading, homework preparation and assignment

Pedagogical Training

Teaching Certificate: Future Professoriate Certificate, Virginia Tech, 2018

Teaching Coursework, Virginia Tech

- Preparing the Future Professoriate
- Contemporary Pedagogy
- Communicating Science
- Diversity for the Global Society

MENTORING EXPERIENCE

North Dakota State University

Ryan Anderson (01/21 – Present)	Micro/nanoplastics in municipal solid waste.
Kira Eliason (02/21 – Present)	Non-recyclable municipal solid waste management.
Biraj Saha (06/21 – Present)	Concentrated landfill leachate treatment for the removal of emerging contaminants.
Himani Yadav (08/21 – Present)	Degradation mechanisms of plastics in landfills.

University of Southern California

Bianca Costa (08/19 – 07/20)	Antibiotic resistance genes fate during food waste treatment.
Harmita Golwala (01/20 – 07/20)	Fate of food waste microplastics in anaerobic membrane bioreactors.
Xueyao Zhang (01/20 – 07/20)	Microplastics in the United States Landfills.

Virginia Tech

Jessie Chung (08/18 – 05/19)	An incorporated advanced oxidation and membrane distillation treatment of landfill leachate.

Bing Xu (01/19 – 05/19)	Disinfection byproducts formation during electrochemical treatment of landfill leachate.
Nick Lang (01/17 – 05/17)	Microbial desalination treatment of landfill leachate.
Qinying Zha (08/16 – 05/17)	Nitrification of landfill leachate for ammonia removal and effects of inhibiting factors on biomass growth.

REVIEW ACTIVITY

- Grant reviewer for the Environmental Research and Education Foundation
- Water Research, ACS ES&T Engineering, Journal of Hazardous Materials, Bioresource Technology, Desalination, Waste Management, Science of the Total Environment, Separation and Purification Technology, Journal of Environmental Engineering, Sustainable Energy & Fuels, Arabian Journal of Chemistry, Journal of Environmental Health Science and Engineering, Water Science and Technology, Environmental Science and Pollution Research, Process Safety and Environmental Protection, Water Environment Research, Bioresources and Bioprocessing, RSC Advances, Journal of Water Process Engineering, Water, Journal of the Air & Waste Management Association, Frontiers of Environmental Science and Engineering.