

Namrata Shanmukh Panji

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EDUCATION

PhD in Environmental Engineering, Virginia Tech, Blacksburg, VA GPA: 3.71/4 Aug 2019 – Present
B.E. in Chemical Engineering, BMS College of Engineering, Bangalore, India GPA: 9.18/10 Aug 2014 – May 2018

RESEARCH PROJECTS

Concentrating Inlet for Enhancing Instrument Sensitivity and Level of Detection Jan 2020 – Present
Isaacman-VanWertz lab, Virginia Tech

- Demonstrated considerable enrichment at SCCM level flows at a moderate cost for major reactive atmospheric gases: monoterpenes ($C_{10}H_{16}$, specifically α -pinene), and n-alcohols (specifically methanol and butanol).
- Modeled the relationship between inlet design parameters, operating conditions, and inlet efficiency.
- Presented a poster on the same at the 38th American Association for Aerosol Research Annual Conference, 2020.

Characterization of Fragrances in Indoor Air Oct 2019 – Jan 2020
Isaacman-VanWertz lab, Virginia Tech

- Studied persistence and decay of fragrances in indoor air by analyzing a complex data set collected by Chemical Ionization Mass Spectrometer coupled with Flame Ionization Detector and Gas Chromatography.
- Identified compounds present in fragrance mixtures by analyzing fragmentation recorded by Semi Volatile-Thermal Desorption Aerosol Gas Chromatography coupled with Electron Ionization Mass Spectrometer.

Wastewater Treatment using Microbial Fuel Cells May 2017 – Apr 2018
BMS College of Engineering, India

- Fabricated and tested electrode materials for microbial fuel cells (MFCs) for the purpose of power generation and wastewater treatment.
- Won first place for Oral presentation on the same at a National Level Symposium, Siddaganga Institute of Technology, India, 2018.
- Work published in peer-reviewed *Asian Journal of Applied Science and Technology*, 2018.

Adsorption studies on Vehicular soot May 2016 – Dec 2017
BMS College of Engineering, India

- Lead a team of four to evaluate the effects of agitation rates and times on the adsorption using vehicular soot in comparison to activated carbon.
- Won first place for presenting a poster on the same at a National Level Student Symposium, Bapuji Institute of Engineering and Technology, India, 2017.

TECHNICAL PUBLICATIONS

Pranesh, R., Panji, N. S., Malhotra, T., A V, K., & Panda, S. (2018). Development of electrodes for use in microbial fuel cells for wastewater treatment and power generation. *Asian Journal of Applied Science and Technology*, 2(2), 987–994. Retrieved from: <http://ajast.net/data/uploads/5033.pdf>

POSITIONS OF RESPONSIBILITY

President | **VA AWWA/VWEA Chapter**, Virginia Tech, VA Jan 2020 – Present

- Organized resume review sessions with industry professionals to aid graduating students with professional development and networking.
- Organized panel discussion sessions with water/wastewater industry professionals for undergraduate and graduate students.
- Planned and arranged logistics for similar sessions in Spring 2021.
- Recruited student members during 2020–2021 academic year.

Research Intern | **Centre for Science and Environment**, India Sep 2018 – Dec 2018

- Conducted performance analyses on the model and pilot projects of Decentralized Wastewater Treatment Systems (DWWTS) involving soil biotechnology systems, anaerobic baffled reactors, planted gravel filter beds, among others.
- Designed upgrade for chlorination disinfection systems for DWWTS.
- Aided in planning capacity building programs conducted by CSE for wastewater professionals.

Intern | **Karnataka Antibiotics and Pharmaceuticals Ltd.**, India Dec 2016 – Jan 2017

- Served as a Laboratory Assistant in the Quality Control and Assurance Department.
- Conducted qualitative and quantitative tests on the raw material, de-mineralized water, finished product streams in the industry using gas chromatography, HPLC, UV-spectrophotometry methods.

TECHNICAL TRAININGS

Urban Lake Management: Water & Environment Sustainability | Centre for Science & Environment, India 2018

- Trained in techniques to prepare urban wetland management plans.
- Developed skills in mapping of wetlands and its catchment using GIS.

WORKSHOPS

Development of Project Managerial Skills | 8th Annual PM Primer, India 2016

SKILLS

Igor	BioWin	MS Office (Word, Excel, PowerPoint)
AutoCAD	GIS (Beginner)	R (Beginner)

AWARDS AND ACTIVITIES

- **Second** Place in 16th Annual VA AWWA Student Water Challenge | WaterJAM, VA 2019
- Student at IWILL Institute: **Inspiring Women in Lifelong Leadership** | Virginia Tech, VA 2019 – Present