NATASHA ANDRADE, PH.D.

Associate Chair for Undergraduate Programs and Senior Lecturer

University of Maryland, Civil and Environmental Engineering Department
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EXPERTISE/SKILLS

- Engineering education research
- Pedagogy
- Curriculum development
- Reforestation
- Mercury contamination
- Persistent organic pollutants
- Bioavailability
- Passive sampling
- Wastewater
- Biosolids
- Remediation
- GIS, ArcMap 9.3
- GC/MS, GC/ECD, HPLC
- Fluent English and Portuguese

EDUCATION

2012	PhD – Environmental Engineering – University of Maryland
2008	MS – Environmental Engineering – University of Maryland
2005	BS – Chemical Engineering – University of Maryland
2002	Chemical Engineering – Federal University Fluminense (UFF), Rio de Janeiro, Brazil

EXPERIENCE

2020 – present	Associate Chair for Undergraduate Programs and Senior Lecturer – Department of Civil and Environmental Engineering – University of Maryland
2015 – 2020	Lecturer – Department of Civil and Environmental Engineering – University of Maryland
2014 – 2015	Research Associate – Department of Civil and Environmental Engineering – University of Maryland
2012 – 2013	Research Associate – Chemical, Biochemical, and Environmental Engineering Department – University of Maryland Baltimore County
2005 – 2012	Graduate Research Assistant – Department of Civil and Environmental Engineering – University of Maryland
2009 – 2012	Graduate Teaching Assistant – Department of Civil and Environmental Engineering – University of Maryland
2006 – 2011	Intern – DC Water and Sewer Authority, Blue Plains Wastewater Treatment Plant
2004 – 2005	Student Laboratory Technician – Department of Civil and Environmental Engineering Department – University of Maryland

TEACHING AND ADVISING

- Undergraduate courses:
  - ENCE215 – Engineering for Sustainability (Spring ’15, ’16, ’17, ’18, ’19, ’20, ’21; Fall ’15, ’16, ’17, ’18, ’19, ’20, ’21)
  - ENCE100 – Introduction to Civil and Environmental Engineering (Fall ’21)
  - ENCE411 – Environmental Engineering Science (Spring ’16, ’17, ’18, ‘19)

- ENME407 – Sustainability, Climate Change, and Renewable Energy Systems (Summer ’18, ’19, Winter ‘20)
- ENCE310 – Introduction to Environmental Engineering (Fall ’14, Spring ‘20)
- ENCE 489 – Special Topics (Summer ’16, Spring ’17)
- ENCE489G – Special Topics in Civil Engineering: Sustainability and Infrastructure Study Abroad Athens, Greece (Spring ’18)

GRANTSMANSHIP

Undergraduate and graduate student mentoring in funded research projects:

- Co-PI Environmentally and Socially Responsible Engineering Education. Lemelson Foundation, FY 20 $30,000
- Co-PI Characterization to Demonstrate Regulatory Compliance of Class A Biosolids Product to be Generated and Distributed by Blue Plains. DC Water, FY 14 $68,899; FY 15 $124,989
- Co-PI Investigation of PBDE’s in Class A biosolids; DC Water, FY 16 $4,484; FY 17 $30,074
- PI Elevate Fellows Program, 1 yearlong project to redesign an undergraduate course, FY 16 S$12,000
- Co-PI Characteristics of finishing processes of Class A biosolids and impact on PBDEs concentrations; DC Water, FY 18 $25,000

SELECTED PUBLICATIONS

2019 **Andrade, N. A.** “Identifying students’ misconceptions with formative assessments” *American Society for Engineering Education (ASEE) 2019 Annual Conference & Exposition, Tampa, Florida.*

2019 **Andrade, N. A.** and Tomblin, D. “What are they talking about? Depth of engineering student socio-technical thinking in a technical engineering course” *American Society for Engineering Education (ASEE) 2019 Annual Conference & Exposition, Tampa, Florida.*

2018 **Andrade, N. A.**, Tomblin, D. “Engineering and sustainability: the challenge of integrating social and ethical issues into a technical course.” *American Society for Engineering Education (ASEE) 2018 Annual Conference & Exposition, Salt Lake City, Utah.*

2018 Sanders, J. P., **Andrade, N. A.**, Menzie, C. A., Amos, C. B., Gilmour, C. C., Bell, J. T., Henry, E. A., Brown, S. S., Ghosh, U. “Persistent reductions in the bioavailability of PCBs at a tidally inundated *Phragmites australis* marsh amended with activated carbon.” *Environ Toxicol Chem. 37(9):2496-2505. https://doi.org/10.1002/etc.4186.*

2018 Sanders, J. P., **Andrade, N. A.**, Ghosh, U. “Evaluation of passive sampling polymers and non-equilibrium adjustment methods in a multi-year surveillance of sediment pore water PCBs.” *Environ Toxicol Chem. 37(9):2487-2495. https://doi.org/10.1002/etc.4223.*

2018 Wang, X., **Andrade, N. A.**, Shekarchi, J., Fischer, S. J., Torrents, A., Ramirez, M. 2018 “Full scale study of class A biosolids produced by thermal hydrolysis pretreatment and anaerobic digestion.” *Waste Management 78: 43:50. https://doi.org/10.1016/j.wasman.2018.05.026.*