KIMBERLY L. JONES, Ph.D., F. AEESP, BCEEM

Dean, College of Engineering and Architecture · Professor, Civil & Environmental Engineering

Howard University

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CURRENT POSITION

Dean, College of Engineering and Architecture

2025 – Present

Howard University, Washington, DC

Appointed to lead a high-growth College at an R1 institution, charged with advancing research excellence, expanding external partnerships, and positioning the College for national prominence.

Strategic Leadership & Institutional Impact

- Planning a comprehensive, stakeholder-driven strategic planning process to position the College as a national leader in engineering, architecture, and computer science, aligned with Howard's R1 research mission.
- Serve as chief advocate for the College, strengthening alignment with university leadership, Board of Trustees, and external stakeholders to advance institutional priorities and visibility.
- Direct a multi-department academic enterprise spanning engineering, architecture, and computing disciplines, with responsibility for academic quality, research growth, and operational effectiveness.

Research Enterprise Growth

- Spearhead initiatives to expand research capacity and competitiveness, strengthening partnerships with federal agencies, industry, and peer institutions.
- Build and scale infrastructure and administrative support systems to increase proposal submissions, improve post-award management, and enhance faculty research productivity.
- Advance interdisciplinary research collaborations across engineering, architecture, and emerging areas (AI, sustainability, infrastructure resilience).

Faculty, Staff & Student Success

- Recruit, retain, and develop high-performing faculty and staff through strategic hiring, mentorship programs, and resource alignment for research and teaching success.
- Implement student success strategies focused on retention, experiential learning, and workforce readiness, including industry partnerships and hands-on learning environments.

Academic Innovation & Financial Stewardship

- Lead modernization of curricula to integrate emerging fields such as artificial intelligence, digital technologies, and sustainability; expand interdisciplinary and graduate programming.
- Ensure continuous improvement and compliance with accreditation standards (ABET, NAAB) while enhancing program distinctiveness and competitiveness.
- Oversee multi-million-dollar college budget; develop and execute fundraising and corporate partnership strategies to diversify revenue streams and support scholarships, research, and infrastructure.

ACADEMIC LEADERSHIP EXPERIENCE

Associate Provost for Faculty Affairs

2022 – 2025

Howard University, Office of the Provost and Chief Academic Officer

- Faculty Recruitment, Retention & Credentialing: Oversaw hiring processes, promoted faculty excellence, and supported professional development including mentoring and leadership training.
- Tenure, Promotion & Evaluation: Managed policies and procedures ensuring fair and transparent evaluation processes.

- Faculty Affairs & Governance: Served as liaison between faculty and the Provost/President, addressing workload, compensation, and governance structures.
- Strategic Initiatives: Led initiatives to enhance faculty success, well-being, and academic excellence in collaboration with deans and department chairs.

Associate Dean for Research and Graduate Education *2016 – 2021*

College of Engineering and Architecture, Howard University

- Built a framework to incentivize and support research — improved grant success rates (+10%), proposal submission rates (+12%), and research expenditures (+9%) across the College.
- Developed innovative research partnership programs with major corporations including Lockheed Martin, Boeing, Amazon, Microsoft, and Ford.
- Increased PhD student percentage from 24% to 45%; doubled funding to support graduate student outcomes and research opportunities.
- Improved graduate program rankings by enforcing higher admission standards and enhanced mentoring to decrease time-to-graduation.

Chair, Department of Civil and Environmental Engineering *2009 – 2021*

Howard University

- Led 2012 and 2018 ABET self-study and review processes; 2018 visit resulted in zero concerns, deficiencies, or weaknesses.
- Increased departmental research expenditures by 15%, enrollment by 16%, and female undergraduate representation from 32% to 46%.
- Developed and implemented a self-sustaining interdisciplinary PhD program — 50% of students earned external fellowship support — without soliciting additional university resources.
- Implemented undergraduate advising model that increased graduation rates by 14%; led 5 major curriculum updates.
- Recruited 4 top-tier faculty in transportation, geotechnical, and environmental engineering.

Co-Chair, Academic & Administrative Program Prioritization Task Force *2017 – 2020*

Howard University

- Led evaluation of 145 degree-granting programs across Howard University campuses using a methodologically robust data collection framework.
- Engaged 300+ faculty, staff, and administrators in a transparent, consensus-building process; led 50+ evaluation teams.

PRIOR ACADEMIC APPOINTMENTS

Professor, Civil & Environmental Engineering *2009 – Present*
Howard University

Associate Professor, Civil Engineering *2002 – 2009*
Howard University

Director of Graduate Programs, Civil Engineering *2001 – 2009*
Howard University

Assistant Professor, Civil Engineering *1996 – 2002*
Howard University

Deputy Director, Keck Center for Nanoscale Materials *2002 – 2004*
Howard University

Visiting Summer Faculty *1997*
Sandia National Laboratory, Albuquerque, NM

Graduate Research Assistant *1992 – 1996*
Johns Hopkins University

Graduate Research Assistant *1990 – 1992*
University of Illinois

Engineering Intern, Water Treatment Division *1990*
CH2M Hill, Herndon, VA

EDUCATION

Ph.D., Environmental Engineering
The Johns Hopkins University
Advisor: Dr. Charles R. O'Melia
Dissertation: The Influence of Protein and Humic Acid Adsorption on the Fouling of Hydrophilic Ultrafiltration Membranes

M.S., Civil and Environmental Engineering
University of Illinois
Advisor: Dr. Mark Clarke | Thesis: Hydraulic Modeling to Predict Performance of a Hollow Fiber Membrane

B.S., Civil Engineering — *Magna Cum Laude*
Howard University

FUNDED RESEARCH — TOTAL AWARDED: >$27 MILLION

National Science Foundation	**$19,696,140**
National Aeronautics and Space Administration	**$5,137,006**
Department of Energy	**$1,828,286**
W.M. Keck Foundation	**$750,000**
DC Water and Sewer Authority	**$765,000**
Water Environment and Research Federation	**$120,834**

NATIONAL BOARD & ADVISORY LEADERSHIP

- Chair, Chartered Science Advisory Board, U.S. Environmental Protection Agency (2023 – 2025)
- Board Member (Presidential Appointee), National Institute of Building Sciences (2021 – Present)
- Committee Member, U.S. Global Change Research Program, National Academies of Science, Engineering & Medicine (2021 – 2025)
- Chair, Advisory Committee on Environmental Research and Education (AC-ERE), National Science Foundation (2020 – 2025)
- Advisory Committee for Engineering (liaison to AC-ERE), National Science Foundation (2021 – 2025)
- Board Member, ASEE Research Leadership Institute (2021 – 2024)
- Department Heads Coordinating Council (DHCC), American Society of Civil Engineers (2021 – 2022)
- JEDI Chair & Alt. Commissioner, Interstate Commission on the Potomac River Basin, Washington DC (2016 – 2023)
- Board Member, Office of the State Superintendent of Education Engineering DC CTE Industry Advisory Board (2016 – Present)
- Chair, Academic Sub-Committee, Program Prioritization Task Force, Howard University (2017 – 2021)
- Diversity Chair & Management Board Member, Urban Water Innovation Network (UWIN) (2015 – 2020)
- Management Board Member, Center for Risk Evaluation and Stakeholder Participation (CRESP) (2012 – Present)
- Chair, Drinking Water Committee, Chartered Science Advisory Board, U.S. EPA (2012 – 2017)
- Chartered Science Advisory Board, U.S. Environmental Protection Agency (2011 – 2017)
- Chartered Science Advisory Board Liaison, National Drinking Water Advisory Committee (2012 – 2017)
- National Academy of Science Water, Science and Technology Board Member (2006 – 2012)
- Steering Committee Member, Center for the Environmental Implications of Nanotechnology (2008 – 2020)

- Chair, Presidential Commission on Academic Renewal Undergraduate Subcommittee (2009 – 2010)
- Expert Panel Member, Washington Aqueduct (2009 – 2010)
- Associate Editor, ASCE Journal of Environmental Engineering (2004 – 2008)
- Board of Directors (Secretary), Association of Environmental Engineering and Science Professors (2003 – 2006)
- Deputy Director, Keck Center for Design of Nanoscale Materials for Molecular Recognition (2002 – 2005)
- Planning Committee, Annual Nanotechnology Symposium, Howard University (2004 – 2011)
- Executive Committee & Howard University Coordinator, Summer Research Experience for Undergraduates, ALS NSCORT Program (2002 – 2007)

UNIVERSITY-WIDE COMMITTEE SERVICE — HOWARD UNIVERSITY

- AI Advisory Council, Capacity and Expertise Committee (2022 – Present)
- Lead, Faculty Hiring and Onboarding Task Force (2022 – 2025)
- Lead, Faculty Workload and Course Optimization Committee, Strategic Framework Process (2021 – 2024)
- Chair, Academic and Administrative Program Prioritization Task Force, Academic Subcommittee (2017 – 2020)
- Research Advisory Committee (2015 – 2016)
- Budget Advisory Committee (2013 – 2014)
- Associate Provost for Undergraduate Studies and Enrollment Management Search Committee (2013)
- Undergraduate Studies Committee (2011 – 2013)
- Presidential Commission on Academic Renewal (2009 – 2011) — Chair of Undergraduate Work Group
- Middle States Commission on Higher Education Self Study Research Team (2008 – 2009)
- Research Advisory Commission (2003 – 2006)
- Strategic Framework for Action II — Research and Infrastructure Committee (2000 – 2001)
- Minority Graduate Education Program Panelist (1998)
- Fund for Academic Excellence Review Team (1998 – 1999)
- Environmental Studies Task Force (1998 – 2000)

AWARDS & HONORS

- Induction, International Women's Forum – DC (2019)
- Charles and Mary O'Melia Lecturer in Environmental Science, Johns Hopkins University (2015)
- Researcher of the Year Award, ADVANCE-IT, Howard University (2015)
- Voices of Discovery Speaker, Elon University (2009)
- Outstanding Service Award, Association of Environmental Engineering and Science Professors (2006)
- Keynote Speaker, ADVANCE Conference for Graduate Students and Postdocs, Virginia Tech (2006)
- Young Civil Engineer Achievement Award, University of Illinois (2005)
- Outstanding Advisor, American Society of Civil Engineers (2002, 2003)
- Named one of the "Top Women in Science," National Technical Association (2001)
- Honored as one of the "30 Women to Watch," Essence Magazine (2000)
- Leadership and Faculty Service Award, College of Engineering, Architecture and Computer Sciences (1999)
- NSF CAREER Award (1998)
- Certificate of Merit, Presentation at 212th ACS Conference (1996)
- NSF Graduate Fellowship Award (1992 – 1995)
- Member, Tau Beta Pi Engineering Honor Society (1988 – Present; VP Student Chapter 1989–1990; Faculty Advisor 2000–Present)

SCHOLARLY PUBLICATIONS

Peer-Reviewed Journal Articles

Fofana, R., Parsons, M., Bachmann, M., Jones, K., Delgado Vela, J., Akyon, B., Liu, W., Klaus, S., deBarbadillo, C., Bott, C., De Clippeleir, H. (2023). Robustness of partial denitrification-anammox (PdNA) in filters with methanol and glycerol as carbon sources. Environmental Science: Water Research & Technology, 9(4), 1124–1136.

Fofana, R., Parsons, M., Long, C., Chandran, K., Jones, K., Klaus, S., Trovato, B., Wilson, C., DeClippeleir, H., Bott, C. (2022). Full-scale transition from denitrification to partial denitrification-anammox (PdNA) in deep-bed filters: Operational strategies for and benefits of PdNA implementation. Water Environment Research. DOI: 10.1002/wer.10727.

Fofana, R., Huu Huynh, Jones, K., Delgado Vela, J., Long, C., Chandran, K., Bott, C., Akyon, B., Liu, W., deBarbadillo, C., De Clippeleir, H. (2022). Mainstream partial denitrification-anammox in sand and expanded clay deep-bed polishing filters under practical loading rates and backwashing conditions. Water Environment Research, 94(5), e10728.

Fofana, R., Peng, B., Huynh, H., Sajjad, M., Jones, K., Al-Omari, A., Bott, C., Delgado Vela, J., Murthy, S., Wett, B., Debarbadillo, C., De Clippeleir, H. (2022). Media selection for anammox-based polishing filters: balancing anammox enrichment and retention with filtration function. Water Environment Research, 94(5), e10724.

Jones, K. (2020). Accelerating Innovation in the Water Sector to Meet Future Water Demands. The Bridge, 50(S), 88–90.

Bergman, L., Jones, K., and VanBriesen, J. (2019). Fluorescence Characterization of Organic Matter and Fouling in a Full-Scale Reverse Osmosis Membrane Treatment Plant. Water Research. DOI: 10.1002/wer.1236.

Odize, V., Rahman, A., Jones, K., Khunjar, W., Murthy, S. (2017). Removal of 17-ethinylestradiol, salicylic acid, trimethoprim, carbamazepine and nonylphenol through biological carbon and nitrogen removal processes. Water and Environment Journal. DOI: 10.1111/wej.12262.

Fennell, Y., Adegboye, T., Jones, K., and Ymele-leki, P. (2016). Sulfidation of Silver Nanoparticles and its Impact on Established P. aeruginosa Biofilm. Journal of Biomaterials and Nanobiotechnology, 8(1), 83–95.

Igbinigun, E., Liu, Y., Malaisamy, R., Jones, K., and Morris, V. (2016). Graphene Oxide Functionalized Polyethersulfone Membrane to Reduce Organic Fouling. Journal of Membrane Science, 514, 518–526.

Mancell-Egala, A., Kinnear, D., Jones, K., De Clippeleir, H., Takacs, I., and Murthy, S. (2016). Limit of Stokesian Settling Concentration Characterizes Sludge Settling Velocity. Water Research. DOI: 10.1016/j.watres.2015.12.007.

Brown, K., Turner, H., Powers, C., Benson, C., Clarke, J., Burger, J., Higley, K., Jones, K., et al. (2015). Hanford Site-Wide Risk Review Project. Proceedings of Waste Management 2015 Conference, Phoenix, AZ.

Hochella, M., Spencer, M., and Jones, K. (2014). Nanotechnology: Nature's Gift or Man's Brainchild? Environmental Science: Nano. DOI: 10.1039/C4EN00145A.

Malaisamy, R., Lepak, L., Spencer, M., and Jones, K. (2013). Surface modification of porous alumina membranes by collagen layers: performance and characterization. Separation and Purification Technology, 113, 114–122.

Armstrong, N., Ramamoorthy, M., Lyon, D., Jones, K., Duttaroy, A. (2012). Mechanism of Silver Nanoparticles Action on Insect Pigmentation Reveals Intervention of Copper Homeostasis. PLOS ONE, 8(1), e53186.

Diagne, F., Malaisamy, R., Boddie, V., Holbrook, R., Eribo, B., and Jones, K.L. (2012). Polyelectrolyte and silver nanoparticle modification of microfiltration membranes to mitigate organic and bacterial fouling. Environmental Science and Technology, 46, 4025–4033.

Egala, A.M., Kinnear, D., Murthy, S., and Jones, K. (2012). Settling Transition Concentration Measurement to Quantify Sludge Settling Behavior. Proceedings of the Water Environment Federation. DOI: 10.2175/193864712811709670.

Lin, S., Cheng, Y., Bobcombe, Y., Jones, K., Liu, J., and Wiesner, M. (2011). Deposition of silver nanoparticles in geochemically heterogeneous porous media: Predicting affinity from surface composition analysis. Environmental Science and Technology, 45, 5209–5215.

Malaisamy, R., Talla-Nwafo, A., and Jones, K. (2011). Polyelectrolyte modification of nanofiltration membranes for selective removal of monovalent anions. Separation and Purification Technology, 77, 367–374.

Malaisamy, R., Berry, D., Holder, D., Raskin, L., Lepak, L., Jones, K. (2010). Development of reactive thin film polymer brush membranes to prevent biofouling. Journal of Membrane Science, 350, 361–370.

Wiesner, M., Lowry, G., Jones, K., Hochella, M. Jr., DiGuilio, R., Casman, E., and Bernhardt, E. (2009). Decreasing Uncertainties in Assessing Environmental Exposure, Risk and Ecological Implications of Nanomaterials. Environmental Science and Technology, 43, 6458–6462.

Awobamise, M., Khan, E., Jones, K., Murthy, S. (2009). Method Development for Measuring Biodegradable Dissolved Organic Nitrogen in Treated Wastewater. Water Environment Research, 81(8), 779–787.

Kouwonou, Y., Malaisamy, R., Jones, K. (2008). Modification of PES Membrane: Reduction of Biofouling and Improved Flux Recovery. Separation Science and Technology, 43(16), 4099.

Mukherjee, P., Jones, K., and Abitoye, J. (2005). Surface modification of nanofiltration membranes by ion implantation. Journal of Membrane Science, 254(1-2), 303–310.

Abitoye, J., Mukherjee, P., and Jones, K. (2005). Ion Implantation: Effect on Flux and Rejection Properties of NF Membranes. Environmental Science and Technology, 39(17), 6487–6493.

Jones, K., Leevy, J., and LaHee, S. (2004). High-Flux, Low-Fouling Membrane System for Wastewater Recycle in Space Missions. SAE 2004-01-2464.

Jones, K., and O'Melia, C. (2001). Ultrafiltration of protein and humic substances: Effect of solution chemistry on fouling and flux decline. Journal of Membrane Science, 193(2), 163–173.

Jones, K. and O'Melia, C. (2000). Protein and Humic Acid Adsorption onto Hydrophilic Membrane Surfaces: Effects of pH and Ionic Strength. Journal of Membrane Science, 165, 30–46.

Jones, K., Odderstol, E., Wetterau, G., and Clark, M. (1993). Using a Hydraulic Model to Predict Hollow Fiber UF Performance. Journal of American Water Works Association, 85, 87–97.

Other Articles

Clark, M.M., Allgeier, S., Amy, G., Chellam, S., DiGiano, F., Elimelech, M., Freeman, S., Jacangelo, J., Jones, K., et al. Committee Report: Membrane Processes. Journal of American Water Works Association, 90(6), 91–105.

Aitken, M.D., Novak, J.T., Characklis, G.W., Jones, K.L., and Vikesland, P.J. (2004). The evolution of environmental engineering as a professional discipline. Environmental Engineering Science, 21, 117–123.

National Academy Consensus Study Reports

Environmental Engineering in the 21st Century: Addressing Grand Challenges. Report to the National Academies of Sciences, Engineering and Medicine (2019).

Review of the New York City Department of Environmental Protection, Operations Support Tool for Water Supply. National Academies (2018).

A Review of the Environmental Protection Agency's Science to Achieve Results Research Program. National Academies (2017).

PCAPP Hydrolysate Report. National Research Council (2015).

Review of Biotreatment, Water Recovery, and Brine Reduction Systems for the Pueblo Chemical Agent Destruction Pilot Plant. National Research Council (2013).

The Blue Grass Chemical Agent Destruction Pilot Plant's Water Recovery System. National Research Council (2012).

Blue Water Navy Vietnam Veterans and Agent Orange Exposure. National Research Council (IOM) (2011).

Models in Environmental Regulatory Decision Making. National Research Council (2007).

Advancing Desalination Technology. National Research Council (2007).

Review of Desalination and Water Purification Technology Roadmap. National Research Council (2004).

CONFERENCE PROCEEDINGS & PRESENTATIONS

Fofana, R., Chen, H., Jones, K., Al-Omari, A., Bott, C.B., Delgado Vela, J., Murthy, S., Wett, B., Debarbadillo, C., DeClippeleir, H. (2020). Influence of media type and feed characteristics on performance of Partial denitrification-anammox (PdNA) in polishing. IWA Biofilms 2020 Virtual Conference, December 7–10.

Fofana, R., Huynh, H., Phan, D., Chen, H., Jones, K., et al. (2020). Media Selection for Partial Denitrification-Anammox: Balancing Anammox Enrichment and Retention with Filtration Function. IWA Nutrient Removal and Recovery Conference, October 5–9.

Fofana, R., DeClippeleir, H., Jones, K., et al. (2020). Media Selection for Partial Denitrification-Anammox: Balancing Anammox Enrichment and Retention with Filtration Function. IWA Nutrient Removal and Recovery Conference, September 1–3.

Fofana, R., Peng, B., Huynh, H., Jones, K., et al. (2019). Media Selection for Enrichment of Anammox in Polishing Filters. 92nd Annual WEFTEC, Chicago, IL, September 23.

Ghaffari Nazarlou, H., Paudel, B., Fennell, Y., and Jones, K. (2019). New developments on fouling control strategies for cross-flow filtration of radioactive wastes. CSAWWA & CWEA Joint Spring Meeting, Crofton, MD, May 9.

Ghaffari Nazarlou, H., Paudel, B., Fennell, Y., and Jones, K. (2019). Direct observation of fouling behaviors in cross-flow membrane system and anti-fouling strategy development. Research Symposium, Howard University, Washington, DC, April 12.

Ghaffari Nazarlou, H., Paudel, B., Fennell, Y., and Jones, K. (2019). Fouling control strategies for cross-flow filtration of high level wastes. AAAS Annual Meeting, Washington, DC, February 14–17.

Ghaffari Nazarlou, H., Paudel, B., Fennell, Y., and Jones, K. (2018). Fouling control strategies for cross-flow filtration of high level wastes (Case study: Hanford Site). CRESP Annual Meeting, Vanderbilt University, Nashville, TN, October 16–17.

Olagunju, O., Van Winckel, T., Mancell-Egala, W., Shanker, N., Kinnear, D., Al-Omari, A., Murthy, S., Jones, K., and De Clippeleir, H. (2018). Standardizing the Kinnear Limit of Stokesian Settling (LOSS) Parameter Using Image Data Analysis. WEFTEC 2018, New Orleans, LA, October 2.

Ramamoorthy, M., Rollock, R., Liu, Y., and Jones, K. (2016). Fouling Mechanisms and Control Strategies in Membrane Filtration of Hanford Tank Waste. 2016 National Capital Region Water Resources Symposium, Washington, DC, April 8.

Liu, Y., Campbell, S., Ramamoorthy, M., Jones, K. (2015). Column studies of Fate and Transport of Titanium Dioxide and Silver Nanoparticles from Biosolids through Porous Media. ICEENN Conference, Columbia, SC.

Liu, Y., Ymele-Leki, P., Igbinigun, E., Ramamoorthy, M., and Jones, K. (2015). Membranes Functionalized with Graphene Oxide Nanosheets to Impart Antibiofouling Properties. ACS National Fall Meeting, San Francisco, CA, August 10–15.

Ramamoorthy, M., Igninigun, E., Liu, Y., Morris, V., and Jones, K. (2015). Graphene Oxide-PES Composite Membranes: Fabrication and Performance Evaluation. ACS National Fall Meeting, San Francisco, CA, August 10–15.

Brown, K., Turner, H., Powers, C., Benson, C., Clarke, J., Burger, J., Higley, K., Jones, K., et al. (2015). Hanford Site-Wide Risk Review Project. Waste Management 2015 Conference, Phoenix, AZ, March 14–20.

Rollock, R., Liu, Y., Ramamoorthy, M., and Jones, K. (2014). Understanding the Fouling Mechanisms of Inorganic Particulates in a Microfiltration System. North American Membrane Society Annual Conference, Houston, TX, June.

Igbinigun, E., Liu, Y., Ramamoorthy, M., Jones, K., and Morris, M. (2014). Novel Graphene-Oxide Functionalized PES Membrane: Fabrication, Characterization and Anti-fouling Behavior. NAMS Annual Conference, Houston, TX, June.

Jones, K., Ramamoorthy, M., Kouwounou, Y., and Talla-Nwafo, A. (2013). Surface Modification to Improve Membrane Performance. 246th ACS National Meeting, Indianapolis, IN, September 8–12.

Hochella, M., Spencer, M., and Jones, K. (2013). Nano Debate 2013: Is nano new or not? Gordon Research Conference on Environmental Nanotechnology, Stowe, VT, June 2–7.

Lyon, D., Lowry, G., Wiesner, M., Jones, K.L. (2012). Evaluating the Environmental Impact of Engineered Nanomaterials: an existential conundrum. ACS Mid-Atlantic Regional Meeting, Baltimore, MD, June. (Invited)

Rollock, R., Liu, Y., Ramamoorthy, M., and Jones, K. (2014). Understanding the fouling mechanisms of inorganic particulates in a microfiltration system. 24th Annual NAMS Meeting, Houston, TX, May 31 – June 4.

Diagne, F., Ramamoorthy, M., Lyon, D., Boddie, V., and Jones, K. (2012). Interactions of Bacteria and NOM on Polyelectrolyte and AgNP Modified Microfiltration Membranes. NAMS Annual Meeting, New Orleans, LA, June 9–13.

Morgan-Evans, K., Diagne, F., Ramamoorthy, M., Jones, K. (2011). Fate and Transport of Nano-TiO2 in Porous Medium. International Conference on Environmental Implications of Nanotechnology (ICEIN), Duke University, May 9–11.

Diagne, F., Ramamoorthy, M., Jones, K. (2010). Ag Nanoparticle Modification of Microfiltration Membranes for Biofouling Reduction and Increased Flux Recovery. NAMS/ICIM Joint International Conference, Washington, DC, July 17–22.

Diagne, F., Ramamoorthy, M., Jones, K. (2010). Integrating Silver Nanoparticles into Polyelectrolyte Layers for Membrane Biofouling Control. International Conference on Environmental Implications of Nanotechnology, Los Angeles, May 11–13.

Diagne, F., Ramamoorthy, M., Jones, K. (2010). Integrated nano composite membranes for biological and organic fouling prevention. ACS 239th National Meeting, San Francisco, March 21–25.

Malaisamy, R., Diagne, F., Hai-Ting, A., Mitchell, J., and Jones, K. (2009). Polyelectrolyte-Silver Nanoparticle Multi-Layer Assembly for Biological and Organic Fouling Prevention. NAMS Annual Conference, Charleston, SC, June 20–24.

Malaisamy, R., Talla, A., and Jones, K. (2009). Surface Modification of Nanofiltration Membrane by Polyelectrolyte Thin Films for Selective Monovalent Ion Removal. NAMS Annual Conference, Charleston, SC, June 20–24.

Malaisamy, R., Kouwonou, Y., Berry, D., Holder, D., Raskin, L., and Jones, K. (2009). Studies on Anti-biofouling and Anti-bacterial Microfiltration Membranes by Membrane Surface Modification Using UV Grafting. 13th IACIS/83rd ACS Colloid & Surface Science Symposium, New York City, June 14–19.

Malaisamy, R., Diagne, F., Hai-Ting, A., Mitchell, J., and Jones, K.L. (2009). Integrated Polyelectrolyte-Silver Nanoparticle Multi-layer Assembly for Fouling Prevention. International Conference on Particle Separation and Nanoparticles in Water, Duke University, June 3–5.

Malaisamy, R., Berry, D., Holder, D., Raskin, L., Lepak, L., Jones, K. (2008). Modification of Microfiltration Membranes: Implications for Biofouling, Flux Recovery and Antibacterial Properties. International Conference on Membranes (ICOM), Hawaii, July 13–18.

Malaisamy, R., Lepak, L., Spencer, M., and Jones, K. (2008). Development and Characterization of Modified Alumina Membrane for Biomolecule Separation. ICOM, Hawaii, July 13–18.

Malaisamy, R., Berry, D., Raskin, L., Jones, K. (2007). Development of Novel Hydrophilic Bactericidal Membranes. AIChE Annual Meeting, Salt Lake City, UT, November 4–9.

Malaisamy, R., Berry, D., Holder, D., Borrell, T., Raskin, L., Lepak, L., Jones, K. (2008). Surface Modification of Microfiltration Membranes to Decrease Biofouling. Spring ACS Meeting, New Orleans, LA, April 6–10.

Awobamise, M., Jones, K., Khan, E., and Murthy, S. (2007). Long-Term Biodegradability of Dissolved Organic Nitrogen. 21st Annual Poster Symposium, WEFTEC, San Diego, CA, October 15–17.

Ramamoorthy, M., Kouwonou, Y., and Jones, K. (2007). Graft-surface Modified Microporous Polyethersulfone Membranes. NAMS Conference, Orlando, FL, May 12–16.

Matthews, J., Mohamed, H., Turner, J., and Jones, K. (2007). Salt Rejection Studies and Characterization of Nanoporous Membranes Designed for Bio-analytical Applications. NAMS Conference, Orlando, FL, May 12–16.

Ramamoorthy, M., Kouwonou, Y., and Jones, K. (2007). Biofouling potential of surface modified micro-porous polyethersulfone membranes. 233rd ACS National Meeting, Chicago, IL, March 25–29.

Matthews, J., Mohamed, H., Turner, J., and Jones, K. (2007). Development of tailorable membranes for targeted rejection. 233rd ACS National Meeting, Chicago, IL, March 25–29.

Kayode, O.D. and Jones, K. (2007). Characterization of surfactant fouling of reverse osmosis and nanofiltration membranes. 2007 CSAWWA Conference, Hershey, PA, April 26.

Kouwounou, Y., Ramamoorthy, M., and Jones, K. (2007). Biofouling Potential of Surface Functionalized Microporous Polyethersulfone Membranes. 2007 CSAWWA Conference, Hershey, PA, April 26.

Murthy, S., Jones, K., Baidoo, S., Pagilla, K. (2006). Biodegradability of dissolved organic nitrogen: Adaptation of the BOD test. Proceedings 79th Annual Water Environment Federation Conference & Exposition, 1550–1559.

Matthews, J., Mohamed, H., Turner, J., and Jones, K. (2006). Methodological Assessment of Nanofiltration Membrane Performance Based on Surface Properties. AIChE 2006 Annual Meeting, San Francisco, November 14.

Wesselman, J., Joshi, V., Bandyopadhyay, A., Ramos, F., Clapp, L., Korikov, A., Diallo, M., and Jones, K. (2006). Chromium(VI) Reduction Inhibition by Nitrate in Hydrogen-Supplied Soil Columns. Batelle Conference, Monterey, CA, May.

Korikov, A., Jones, K., and Clapp, L. (2006). Water vapor transport studies through porous/non-porous hollow fiber membranes for gas-liquid contactors. NAMS Conference, Chicago, IL, May 15–17.

Matthews, J., Mohamed, H., Swarowski, D., Jones, K., and Turner, J. (2006). Permeability and Characterization Studies of Fabricated NF Membranes. NAMS Conference, Chicago, IL, May 15–17.

Samuel, M., Jones, K., and Murthy, S. (2006). Treatment of Spent Filter Backwash Wastewater By Using Dissolved Air Flotation. Virginia Water Environment Association 59th Annual Meeting, April 30 – May 3.

Matthews, J., Mohamed, H., Swarowski, D., Jones, K., and Turner, J. (2006). Fabrication and Characterization of Novel Nanofiltration Membranes. Materials Research Society, San Francisco, CA, April 17–21.

Matthews, J., Mohamed, H., Abitoye, F., Jones, K., Turner, J. (2005). Next Generation Nanofiltration Membranes: Synthesis and Characterization. Emerging Technologies for a Sustainable Environment, October 20.

La Hee, S. and Jones, K. (2005). The Reduction of Biofouling in Microfiltration Membranes using Membrane Modification. GEM National Conference, Boston, MA, June 29 – July 1.

Turner, J., Mohamed, H., Graber, D., Szarowski, D., Caggana, M., Martin, D., Jiang, X., Spencer, M., Mathews, J., Abitoye, F., and Jones, K. (2005). On-Chip Single Step Nanofiltration. World Congress on Biotechnology, April.

Abitoye, J.O., and Jones, K. (2005). Increasing Rejection in Nanofiltration Membranes by Ion Implantation. Chesapeake Section AWWA, August.

La Hee, S. and Jones, K. (2005). Biofouling Reduction of Membranes with Modification. Howard University Graduate Symposium, Washington, DC, April 12.

Samuel, M., Jones, K., and Murthy, S. (2005). Treatment of Spent Filter Backwash Wastewater By Using Dissolved Air Flotation. Chesapeake Section AWWA University/Research Day Conference, Dover, DE.

Mulamula, L., Jones, K., and Murthy, S. (2005). Size Fractionation of Organic Nitrogen, Carbon and Endocrine Disrupting Compounds: Effects of Wastewater Treatment Processes. NU BGSA 9th Annual Graduate and Professional Student Conference, Northwestern University, Evanston, IL, April.

La Hee, S. and Jones, K. (2005). Biofouling Reduction of Membranes with Modification. National Society of Black Engineers National Conference, Boston, MA, March 25–27.

Mulamula, L., Jones, K., and Murthy, S. (2005). Size Fractionation of Organic Nitrogen, Carbon and Endocrine Disrupting Compounds. NSBE Conference, Boston, MA, March.

Abitoye, J.O., and Jones, K. (2004). Increasing Ion Rejection in Nanofiltration Membranes by Ion Implantation. NSBE Annual Conference, Dallas, TX.

Abitoye, J.O., and Jones, K. (2004). Increasing Salt Rejection in Nanofiltration Membranes by Ion Implantation. Howard University Research Symposium, Washington, DC.

Jones, K., and Tesema, M. (2004). Adsorption and Fouling Mechanisms in UF and MF Membranes. 228th ACS National Meeting, Philadelphia, PA, August 22–26.

Jones, K., and Leevy, J. (2004). High-Flux, Low-Fouling Membrane System for Wastewater Recycle in Space Missions. International Conference on Environmental Systems (ICES), Colorado Springs, CO, July 19–22.

Mukherjee, P., Jones, K., and Abitoye, J.O. (2004). Surface modification of nanofiltration membranes by ion implantation. NAMS Conference, Honolulu, Hawaii.

Mukherjee, P., Jones, K., and Abitoye, F. (2003). Electrostatic Interactions Near Membrane Surfaces. 227th Annual ACS Conference, New York, NY, September 10–14.

Abitoye, J.O., Mukherjee, P., Jones, K. (2003). Modification of Nanofiltration Membranes by Ion Implantation. AIChE Conference, San Francisco. (Poster)

Abitoye, J.O., and Jones, K. (2003). Increasing Ion Rejection in Nanofiltration Membranes by Exploiting Electrostatic Forces Near the Membrane Surface. Howard University Research Symposium, Washington, DC.

Donaldson, M. and Jones, K. (2002). Use of Pervaporation for Separation of PCE from Aqueous Solutions. 28th Annual NSBE Convention, March 27–31.

Jones, K., Bogle, K., and Brown, K. (2000). Optimizing rejection in nanofiltration membranes by increasing surface charge. Extended Preprinted Abstract, American Chemical Society.

Jones, K. and O'Melia, C. (1998). The Influence of Protein and Humic Acid Adsorption on the Fouling of Hydrophilic Ultrafiltration Membranes. Extended Preprinted Abstract, American Chemical Society, 37(1).

Datwani, S., Jones, K., and Stebe, K. (1997). A Point Charge Model for Ionic Effects in Membrane Fouling Kinetics: Theory and Experiment. NAMS Conference, Baltimore, MD, May 31 – June 4.

Tesema, M., Jones, K., and Tharakan, J. (1997). Characterization of Clean and Fouled Membrane Surfaces. AIChE Annual Meeting, Los Angeles, CA, November 17–21.

Ntiru, M., and Jones, K. (1997). Rejection of Cesium from Nanofiltration Membranes. AIChE Annual Meeting, Los Angeles, CA, November 17–21.

INVITED LECTURES & KEYNOTES

“Bridging Environmental Research, Policy, and Community Engagement for a Sustainable Future”, Evans Lecture, University of Washington Department of Civil and Environmental Engineering, May 15, 2025.

“Intersection of Water Research and Policy: Ensuring Public Health in the 21st Century”, American Academy of Environmental Engineers and Scientists, April 11, 2024.

“Environmental Justice in the Water Sector: Pathways towards Equitable Access”, Department of Energy-Environmental Management, July 20, 2023.

“Role of Science, Engineering, and Policy in Ensuring Equity in Urban Water Systems”, Federal Water Quality Association, November 10, 2022.

“Water Reuse and Wastewater Based Epidemiology”, Chesapeake Water Environment Association, October 6, 2022.

"Water Justice." Hot Science-Cool Talks, Environmental Science Institute (ESI), September 10, 2021.

"Environmental Justice: Role of Science, Engineering, and Policy in Ensuring Equity in Urban Water Systems." ACS Fall Meeting: Resilience of Chemistry, August 22–24, 2021.

"The Role of Water Research and Policy in Ensuring Environmental Justice." Milken Institute School of Public Health, The George Washington University, Spring 2021 Research Seminar Series, March 29, 2021.

"Environmental Racism: Impact on Water Quality." The Schiller Institute for Integrated Science and Society, Boston College, Environmental Racism Panel, February 23, 2021.

"Intersection of Water Research and Policy: Ensuring Public Health in the 21st Century." University of Texas at Austin, EWRE Seminar Series, November 12, 2020.

"Water Research and Public Policy: Ensuring Public Health." ASCE EWRI, National Capital Section Monthly Webinar Series, October 1, 2020.

"Intersection of Water Research and Policy." Chesapeake Water Environment Association, June 18, 2020.

"Environmental Engineering for the 21st Century: The Intersection of Water Research and Policy: Research, Policy and Pipeline." University of California, Davis, February 19, 2020.

"Water Crisis 101: Nanotechnology and Water Treatment." Colorado State University, Fort Collins, CO, December 7, 2018.

"Maximizing Opportunities and Overcoming Challenges of a Faculty Research Career." GEM-ASEE Doctoral Engineering Research Showcase, January 22–23, 2018.

"Invited Panelist: Rethinking the Value of Water: Innovations in Research, Technology, Policy, and Management." 2016 National Capital Region Water Resources Symposium, Washington, DC, April 8, 2016.

"Can Nanotechnology Solve the Water Crisis? Advances and Obstacles in the Use of Nanomaterials for Water and Wastewater Treatment." Charles and Mary O'Melia Lecture, Baltimore, MD, September 29, 2015.

"Diversifying our Field: Water Treatment and Environmental Nanotechnology as Case Studies for Engaging Women and Minorities." ACS Women's Symposium, San Francisco, CA, August 15–20, 2014.

"Environmental Engineering and Science: Role in Policy and Decision Making." Keynote, 20th Annual Environmental Engineering Symposium, UIUC, April 3, 2014.

"Desalination: Technological Advances to Improve Efficiency and Reduce Energy Needs." The World Bank, March 1, 2012.

"Women in Science, Math and Technology." 2010 Women and Girls Workshop on STEM, Princeton Plasma Physics Laboratory, March 12, 2010.

"Providing Clean Drinking Water: Strategies for solving this global challenge." Virginia Tech, EIGER Conference, November 16, 2009.

"Providing Clean Drinking Water: Strategies for solving this global challenge." Carnegie Mellon University, November 20, 2009.

"Environmental Nanotechnology: Discerning the effect of nanomaterials on our world." Elon University, November 9, 2009.

"Data Management: Responsible treatment of laboratory data, data security, and privacy." Responsible Conduct of Research Workshop, Howard University, February 2009.

"Nanotechnology Essentials." US Patent and Trademark Office Education Series, September 17, 2008.

"Use of Nanotechnology in Membrane Applications." YESS Conference, July 9, 2008.

"Nanoporous Membranes for Biological Applications." Annual Meeting, Nanobiotechnology Center, October 27, 2007.

"Nanofiltration Membranes: Environmental and Biological Applications." Drexel University, November 10, 2006.

"Environmental Engineering." Summer Transportation Institute, June 26, 2006.

"Novel Membranes for Water and Wastewater Treatment." Virginia Tech, April 28, 2006.

"Water Recycle and Reuse in Space Missions." University of Illinois, April 1, 2005.

"New Synthesis Membranes: Synthesis and Characterization." Water CAMPWS, University of Illinois, April 1, 2005.

"Membrane Modification to Increase Performance." Rice University, October 25, 2004.

"Environmental Engineering." Summer Transportation Institute, July 16, 2003.

"Membrane Processes in Water and Wastewater Treatment." HUSEM Students, March 24, 2003.

"Membranes in Environmental Engineering." Department of Mechanical Engineering Graduate Seminar, January 24, 2003.

"A Chesapeake Bay Environmental Field Facility." CLEANER Workshop III, Duke University, February 2–4, 2003.

"Nanofiltration Membranes: Electrostatic Effects." NBTC Invited Lecture Series, Cornell University, Ithaca, NY, April 1, 2003.

"Ion Implantation in Nanofiltration Membranes." Nanobiotechnology Center Annual Meeting, Cornell University, Ithaca, NY, June 27, 2003.

"Membrane Processes in Water and Wastewater Treatment." Department of Chemical Engineering Graduate Seminar, October 28, 2002.

"Use of Nanofiltration Membranes for Ion Separation." Nanobiotechnology — Moving Into the Future, Cornell University, June 21, 2002.

"Environmental Technology for a Changing Society." Invited Speaker at Center for Talented Youth Conference, The Johns Hopkins University, November 10, 2001.

SYMPOSIA ORGANIZED

- 247th National ACS Meeting — "Reactive and Functionalized Membranes" (Program Chair, Division of Environmental Chemistry), San Francisco, CA, August 10–14, 2014.
- 246th National ACS Meeting — "Membranes for Water Purification" (Program Chair, Division of Environmental Chemistry), Indianapolis, IN, September 8–12, 2013.
- Environmental Nanotechnology Gordon Research Conference (Steering Committee), Stowe, VT, June 2–8, 2013.
- 2nd Annual Howard University Nanotechnology Conference, Washington, DC (Co-Chair), March 2010.
- 1st Annual Howard University Nanotechnology Conference, Washington, DC (Chair), November 2008.

REVIEWER ACTIVITIES

Funding Agencies

National Science Foundation · American Association for the Advancement of Science · American Association of University Women · Environmental Protection Agency · Department of Energy · US Agency for International Development · National Research Council · US Bureau of Reclamation

Scholarly Journals

Environmental Science and Technology · Journal of Membrane Science · Separation Science and Technology · ACS Nano · Environmental Technology · Nano Letters · Separation and Purification Technology · Environmental Progress · Journal of Environmental Engineering · Journal of American Water Works Association · Water Research · Water Science and Technology · Desalination · Environmental Engineering Science

TEACHING EXPERIENCE

- Introduction to Engineering (EGPP 101) — Interdisciplinary design course for all first-year engineering majors. Team-taught (5 faculty, 5 TAs). Lead instructor 2003–2008; on instructional team since 1996.
- Unit Operations in Environmental Engineering (CIEG 328) — Senior-level required course covering physical-chemical unit processes in water and wastewater treatment. Taught 1996–2000.
- Water and Wastewater Treatment Plant Design (CIEG 440) — Senior-level elective on physical, chemical, and biological operations in water/wastewater treatment. Taught 1996–Present.
- Introduction to Environmental Engineering (CIEG 207) — Sophomore-level required course covering mass balance, reactor design, water/wastewater treatment, air pollution and hazardous waste. Taught 1996–2000.
- Introduction to Civil Engineering (CIEG 102) — First-year course covering civil engineering sub-disciplines with a design project. Taught 1996–2003.
- Physical-Chemical Treatment Processes (CIEG 502) — Graduate-level design course covering advanced water and wastewater treatment topics. Taught since 1996.
- Aquatic Chemistry (CIEG 511) — Graduate-level course on chemical equilibrium and kinetics in aquatic systems. Taught since 2004.
- Transport Phenomena (CIEG 505) — Graduate-level course on fundamental transport mechanisms in environmental engineering. Taught 1999–2006.
- Special Topics in Environmental Engineering (CIEG 601) — Graduate research-focused course on current topics in environmental engineering and management.

STUDENTS & POSTDOCTORAL RESEARCHERS MENTORED

Postdoctoral Researchers

- Yaolin Liu — Principal Engineer, City of Rockville
- Michelle Chavis — HNF Facility
- Delina Lyon — Science Executive, Concawe
- Ramamoorthy Malaisamy — Senior EHS Specialist, NIH
- Alexander Korikov — Pall Corporation
- Jeremy Matthews — Applied Physics Today
- Parna Mukherjee — Asst. Professor, Cal Poly State Univ.
- Ravindra Revanur — University of Massachusetts

Ph.D. Students

- Foune Fofana — Process Engineer, DC Water
- Efosa Igbinigun — Senior Manager, Analytical Science, Coca-Cola
- Hossein Safa — Senior Project Manager

M.S./M.Eng. Students

- Mel Tesema
- Monica Ntiru
- Alisa Ivory
- Kimberly Bogle
- Philip Nelson
- Marvin Donaldson
- Stephanie Roberts
- Joshua Abitoye
- Simon Baidoo
- Samantha LaHee
- Seyi Kayode
- Laetitia Mulamula
- Michelle Samuel
- Mayokun Awobamise
- Yao Kowonou
- Alain Talla-Nwafo
- Fatou Diagne
- Thea Dennis
- Ikenna Clarke
- Karel Morgan-Evans
- Abdul Mancell-Egaba
- Norman Dockett
- Olawale Akintayo
- Shauna-Gaye Campbell
- Victory Odize
- Ryane Rollock
- Mandy Mitchell
- Heather Battiste-Alleyne

- Hamid Ghaffari — Consultant
- Alrick Davis — Current
- Josephine Adelegan — Current
- Temitope Adegboye
- Olajide Olagungu
- Deondre Glover

PROFESSIONAL SOCIETIES & RESEARCH INTERESTS

Professional Affiliations

- Association of Environmental Engineering and Science Professors
- American Society of Civil Engineers
- American Water Works Association
- Water Environment Federation
- North American Membrane Society
- International Water Association

Research Interests

- Physical-Chemical Water Treatment Processes
- Membrane Processes & Fouling Control
- Environmental Nanotechnology
- Water & Wastewater Treatment Plant Design
- Nutrient Removal
- Water Justice & Environmental Policy

CONSULTING EXPERIENCE

Expert Panel, Washington Aqueduct Future Treatment Alternative Study

Sept. 2009 – Oct. 2011

Malcolm Pirnie

Provided technical consulting for a comprehensive review of project approach, reports, and documents; attended project meetings and participated in expert panel workshops reviewing interim and final deliverables to Washington Aqueduct.

Environmental Engineering Design

Jan. 2003 – 2005

Legion Design

Aided in development of environmental engineering capabilities. Partnered with Legion Design and Malcolm Pirnie to win water treatment plant design, operation, and maintenance contracts including disinfection by-products compliance strategy studies for Washington Suburban Sanitation Commission.

Technical Advisory Committee — Feasibility of Membrane Technology for Biological Wastewater Treatment

Jan. 2001 – Mar. 2002

Water Environmental Research Federation with CH2M Hill

Provided technical assistance evaluating membrane bioreactor technology for water and wastewater treatment, compiling performance data, and identifying additional research needs.

Research on Water Treatment Equipment at Aqua 2000 Research Center

Aug. 2001 – Oct. 2001

City of San Diego with Montgomery-Watson Harza

Managed engineering work for membrane research on water treatment equipment.

Feasibility Study of Membrane Processes for TDS Removal from Colorado River Water

Jan. 1997 – May 1998

Metropolitan Water District of Southern California

Team Leader/Manager responsible for hiring staff, managing progress, and providing reports. Reviewed applications of membrane processes for removing TDS and pathogens from drinking water.