

Name:

Joshua S. Fu, PhD, BCEEM

Title:

Chancellor's Professor, John D. Tickle Professor of Engineering, and James G. Gibson Professor in Climate Change

Company:

University of Tennessee, Knoxville

City/State:

Knoxville, Tennessee

Join Date:

2001

Section/Chapter:

Southern Section/Tennessee Chapter

Education/Professional Credentials:

- PhD, North Carolina State University
- MS, University of California, Los Angeles (UCLA)
- BS, Environmental Engineering, National Cheng Kung University, Taiwan
- Fellow, Air & Waste Management Association (AWMA)
- Fellow, American Association for the Advancement of Science (AAAS)
- Board Certified Environmental Engineering Member, American Academy of Environmental Engineers and Scientists (AAEES)

Biographical Summary:

Joshua S. Fu is Chancellor's Professor, John D. Tickle Professor of Engineering, and James G. Gibson Professor at the University of Tennessee, Knoxville. His research and professional activities focus on air quality modeling, atmospheric chemistry, climate impacts, extreme events, environmental health, exposure assessment, and artificial intelligence/machine learning for environmental prediction and decision support. He has authored more than 230 journal publications, the book Air Quality, and more than 125 international technical reports and conference publications, and has been an invited speaker at more than 200 events. He is active and a leader in the World Meteorological Organization and other international scientific activities involving AI applications, weather and atmospheric composition, climate action, and measurement-model integration.

Fu has been actively involved in AWMA for more than two decades and received the Association's Lyman A. Ripperton Environmental Educator Award in 2018. His career has emphasized connecting scientific innovation, engineering applications, professional education, and environmental decision-making.

A&WMA Activities and Offices Held:

Fellow, Air & Waste Management Association

- Chair, Climate Change Impacts, Mitigation and Adaptation Division
- Leadership and service within the A&WMA Technical Council
- A&WMA liaison to the Association of Environmental Engineering and Science Professors (AEESP)
- Member, A&WMA Publications Committee
- Conference session chair and technical session organizer
- Speaker and contributor on climate change, air quality, wildfires, AI applications, and data/model fusion
- Recipient, 2018 Lyman A. Ripperton Environmental Educator Award
- Long-standing contributor to A&WMA technical programs, conferences, publications, and professional activities

Goals/Vision for the Organization:

My vision for the Air & Waste Management Association is to help strengthen its role as a leading professional home for science-based, solution-oriented dialogue on air quality, waste management, climate, environmental health, and emerging technologies. As environmental challenges become increasingly complex, interdisciplinary, and data-driven, A&WMA is uniquely positioned to connect academia, government, industry, consulting, and communities while advancing rigorous science, practical engineering, policy relevance, and professional education.

As an academic member of the Board, I would focus on strengthening A&WMA's engagement with universities, faculty, postdoctoral researchers, students, and early-career professionals. I currently serve as the liaison between A&WMA and the Association of Environmental Engineering and Science Professors (AEESP), and I see an important opportunity to use this connection to expand university participation, student membership, mentoring, technical training, and long-term engagement with the Association.

I would also help advance forward-looking technical programs in areas that are reshaping the environmental profession. My research and professional activities span air quality modeling, atmospheric chemistry, climate impacts, exposure and health-risk assessment, wildfire smoke, measurement-model fusion, and AI-enabled environmental forecasting. I would use this experience to support innovative conferences, workshops, webinars, publications, and technical initiatives addressing both foundational environmental challenges and emerging topics such as artificial intelligence, health-informed forecasting, carbon neutrality, climate resilience, and environmental decision support.

Another priority would be to strengthen A&WMA's international engagement. Through my work with the World Meteorological Organization and other international scientific organizations, I have developed collaborations across countries, disciplines, and institutions. I would help A&WMA expand partnerships with international experts and organizations and enhance its visibility as a global forum at the intersection of air quality, climate, health, waste, energy, and emerging technologies.

Finally, I would work to strengthen the Association's student and young-professional pipeline. Sustainable growth requires attracting and retaining the next generation of environmental engineers, scientists, policymakers, and practitioners. I would support opportunities for students and postdoctoral researchers to present their work, interact with government and industry leaders, receive mentoring, and view A&WMA as their long-term professional community.

Overall, I would bring an academic, collaborative, and international perspective to the Board and help A&WMA serve as a stronger bridge between scientific innovation and real-world implementation. My goal is to help the Association remain scientifically strong, professionally inclusive, internationally connected, and strategically positioned for sustainable long-term growth.