

Kumar Ganesan PhD, PE, BCEE
Professor and Department Head of Environmental Engineering
Montana Technological University
Butte, MT

Join date: 1985

Section: Pacific Northwest International Section (PNWIS)

Education and professional credentials:

PhD in Engineering Science (Air Quality Engineering), Washington State University, Pullman, WA, Masters in Public Health Engineering and Bachelors in Civil Engineering, Madras University (Anna University), South India. Board Certified Environmental Engineer of American Academy of Environmental Engineers and Scientists. ABET Program Evaluator. Fellow of AWMA, recipient of AWMA Lyman Ripperton Environmental Educator Award, and recipient of AWMA-PNWIS Robert Stockman Distinguished Achievement Award. Recipient of Distinguished Researcher Award and the Faculty Achievement Award (four times) from Montana Technological University. Editor, Author and Co-author of over five text books. Presented several technical papers and written technical reports for government and private companies. Received Fellowships from USAID, AAAS and US DOE.

Biographical summary:

Kumar Ganesan served the environmental community for over 53 years since 1971. He was one of the first scientists who started air pollution studies in India and carried out extensive air pollution monitoring, source testing, meteorological studies to plan a new city, New Bombay, while working at the National Environmental Engineering Research Institute (NEERI) as a scientist. Kumar left NEERI in 1977 to pursue doctoral work at Washington State University, Pullman, WA. As a graduate student he was involved in several photochemical field studies and contributed towards developing ozone predictive modeling using simple chemical kinetics. After graduation he worked for ERT Inc. (defunct) in 1981-1983. One of the major tasks of Kumar at ERT was to develop the grid emission inventory for SO₂ and NO_x for US and Canada, for the first ever large-scale acid rain modeling. In 1983 Kumar moved to Montana Technological University where he has been serving as the Head of the Environmental Engineering Department for 28 years, since 1996. Kumar founded the student chapter of AWMA at Montana Tech and he made sure that his students attend the annual PNWIS conferences in the past thirty plus years without fail. His dedication to students is well recognized on campus by students and the administration and also by AWMA and PNWIS. His contribution in educating environmental engineers is significant and it has a profound impact on environmental profession and industry. Kumar has been working on mercury related research for the past ten years and has developed a mercury filtration system for flue gas using metallic Nano-particles and holds

an US Patent. He is currently working on Microbial Cellulose Membranes (MCM) as a viable and sustainable membrane to filter water and air. He has received funding from US EPA, US DOE, State of Montana, USFS, DODS, Oil Companies, and other governmental agencies for research. Under his leadership Montana Tech's environmental engineering student design teams participated over 20 years and won several awards including the INTEL innovation award at the WERC design competition at New Mexico State University, Los Cruces New Mexico. One of his past students, Karen Helfrich, stated that "One of my goals as a future engineer is to be as successful as Kumar has been and will continue to be. Kumar has motivated me to become not only a successful engineer, but also an honorable and ethical engineer and person. John Quincy Adams once said, "If your actions inspire others to dream more, learn more, do more and become more, you are a leader." Kumar is not only a great teacher; he is truly a leader in our profession."

A&WMA activities and offices held:

A&WMA representative for American Academy of Environmental Engineering and Scientist for Accreditation of Environmental Engineering programs. Past President of AWMA-PNWIS, Annual PNWIS Conference general Chair twice; 2001 and 2019. Technical Chair for PNWIS Annual conference. Founder of Montana Tech's Student chapter and Advisor for over 30 years. Current Chair of Montana Student Chapter.

Goals/vision for the organization:

It is vital for the organization to have a continued growth. That is, existing strategies need to be evaluated and changed to meet the current needs of the members and potential members. Organizing student chapters, working with young professionals, recruiting new members, and collaborating with other organizations are some of the areas we need to focus on. Investing in younger members is one of the ways to keep our organization grow. The needs of our members are dynamic, similarly the organization has to be dynamic, and keep up with the needs of the members and the society. The **Mission of A&WMA** is to assist in the professional development and critical environmental decision-making of our members to benefit society. The core **Purpose of A&WMA** is to improve environmental knowledge and decisions by providing a neutral forum for exchanging information. The "neutral forum" has been one of the hallmarks of our association for decades. Today's world consists of believers of science and non-believers of science. Thus, puts our association in a challenging position such that while we stay neutral, the community at times is exposed to "scientifically biased" information. The climate change is an example that comes to my attention. Therefore, the role of our association is becoming ever challenging in terms of how we position ourselves to counter balance the scientific misinformation. Years back, in 1985, I started the student chapter at Montana Tech, shortly arriving as an Assistant Professor. Since then, Montana Tech student chapter has been active participant of the PNWIS/A&WMA. We need to start new student chapters and help them to be an integral part of our

chapters, sections, and A&WMA. This needs necessary resources, incentives, and mentorship until the student chapters become self-supporting, stable and independent. AWMA is already doing this but could be improved. For beginners, starting two new student chapters, in each section of the A&WMA per year, is an achievable goal. It is time that the **young professionals (YP)** gain additional attention and identity. The needs of young professionals may not align perfectly with the needs of matured members of the association. YPs having their own technical sessions in conferences will help focus on the interests of the young professionals. Currently, we do have leadership roles for young professionals, but making the YP leadership more prominent and empowering them will help the association in the long run. Overall, we should evaluate how we can further strengthen the YP side of the association and the student chapters. A stronger YP means a stronger future for A&WMA, in my opinion. It is vital for A&WMA to have continued growth. That is, existing strategies need to be re-evaluated and changed to meet the current and future needs of the members. Organizing student chapters, collaborating with young professionals, recruiting new members, and collaborating with other organizations are some areas where we could focus.