

2016

A&WMA Honors & Awards



The Air & Waste Management Association (A&WMA) is a nonprofit, nonpartisan professional organization that provides training, information, and networking opportunities to environmental professionals. A&WMA's core purpose is to improve environmental knowledge and decision-making by providing a neutral forum for the exchange of information. The Association's goals are to strengthen the environmental profession, expand scientific and technological responses to environmental concerns, and assist professionals in critical environmental decision-making to benefit society.



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2016 Honors & Awards

Each year, A&WMA recognizes deserving individuals or companies for their outstanding accomplishments in the promotion of a clean environment. These awards were established by the Association to encourage environmental professionals to serve as models for others to emulate and to otherwise further A&WMA's mission and objectives. Please join us in celebrating their remarkable contributions.

Frank A. Chambers Excellence in Air Pollution Control Award

Charles L. Blanchard, Ph.D.

S. Smith Griswold Outstanding Air Pollution Control Official Award

Laki T. Tisopoulos, Ph.D., P.E.

Lyman A. Ripperton Environmental Educator Award

Gediminas (Gedi) Mainelis

Charles W. Gruber Association Leadership Award

Tony van der Vooren Ph.D., P.Eng., QEP

Honorary Membership

Edith Mijares Ardiente
George M. Hidy

Fellow Membership

S. James Ryckman, Jr., P.E., QEP

Arthur C. Stern Distinguished Paper Award

Judith C. Chow, John G. Watson, L.-W. Antony Chen, M.C. Oliver Chang,
Norman F. Robinson (posthumously), Dana Trimble, and Steven Kohl



Frank A. Chambers Excellence in Air Pollution Control Award



Frank A. Chambers (1885–1951) was a founder of the Smoke Prevention Association of America, a forerunner of the Air & Waste Management Association, and was instrumental in building the foundation for A&WMA. His pioneering ideas for smoke control were employed by many cities across the United States. The Frank A. Chambers Excellence in Air Pollution Control Award is presented annually by the Association for outstanding achievement in the science and art of air pollution control. It requires technical accomplishments considered to be major contributions, the merits of which have been widely recognized by persons in the field. The coverage is intentionally broad, since it recognizes achievement in any line of technical endeavor in air pollution control, from pure research to applied science.

A&WMA presents the 2016 Frank A. Chambers Excellence in Air Pollution Control Award to **Charles L. Blanchard, Ph.D.**, principal of Envair, for his contributions in the area of air pollution research and development.

For more than 30 years, Dr. Blanchard has contributed to multiple areas of air pollution research, including atmospheric deposition, ozone, particles, visibility, pollutant transport, and atmospheric chemistry. In his use of data from major field studies and long-term measurement programs to inform air quality management, his work has yielded new approaches for analyzing and interpreting air quality measurements. His contributions exemplify a goal of understanding which emission control efforts improve air quality most effectively.

An early interest in water quality led Dr. Blanchard into the field of air pollution through the study of atmospheric deposition, using receptor models to identify emission sources contributing to deposition and to its impacts on surface water. After graduate school and post-doctoral programs, he worked for the California Air Resources Board to develop some of the initial findings of the California Acid Deposition Monitoring Program. He continued working as an independent consultant to quantify wet and dry deposition rates throughout California.

The potential value of the large data sets produced by major field studies and measurement programs, and the challenges posed in turning voluminous field measurements into useful information, led to further work on using data from monitoring networks to detect and quantify changes in atmospheric deposition and to attribute observed changes to emission control efforts. Applications to the U.S. National Acid Precipitation Assessment Program and the Canadian Air and Precipitation Monitoring network followed.

Between the late 1980s and early 2000s, Dr. Blanchard contributed to the study design and to the analysis and interpretation of measurements from numerous ozone field studies, including the 1990 San Joaquin Valley Air Quality Study, the 1991 Lake Michigan Ozone Study, and the 2000 Central California Ozone Study. During this time, he also worked with both the public and private sectors to develop improved understanding of the ways that ozone was responding to new controls

on anthropogenic emissions of nitrogen oxides and volatile organic compounds, using long-term observations as an important complement to air quality modeling and laboratory experimentation.

Dr. Blanchard has also contributed to the analysis and interpretation of measurements from numerous particulate matter field studies and long-term measurement programs, including the 1999–2001 California Regional Particulate Air Quality Study, the ongoing Southeastern Aerosol Research and Characterization program, and studies coordinated by the Lake Michigan Air Directors Consortium. His contributions have improved contemporary understanding of the interactions of sulfate, nitrate, and ammonium in inorganic aerosol as observed over time and in different geographical regions. He has also contributed to current understanding of the sources of organic aerosol through analyses of long-term measurements and by developing a receptor modeling approach that combined gas and particle measurements.

Recognizing the importance of communicating the knowledge that has been developed by major field studies and long-term measurement programs, Dr. Blanchard has co-authored over 40 peer-review journal publications, nearly half of which have appeared in the *Journal of the Air & Waste Management Association (JA&WMA)*. Additional publications have been printed in the proceedings of A&WMA annual and specialty conferences. He has contributed to NARSTO (formerly North American Research Strategy for Tropospheric Ozone) publications on both ozone and particulate matter.

Dr. Blanchard received a bachelor's degree in biology and zoology from Michigan State University in 1975. He completed graduate work at the University of California at Berkeley, earning his master's degree in energy and resources in 1978, a bachelor's degree in statistics in 1984, and a Ph.D. in energy and resources in 1986. Between 1986 and 1988, he continued his education as a visiting research fellow at the Center for Energy and Environmental Studies at Princeton University. He has been a member of A&WMA since 1988. He values K-12 education as a foundation for student achievement, and has been supporting public education by serving for more than seven years on the board of education of the community in which he resides.

S. Smith Griswold Outstanding Air Pollution Control Official Award



S. Smith Griswold (1909–1971) served as chief air pollution control officer for the Los Angeles Air Pollution Control District between 1954 and 1965. In 1965, he became chief of the Abatement Branch of the Division of Air Pollution Control in the U.S. Department of Health, Education, and Welfare, and later served as associate director for abatement and control before leaving in 1967 to work as a consultant. As President of the Association in 1962, he focused international attention on air pollution control officials' activities, problems, and achievements. The S. Smith Griswold Outstanding Air Pollution Control Official Award is presented by the Association for outstanding accomplishments in the prevention and control of air pollution. The recipient must be or have been a government agency staff member whose contributions to the prevention and control of air pollution have been widely recognized.

A&WMA presents the 2016 S. Smith Griswold Outstanding Air Pollution Control Official Award to **Laki T. Tisopulos, Ph.D., P.E.**, Assistant Deputy Executive Officer for the South Coast Air Quality Management District (SCAQMD).

SCAQMD is the nation's premier air pollution control agency in charge of improving air quality for a jurisdiction that encompasses more than 17 million Southern Californians. During his distinguished 28-year career with the agency, Dr. Tisopulos has made numerous contributions to the air quality management and control field which have brought dramatic improvements in air quality.

Throughout his long and multi-faceted career with SCAQMD, Dr. Tisopulos has developed a body of work that spans all aspects of the air quality field, including permitting, enforcement, planning, rule and policy development, outreach, budget preparation, and ambient air monitoring and analysis.

Of particular importance is his tireless work in developing the nation's most innovative and effective air pollution control programs, including air quality management plans, control measures, and air quality rules and regulations designed to improve air quality in one of the most challenging airsheds and densely populated regions of the United States. These programs cover the entire spectrum of pollution sources, including stationary, area, consumer products, and mobile and transportation sources.

Among his most notable accomplishments is his development of ultra-low and zero-emission control strategies for both stationary and consumer products. Water-based, zero- and near-zero emission paints, inks, adhesives, and solvents, now an everyday reality in Southern California and elsewhere, are the result of Dr. Tisopulos team's more than two decades-long effort to provide significant environmental benefits. He had similar success in exploring, identifying, and implementing refinery and chemical plant controls, area source programs, and particulate matter control strategies. Dr. Tisopulos has also worked on the inception and implementation of multiple regulatory flexibility and credit programs for stationary point and area sources, as well as traditional command and control regulations.

In addition to stationary source control programs, Dr. Tisopulos also worked on developing and implementing multiple innovative programs aimed at reducing pollution from mobile and vehicular sources. One such regulatory flexibility program that he worked on was recognized and received the Presidential Project for Excellence and Leadership (Project XL) Award by President Clinton.

In his current capacity as Assistant Deputy Executive Officer for the Science and Technology Advancement Office of SCAQMD, Dr. Tisopulos is aggressively pursuing the implementation of sophisticated optical fence-line remote sensing technologies and the employment of air quality sensors that can provide real- and near-real-time emissions information. He oversaw the recent completion of the nation's first air sensor evaluation center, the AQ-SPEC. The successful integration of such automated technologies into the monitoring arena will not only improve current monitoring capabilities, but also have the potential to dramatically improve environmental protection efforts at the federal, state, and local levels.

Many of the pioneering programs that Dr. Tisopulos has worked on have served as a template for and/or have been emulated by many other states and countries. His integrity, as well as a strong commitment to transparency and consensus-building, is among the key traits and principals guiding his work.

Dr. Tisopulos holds bachelor's, master's, and doctorate degrees in chemical engineering, as well as a California Professional Engineer License. He is an accomplished author with more than 150 SCAQMD and other peer-reviewed publications. He is a passionate supporter of A&WMA and is deeply committed to the mission of the Association, where he has been actively involved and served in multiple capacities, including Vice Chair and Chair of the West Coast Section and Director and Vice President of the A&WMA Board of Directors.

Lyman A. Ripperton Environmental Educator Award



Lyman A. Ripperton (1921–1978) spent his career as a practitioner in education and research for air pollution control. He left the Los Angeles County Air Pollution Control District in 1958 to assume a teaching and research position in the Department of Environmental Science at the University of North Carolina at Chapel Hill. There, he initiated an air pollution education program that developed into one of the foremost of its kind in the United States. The Lyman A. Ripperton Environmental Educator Award is presented to an individual who has inspired students to achieve excellence in their professional and social endeavors. It recognizes the ability that only a few educators possess: to teach with rigor, humor, humility, and pride. Recipients of this award are educators we would have chosen as our teachers if we had a choice. They are known by the accomplishments of their students.

A&WMA presents the 2016 Lyman A. Ripperton Environmental Educator Award to **Gediminas (Gedi) Mainelis, Ph.D.**, Professor of Environmental Sciences at the Department of Environmental Sciences of Rutgers, The State University of New Jersey.

Dr. Mainelis's research and teaching focus on various aspects of health-related aerosols (airborne particles), including air pollution science and control, bioaerosol (airborne microorganism) sampling and detection, and exposure assessment. In recent years, he has expanded his research interests into other areas of health-related aerosols, such as exposures to and control of engineered nanoparticles due to the use of nanotechnology-based consumer products; indoor air quality in green buildings; and the use of robotic samplers to assess exposures of young children to air pollutants.

Dr. Mainelis's research on these topics has been supported by the National Institute for Occupational Safety and Health, National Institute of Environmental Health Sciences, National Science Foundation, U.S. Environmental Protection Agency, U.S. Department of Housing and Urban Development, National Cancer Institute, Health Effects Institute, U.S. Army Research Office, Lawrence Livermore National Laboratory, and private industry. His research findings have been presented in more than 70 peer-reviewed publications, more than 130 conference presentations, and several book chapters, and more than a dozen of the publications from his group have been included in the most-downloaded article lists of various journals. He has also given more than 50 invited presentations throughout the world.

Dr. Mainelis is editor of the journal, *Aerosol and Air Quality Research*, and is a recipient of the CDC/NIOSH Career Award, Twinning Fellowship from the National Academy of Sciences, and the Research Excellence Award from the School of Environmental and Biological Sciences at Rutgers University.

Dr. Mainelis is very enthusiastic about teaching, education, and working with students and postdoctoral scientists. His graduate and undergraduate courses on air pollution and air sampling have been highly rated and appreciated by both undergraduate and graduate students. In addition to classroom teaching, Dr. Mainelis is co-directing the first-ever training grant in exposure science. Since understanding exposures is an integral and necessary component of understanding health effects of air pollution, the program is critical in educating a new generation of leaders in air pollution control and prevention field. Dr. Mainelis's mentoring of young researchers in his laboratory is distinguished by individual attention to students and their thorough professional preparation. Thanks to rigorous training, graduates from his laboratory have become leaders in their chosen fields and professions. His students and postdoctoral scientists are recipients of multiple awards and recognitions from various organizations, including A&WMA.

Dr. Mainelis is also passionate and committed to transferring knowledge from his research into practice. In addition to peer-reviewed publications and presentations at various national and international venues, research and innovation from his laboratory have resulted in two granted patents and two pending patent applications. One of the granted patents provides a novel solution to control particulate matter exhaust from diesel engines.

Dr. Mainelis received his undergraduate degree in physics (5-year program, graduated *with distinction*) from Vilnius University, Lithuania, and his Ph.D. in environmental health from the University of Cincinnati, Ohio.

Charles W. Gruber Association Leadership Award



Charles W. Gruber (1910–2001) was a pioneer in the field of air pollution control. His contributions to the field of air pollution control and the Association were numerous and significant. He joined the Association in 1938 and made important contributions during the transitional years from 1948 to 1952, when the Association was transformed from a relatively closed smoke-oriented organization to one that addressed in name, philosophy, and structure the broader dimensions of air pollution control. In 1950, he became the first president of the reorganized and renamed Association. During his term of office, he conceived of the present technical committee structure and guided its development through the early years. In 1980, the Association awarded Honorary Membership to Gruber for more than 40 years of leadership and continuing contributions to the organization. The Charles W. Gruber Association Leadership Award is presented to an individual who has provided outstanding service to the Association through leadership positions at both international and local levels and who has contributed toward the achievement of the mission and objectives of the Association. The recipient will have demonstrated sincere, constant, and unselfish efforts over the course of his or her membership toward the betterment of the Association.

A&WMA presents the 2016 Charles W. Gruber Association Leadership Award to **Tony van der Vooren Ph.D., P.Eng., QEP**, a Fellow member and Past President of the Association.

Dr. van der Vooren has been a member of A&WMA for more than 30 years. He became active in the Association at the Section level in the mid-1980s, when a colleague, and soon to be good friend Paul Complin, tapped him on the shoulder and asked him to help out with a conference. Dr. van der Vooren found he enjoyed the Association's community and soon became very active in the Ontario Section. He served as the Ontario Section Chair in 1993–1994 and was introduced to the International Association during the prior year at the Incoming Officers Training (now called Leadership Training Academy, LTA).

Again, at the Incoming Officers Training, he met many kindred spirits in the broader Association; both as invaluable professional career contacts and as lifelong friends, among the membership and on staff. He became active in the Sections Council (long before it was named the Sections & Chapters Council) and was Chair of the Sections Council from 1997 to 2000. Soon after that he was elected to the A&WMA Board of Directors for a three-year term.

In 2005, Dr. van der Vooren was elected President of the Association during A&WMA's Centennial Year (2007). It was a year of promoting the Association and meeting many of the members at numerous meetings and events throughout the Association's geographic reach. It was an extremely busy year, but personally very fulfilling, and a highlight of his "career" within the Association.

He continues to stay active in the Association, representing the Ontario Section within the Section and Chapters Council and chairing the LTA (which is held each year in the spring for approximately 40 or 50 new

leaders in the Association to provide them with leadership tools and a better understanding of A&WMA). He still retains his local roots by continuing to be active within the Ontario Section, chairing the program development committee and newsletter. He does not foresee retiring from the Association any time soon!

In his professional career, Dr. van der Vooren is a senior environmental consultant at Amec Foster Wheeler responsible for air quality and regulatory issues. Amec Foster Wheeler is a leading provider of environmental services and engineering solutions to infrastructure, manufacturing, electricity, and process industries. The company has nearly 40,000 employees worldwide, with about 15,000 in North America. He has been with Amec Foster Wheeler (and its predecessor companies) for 20 years. Prior to that, he worked for SNC-Lavalin.

Dr. van der Vooren has been involved in environmental issues for more than 30 years. His expertise includes industrial air pollution control (all industrial sectors), compliance testing, regulatory review, environmental assessment (mines, industrial facilities, landfills, incinerators, contaminated sites), and impact modelling (air quality, regulatory, multimedia pathways). In this capacity, he has developed extensive expertise in air management and environmental legislation. Projects have ranged as far afield as Peru and Serbia; and in the far north above the Arctic Circle.

His graduate degrees (M.A.Sc. and Ph.D.) are from the University of Toronto, Department of Chemical Engineering and Applied Science. He is a licensed Professional Engineer in Ontario, a Qualified Environmental Professional, and a Toxic Reduction Planner License in Ontario, and is a Fellow Member of A&WMA.

Honorary Membership

Honorary Membership in A&WMA is conferred upon persons who have attained eminence in some field related to the mission and objectives of the Association or who have rendered valuable service to the Association. Honorary membership in 2016 is awarded to Edith Mijares Ardiente and George M. Hidy.



Edith Mijares Ardiente, P.E., QEP

Ardiente retired in 2012 as Vice President, Environmental and Energy Affairs of Navistar International Corporation, one of the world's largest commercial and military truck, school bus, and engine manufacturers. She was elected to this position in May 2000, after serving as director of environmental affairs since 1991. She was the top environmental officer of the company and was responsible for creating the environmental department, establishing corporate environmental and energy policies and guidelines, and providing technical and regulatory assistance to all Navistar locations and operations worldwide. During her tenure at Navistar, she encouraged all of the company's environmental professionals to become members and participate in Association activities. She also held the company's annual environmental and energy meetings concurrent with and at the same venue as A&WMA's Annual Conference & Exhibition.

Ardiente previously was manager of environmental protection for Borg-Warner Corporation (1986–1987), served as section chief of the RCRA (hazardous waste) permitting program and section chief of the air enforcement program at the U.S. Environmental Protection Agency, Region 5 (1979–1986), and was senior chemical engineer at Sargent and Lundy Engineers (1973–1979).

In 2005, Ardiente served as President of A&WMA, was a member of the People-to-People Program's environmental exchange delegation to China, and was a Board member of the International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA). During her term as A&WMA President, she made increasing Association membership as one of her priorities and visited and spoke at A&WMA Sections and Chapters in the United States, Canada, Mexico, Brazil, South Korea, China, Japan, and the Philippines.

From 1994 to 2004, Ardiente served as a member of the Board of Overseers of the Illinois Institute of Technology's Stuart School of Business and was Chair of Stuart's Masters in Environmental Management Program. In 1993, she served as TOKTEN (Transfer of Knowledge Through Expatriate Nationals) consultant to the Philippines under the sponsorship

Ardiente has been a member of the Association for the past 40 years. She has provided outstanding service to A&WMA by serving in leadership positions at local, national, and international levels and has contributed significantly to the achievement of the mission and objectives of the Association. She received the A&WMA Charles W. Gruber Association Leadership Award in 2013 and was made an A&WMA Fellow in 1997.

Ardiente retired in 2012 as Vice President, Environmental

of the Philippine Department of Foreign Affairs and funded by the United Nations Development Program. In 2006, she received a Heritage of the Filipino professional excellence award from the President of the Republic of the Philippines.

Ardiente received her bachelor's degree in chemical engineering, valedictorian, magna cum laude, from the University of San Agustín in the Philippines. In college, she was a full university academic scholar and a Philippine National Science Development Board scholar. She received her master's degree in environmental engineering from Northwestern University. She is a registered Professional Engineer in Illinois and a Qualified Environmental Professional.



George M. Hidy, D.Eng.

Dr. Hidy has been a member of the Association for more than 25 years. During this time, he has served as both the Chair of the Critical Review Committee and as Co-Technical Editor-in-Chief of the *Journal of the Air & Waste Management Association (JA&WMA)*. In addition, he has contributed a large number of papers on atmospheric chemistry to *JA&WMA*.

In 2005, he was presented with the Frank A. Chambers Excellence in Air Pollution Control Award in recognition

of his achievements and contributions to the knowledge of atmospheric aerosols in the urban environment, his pioneering leadership in the design and execution of major field experiments that have led to improvements in knowledge about secondary aerosols and regional-scale pollution phenomena, and his role in informing international stakeholders about the application of atmospheric science to develop insightful and sound air pollution management strategies.

Dr. Hidy began his career in 1962 with the National Center for Atmospheric Research and later joined the staff of the Rockwell Science Center in 1967. Until 1994, he devoted his efforts to research administration and project management of various atmospheric aerosol and environmental studies culminating in his leadership of the Desert Research Institute (1984–1987) and the Environment Division of the Electric Power Research Institute (1987–1994).

After 1994, he returned to air quality research and has contributed to this field advancing knowledge of aerosols and ozone chemistry. Dr. Hidy has been a member of the U.S. Environmental Protection Agency (EPA) Science Advisory Board, a number of committees of the National Research Council, and was a committee chair of the North American Research and Study of Tropospheric Ozone (NARSTO).

Fellow Membership

*The Fellow Grade of Membership was inaugurated in 1986 to recognize professional attainment and accomplishments related to the mission and objectives of A&WMA. A candidate for fellowship has a minimum of 15 years of experience in an area served by the Association and has been a member of the Association for at least 10 continuous years. Fellows are recognized for their professional accomplishments and service to the Association based on a process, product, or regulatory development; project leadership; managerial achievement; the education of specialists; peer-reviewed technical publications; patents; and research or theoretical developments. A&WMA commends the following individual and awards them the Fellow Grade of Membership in 2016: **S. James Ryckman, Jr., P.E., QEP***



Ryckman is an environmental and civil engineer for the U.S. Air Force Materiel Command (AFMC) and the Air Force Life Cycle Management Center (AFLCMC). For nearly three decades, he worked as an environmental engineer leading the air quality management program for AFMC's Environmental Management Division at Wright-Patterson Air Force Base, OH, where he was responsible for policy formulation, planning, coordinating, budgeting, and

implementing guidance to the installations, research laboratories, air logistics centers, the various product directorates, and test centers.

During this time, he oversaw the annual operating budget and provided advocacy for thousands of air quality compliance projects. Ryckman served as a member of the U.S. Department of Defense (DoD) CAA Services Steering Committee for more than 23 years, leading various Air Force Team efforts related to National Emission Standards for Hazardous Air Pollutants (NESHAP) Rulemaking (e.g., aerospace and boiler NESHAPs). He successfully led AFMC Air Quality Managers' Working Group for many years, successfully achieving its compliance goals.

Ryckman also chaired the AFMC Air Pollution Information Management System (APIMS) Functional Users Group from the mid-1990s to 2010, guiding the system's development for the AFMC's 14,000 air quality compliance sites. APIMS was designated the U.S. Air Force's *Best of Breed* in 1998, and is today serving 200 military bases.

Prior to joining AFMC, Ryckman served with the 2750th Air Base Wing Base Civil Engineering Office (1969–1983) and the U.S. Air Force Logistics Command's (AFLC) Civil Engineering Directorate (1983–1992), providing civil, environmental, and engineering management services. During this period he chaired numerous AFLC environmental focused working groups and task forces, and supported the Joint DoD Logistics Commanders' Group on Volatile Organic Compounds.

In 2012, Ryckman joined the Air Force Life Cycle Management Center's (AFLCMC) Environment & Health Risk Management Branch and worked to reduce the environment, safety, and occupational health (ESOH) burden of the systems acquisition process through the use of innovative pollution prevention processes and business practices. In 2013, he joined the Environmental Compliance Branch, wherein he provides guidance and assistance to the AF government-owned, contractor-

operated (GOCO) facilities to meet all environmental standards. He also leads the ESOHCAMP (multimedia auditing) and the Environmental Baseline Survey (EBS) programs at all GOCOs and performs as the environmental resource manager for compliance activities.

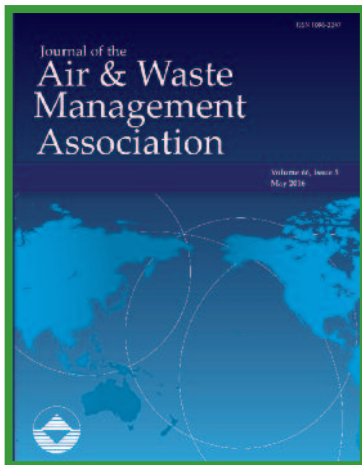
An A&WMA member since 1974 (Southwest Ohio Chapter, East Central Section), Ryckman is also a member of the Society of American Military Engineers (SAME), National Defense Industry Association, Dayton Council on World Affairs, Affiliate Societies Council of Dayton, and is a former member of the Water Environmental Federation. He was the 2012 recipient of A&WMA's Richard Beatty Mellon Environmental Stewardship Award. He's been an IPEP Regional Coordinator since 2005 and a member of the SAME-Kittyhawk Post Board.

Ryckman received bachelor's and master's degrees in engineering management from the University of Dayton. He is a graduate of the U.S. Air Force Institute of Technology's Applied Engineering Program, U.S. Air Force Air War College Seminar Graduate Program, and Rockhurst University's Excellence in Leadership Certificate Program. He is a registered Professional Engineer for the State of Ohio, a Qualified Environmental Professional, and holds a Systems Planning, Research, Development and Engineering (SPRDE) Systems Engineering Certification from Defense Acquisition University.

Over the past 25 years, Ryckman has actively supported the Association in various leadership capacities. He served on the A&WMA Board of Directors from 2008 to 2010 and on its By-Laws and Governance Committees. He chaired the Technical Council's Industrial Process Division (1995–1998) and was Environmental Management Group Coordinator (1999–2002). He has organized, chaired, or co-chaired numerous specialty (EI-1) breakout sessions or workshops for federal facilities at A&WMA Annual Conferences and facilitated add-on extended EI-1 sessions at A&WMA-EPA Information Exchanges, and contributed dozens of papers since 1991. He has been a member of Public Education Division since 1997 and is the founder and a past Chair of A&WMA's Scouting Jamboree Committee.

Ryckman served as Southwest Ohio Chapter's Education Committee Chair, serving on its Board (2005–2016), and on the East Central Section Board (2014–2016). He's been the Southwest Ohio Chapter's liaison to the Affiliate Societies Council of Dayton, since 2007, which supports science, technology, engineering, and math (S.T.E.M.) outreach to youth and professional development for scientists and engineers. He has also been an active member of A&WMA's Annual Technical Programs Committee since 1995, and was the founding Chair of the Federal Facilities Committee (EI-1; 1990–1995), and remains an active member in this and other Technical Council Committees to present.

Arthur C. Stern Distinguished Paper Award



Arthur C. Stern (1909–1992) was a long time member and past president of the Air Pollution Control Association, a forerunner of A&WMA. He made major contributions to the Journal of the Air & Waste Management Association (JA&WMA) and his books on air pollution control are well-recognized nationally and internationally. Established in 2013, the Arthur C. Stern Award is given annually to an individual(s) for the outstanding contribution in the air and waste management fields to JA&WMA that has greatly advanced science and technology and is based on publication of a paper in JA&WMA any time in the past. It requires accomplishment of a technical or scientific nature on the part of the recipient(s) that while advancing the mission of JA&WMA is considered to be a substantial contribution toward improving our understanding of air pollution and waste management problems and their impact on environment and health. Both members and nonmembers are eligible for the Stern Award.

A&WMA presents the 2016 Arthur C. Stern Distinguished Paper Award to **Drs. Judith C. Chow, John G. Watson, L.-W. Antony Chen, M.C. Oliver Chang, Norman F. Robinson (posthumously), Dana Trimble, and Steven Kohl**, all with Desert Research Institute, Reno, NV, for their paper: “The IMPROVE_A Temperature Protocol for Thermal/Optical Carbon Analysis: Maintaining Consistency with a Long-Term Database” (*J. Air & Waste Manage. Assoc.* 2007, 57 (9), 1014-1023; DOI: 10.3155/1047-3289.57.9.1014).

The paper, published in 2007, addresses the question of how to introduce new measurement technology into long-term network operations, with the example being that of organic and elemental carbon quantification

on aerosol samples. The newer instrumentation documented in this paper allowed for all reported carbon measurements methods to be implemented on a single platform. This platform provides different temperature fractions and optical corrections that can be summed to approximate many different methods for comparison across networks. The paper reports the results of systematic testing that identified and corrected limitations of previous analysis hardware, including uncertain sample temperature quantification, infiltration of oxygen into the inert gas stream, and undue dominance of adsorbed organics with the filter on the transmittance pyrolysis correction, while still maintaining consistency with the long-term U.S. chemical speciation databases.



2016 Sections and Chapters Awards

Each year, A&WMA's Sections & Chapters Council recognizes outstanding individual Sections and Chapters with two prestigious awards: the George T. Minasian Award and the Chapter Cup Award.

George T. Minasian Award

Named for the late George T. Minasian, first chair of Sections Council, to commemorate his many years of distinguished service to the Association, this award is given to the top performing Sections recognized for outstanding achievement in serving the mission and the membership of the Association. The 2016 George T. Minasian Award is presented to:

**Niagara Frontier Section
Pacific Northwest International Section (PNWIS)**

Chapter Cup Award

Given to the top performing Chapters recognized for superior performance in providing service to A&WMA Members. The 2016 Chapter Cup Award is presented to:

**East Michigan Chapter
Mississippi Chapter**

Long-Term Members

A&WMA continues its tradition of recognizing members for their continuous service to the Association by acknowledging those individual members with 30+ years of service. In particular, we would like to salute five members who have dedicated 60 or more years of continuous membership. Many of those listed below have volunteered countless hours to aid the Association in providing members with training, education, technical information, publications, and networking opportunities. It is with great pride that A&WMA acknowledges their years of service and dedication.

Member Name, Membership (in years)

Peter Mueller, 64
Frank Terraglio, 62
Charles Licht, 61
Victor Sussman, 61
Morton Sterling, 60

Harry Hovey, 59
David Standley, 58
Arthur Benline, 57
Humberto Bravo, 56
Walter Smith, 55
Joseph Soporowski, 55
Norman Canfield, 53
Stephen Baruch, 52
Louis Theodore, 52
Arthur Krawetz, 51
Joe Lukacs, 51
Dale Lundgren, 51
Justice Manning, 51
Thomas Montgomery, 51
William O'Brien, 51
Austin Phelps, 51
Charles Pratt, 51
Gilmore Sem, 51
Stanley Sleva, 51
Harold Cota, 50
Mackenzie Davis, 50
Paul Harrison, 50
Gene Slice, 50
Wilbur Tisch, 50
James Wilburn, 50
William Wilson, 50
John Koogler, 49
Theodore Polychronis, 49
Karl Schnelle, 49
William Achinger, 48
Walter Biggs, 48
R. Kinnan Golemon, 48
Marcel Halberstadt, 48
Lorenzo Iglesias, 48
Billy Mullins, 48
Richard Walli, 48
Norman Wenck, 48
Thomas Young, 48

William Auberle, 47
Bob Hall, 47
Lawrence Kornreich, 47
Frank Partee, 47
Stanley Penkala, 47
Richard Siegel, 47
John Stallings, 47
James Turner, 47
Jesse Wilson, 47
George Wolff, 47
William Zegel, 47
Carole Burnham, 46
Robert Carr, 46
Nicholas Cernansky, 46
Peter Charrington, 46
Wayne Davis, 46
Gale Hoffnagle, 46
Richard Krablin, 46
Robert Kunz, 46
Joseph Merenda, 46
Conrad Newberry, 46
Kenneth Noll, 46
Robert Sommerlad, 46
James Southerland, 46
Jim Steiner, 46
William Weems, 46
Art Bedrosian, 45
Norman Beloin, 45
Elmer Berlie, 45
Anthony Buonicore, 45
John Chandler, 45
Jack Coblenz, 45
Robert Eisenbach, 45
Doug Fulle, 45
A. Roger Greenway, 45
David Hoffman, 45
Robert Jacko, 45
John Johnson, 45
Michael Lukey, 45
Gary McCutchen, 45
John McKenna, 45
Ronald Mueller, 45
Wilbert O'Connell, 45
Wayne Ott, 45

Richard Schulze, 45
James Serne, 45
George Siple, 45
Donald Stedman, 45
William Swofford, 45
Eric Walther, 45
Richard Baldwin, 44
Frederick Boelter, 44
Eugene Brackbill, 44
Steven Brockel, 44
Gary Brown, 44
Chatten Cowherd, 44
Bernard Dailey, 44
Peter Hess, 44
Michael Hoyles, 44
Alan Krol, 44
Joseph Laznow, 44
Joseph Martone, 44
Robert McCann, 44
Steven Menkus, 44
David Mobley, 44
Joe Morgan, 44
Thomas Overcamp, 44
Joseph Padgett, 44
George Pedersen, 44
Richard Rothstein, 44
Dean Simeroth, 44
Bill Steiner, 44
Geoffrey Wortley, 44
Kenneth Barrett, 43
Albert Berst, 43
Thomas Blackwood, 43
Jack Brady, 43
Roger Dhonau, 43
David Draper, 43
Paul Farber, 43
Robert Hodanbosi, 43
Martin Ledwitz, 43
Allan Legge, 43
Charles Mann, 43
Pramodh Nijhawan, 43
Norman Radford, 43
S. James Ryckman, 43
Richard Schwartz, 43

Ivar Tombach, 43
William Vaughan, 43
Richard Wales, 43
Roger Zygmunt, 43
Samuel Altshuler, 42
Irving Cohen, 42
Eugene Cox, 42
Raymond Cummings, 42
Prabhu Dayal, 42
Jim Donnelly, 42
Brian Doyle, 42
Timothy Keener, 42
Stan Krivo, 42
James Little, 42
Jack McDonald, 42
George McVehil, 42
Rolland Mura, 42
Walter Niessen, 42
Tom Pace, 42
Roger Raufer, 42
Ralph Roberson, 42
William Steggles, 42
Donald Blumenthal, 41
David Bubenick, 41
Roger Caiazza, 41
Theodore Fuhrman, 41
Joseph Guimond, 41
John Kinsey, 41
Wayne Leipold, 41
Julian Levy, 41
Dwight Lockwood, 41
John Marlow, 41
John Moldovan, 41
Jim Morrow, 41
William Murray, 41
John Olin, 41
Harry Otto, 41
Ron Petersen, 41
Mark Shanis, 41
Donald Sodersten, 41
Douglas Splitstone, 41
John Woodyard, 41
Edith Ardiente, 40
Stephen Capone, 40

Long-Term Members, Cont.

Member Name, Membership (in years)

Larry Caretto, 40	T.W. Tesche, 39	Edward Faeder, 37	Thomas Diggs, 35
H. Chamberlain, 40	Robert Van Wassen, 39	Douglas Fox, 37	Michael Durham, 35
Ken Cushing, 40	Stephen Vigeant, 39	Steven Francis, 37	David Ernst, 35
Eduardo de Oliveira, 40	Bruce Walker, 39	Luther Gibson, 37	Winston Esteves, 35
William Fleming, 40	John Watson, 39	Jill Barson Gilbert, 37	Walter Gray, 35
Peter Guldborg, 40	Charles Weschler, 39	John Grisinger, 37	Cynthia Mascione, 35
Lawrence Hands, 40	Arthur Winer, 39	Sara Head, 37	Michael Maxwell, 35
Martin Hochhauser, 40	Paolo Zannetti, 39	David Hitt, 37	Douglas Murray, 35
John Hochstrasser, 40	Viney Aneja, 38	Philip Hopke, 37	John Pinsonnault, 35
Paul Neil, 40	Vittorio Argento, 38	Henry Krigmont, 37	A. K. Price, 35
Richard Osa, 40	Keith Baugues, 38	Ashok Kumar, 37	Arthur Schatz, 35
Joseph Pezze, 40	Dennis Becvar, 38	Frank Lambert, 37	Paul Schleusener, 35
Thomas Porritt, 40	David Chadder, 38	Alvaro Linero, 37	Barry Stephens, 35
Kenneth Skipka, 40	John Clouse, 38	Robert Morgan, 37	Suzanne Thomas-Cole, 35
Philip Slakey, 40	Cliff Davidson, 38	Barry Neal, 37	Raymond Topazio, 35
Hal Taback, 40	Glenn Draper, 38	Stephen Neck, 37	Myrl Wear, 35
Jim Tarr, 40	Earl Evans, 38	Kenneth Pickering, 37	Kirk Wings, 35
John Thielke, 40	Judy Freitag, 38	Donald Pompelia, 37	Michael Barr, 34
Daniel Todd, 40	David Gilmore, 38	Lewis Weinstock, 37	Barbara Curtis, 34
John Voelpel, 40	Jeffrey Hahn, 38	Doug Wilson, 37	Delbert Eatough, 34
Michael Walters, 40	Ken Johnson, 38	Steven Young, 37	Glenn England, 34
Joel Watson, 40	John Koehler, 38	Larry Anderson, 36	Frank Fleer, 34
Kenneth Weiss, 40	Lee Lundberg, 38	Thomas Arnold, 36	Brian Gasiorowski, 34
James Wilson, 40	C. V. Mathai, 38	Marshall Atwater, 36	Jayne Graham, 34
Earl Withycombe, 40	Jess McAngus, 38	David Cabe, 36	Kris Hansen, 34
Robert Wright, 40	Thomas McCabe, 38	Mervyn Davies, 36	Gary Hunt, 34
Beth Barfield, 39	Chuck McDade, 38	Bruce Davis, 36	R. K. M. Jayanty, 34
Ronald Berglund, 39	Charles McGinley, 38	Michael DeBusschere, 36	Donald Langley, 34
Edward Biedell, 39	Paula McLemore, 38	Rob Farber, 36	Kenneth Lensmeyer, 34
William Boehler, 39	David Minott, 38	Scott Freeburn, 36	Frank Maccioli, 34
James Burnham, 39	Leroy Owens, 38	Robert Gilbert, 36	David Maxwell, 34
Douglas Cook, 39	Patricia Paulus, 38	Allen Gillette, 36	Barry Millman, 34
John Cooper, 39	Marc Pitchford, 38	William Herrin, 36	Will Ollison, 34
Richard Countess, 39	Rolf Reichel, 38	Larry Hottenstein, 36	Ronald Patterson, 34
Jerry Crowder, 39	Joseph Ruffing, 38	Merlyn Hough, 36	Andrew Polahar, 34
Chuck Dene, 39	Alexander Sagady, 38	Michael Jury, 36	Armistead Russell, 34
Michael D. Durham, 39	Marvin Schorr, 38	Joseph Juszkiewicz, 36	Daniel Schmid, 34
Cary Eaton, 39	Paul Stenberg, 38	Robert Kelly, 36	Chris Schreiber, 34
Don Elias, 39	Wileen Sweet, 38	Kazuhiro Kuwata, 36	Leo Stander, 34
John Evanoff, 39	Alan Trbovich, 38	Eric Mendelsohn, 36	Elia Sterling, 34
Paul Fransoli, 39	Roger Wayson, 38	Michael Musheno, 36	David Sultana, 34
Ralph Froehlich, 39	Herbert Weidemann, 38	Roy Neulicht, 36	Steven Van Slyke, 34
Walter Hecq, 39	Robert Wells, 38	Greg Quartucy, 36	George Ayerides, 33
Joann Held, 39	Lucio Alonso, 37	Gary Rubenstein, 36	Dinesh Bhushan, 33
Alan Jirik, 39	Billy Atkins, 37	Larry Simmons, 36	Robert Chalfant, 33
Michael Kleinman, 39	Robert Baxter, 37	Kirk Stopenhagen, 36	Arthur Davidson, 33
Dennis Lane, 39	S. William Becker, 37	Richard Tropp, 36	Allen Dittenhoefer, 33
Tony Licata, 39	Judith Chow, 37	Michael Anderson, 35	Gregory Edwards, 33
Thomas Marriott, 39	C. David Cooper, 37	Thomas Bach, 35	Bruce Egan, 33
Douglas Pottratz, 39	J. Wayne Cropp, 37	Mitch Baer, 35	Paul Eisen, 33
S. T. Rao, 39	Anton Davies, 37	Roger Brower, 35	Gerald Emison, 33
John Ruud, 39	Thomas Easterly, 37	David Calkins, 35	Barbara Finlayson-Pitts, 33
Joel Soden, 39	Allen Ellett, 37	Herbert DeFriez, 35	Peter Flachsbart, 33

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Member Name, Membership (in years)

Leigh Gammie, 33	Thomas Eckhoff, 32	Scott Fichtner, 31	Alvaro Feal-Veira, 30
Henry Graham, 33	Margaret Farrell, 32	James Ford, 31	Howard Feldman, 30
Lester Grant, 33	Terence Filipiak, 32	Richard Fritz, 31	Graham Fitzsimons, 30
Jay Haney, 33	Linda Gamble, 32	Leo Gendron, 31	Eric Goldman, 30
G.M. Hidy, 33	Mark Goodin, 32	Fred Hall, 31	David Gossman, 30
John Higuchi, 33	Gregory Goslow, 32	Sardar Hassan, 31	Kenneth Hardesty, 30
Joseph Hower, 33	James Jahnke, 32	David Heinold, 31	Michael Hopkins, 30
Mark Johnson, 33	David Jordan, 32	Thomas Hormel, 31	Daniel Inouye, 30
Robert King, 33	Steven Klafka, 32	Ronald Huffman, 31	David Jellerson, 30
Bernard Leber, 33	Michael Kosusko, 32	Alphonse Iannuzzi, 31	Harry Klodowski, 30
C. David Livengood, 33	Robert Kricks, 32	Fred Lurmann, 31	Nancy Kralik, 30
Joanna Livengood, 33	Alan Lanfranco, 32	David McCready, 31	William Kuehne, 30
David Long, 33	David Lipsky, 32	Thomas McGowan, 31	James Lents, 30
Thomas Marrero, 33	Jorge Marson, 32	Martin Minnicino, 31	Miriam Lev-On, 30
F. D Muschett, 33	David Pankratz, 32	Bob Paine, 31	John Macfadyen, 30
Robert Newman, 33	Nancy Pfeffer, 32	John Pehrson, 31	Douglas McCormick, 30
Donald Price, 33	Jeffrey Pfost, 32	Mark Rood, 31	Kenneth Menzies, 30
James Robbins, 33	Thomas Polinski, 32	Joseph Santoleri, 31	Michael Miller, 30
Suresh Santanam, 33	James Rabe, 32	Robert Schreiber, 31	Terry Nyman, 30
Stephen Schoen, 33	Ram Ramanan, 32	Kenneth Sexton, 31	Duane Ono, 30
Robert Schoenberger, 33	Harish Rao, 32	Gary Shiomoto, 31	David Ozawa, 30
Richard Shores, 33	Leonard Richter, 32	Paul Siebert, 31	Arijit Pakrasi, 30
Donald Stock, 33	George Schewe, 32	Willard Smith, 31	Brian Petermann, 30
Kenneth Stubbs, 33	Chuck Schmidt, 32	Paresh Thanawala, 31	Steven Ramsey, 30
James Unmack, 33	Cindy Thompson, 32	William Troxler, 31	Jerry Schroy, 30
Kit Wagner, 33	Neil Wheeler, 32	Tony van der Vooren, 31	John H. Skinner, 30
Glenn Dwain Waters, 33	Susan Wierman, 32	Christi Veleta, 31	Arnold Srackangast, 30
Douglas Wolf, 33	Jay Willenberg, 32	Samuel Vigil, 31	Steve Stasko, 30
David Yanochko, 33	Ashley Williamson, 32	Roy Vincik, 31	David Sullivan, 30
David Anderson, 32	Kay Bedenis, 31	Chester Wisner, 31	Barbara Toole-O`Neil, 30
William Barnard, 32	David Braslau, 31	Eiji Yokoyama, 31	Harry Trout, 30
Linden Blackmon, 32	Marc Brindamour, 31	Robert Baker, 30	Thomas Walsh, 30
Arlene Borowsky, 32	Finis Carleton, 31	David Beil, 30	Kenneth Willings, 30
W. R Brooks, 32	Ian Cohen, 31	Richard Brewer, 30	John Yavorsky, 30
Maxime Cloutier, 32	Bernard Delaney, 31	Mike Cassidy, 30	Mousa Zada, 30
Paul Deneka, 32	Frank Di Genova, 31	Donna Clark, 30	
Donald Dicristofaro, 32	A. Gwen Eklund, 31	Philip Daily, 30	
Russell Dietz, 32	Stephen Felton, 31	James Estler, 30	

2016 Scholarship Award Recipients

A&WMA takes great pride in supporting the future environmental leaders of our world. For more than two decades, the Association has awarded scholarships to the most promising environmental students on the basis of academic record, plan of study, career goals, recommendations, and extracurricular activities without consideration of sex, race, national origin, financial need, age, or physical disability. Full-time graduate students who are pursuing courses of study and research leading to careers in air quality, waste management, environmental management/policy/law, and sustainability are eligible to apply. This year, A&WMA is pleased to recognize the following 16 students chosen by the Scholarship Awards Committee with scholarship awards totaling \$49,500.

Milton Feldstein Memorial Scholarship for Air Quality Research (\$7,500)

Lan Jin

Dave Benferado Scholarship for Air Pollution Control and Waste Minimization Research (\$4,000)

Eric Monsu Lee

Richard Stessel Memorial Scholarship for Solid and Hazardous Waste Research (\$4,000)

Alireza Rajabpour Ashkiki

Jacqueline Shields Memorial Scholarship for Waste Management Research and Study (\$4,000)

Syeed Md Iskander

In recognition of excellence in air quality research and study (\$2,500)

Mohsen Ghafari
Amrutasri Nori-Sarma
Ashley Pierce
Mercede Ramjerdi
Jian Sun

Lucas Henneman
Michelle North
Keerthisaranya Palanisamy
Pooyah Shariaty

In recognition of excellence in waste management research and study (\$2,500)

Mylung Hwangbo

Nebechi Osia

In recognition of excellence in sustainable development research and study (\$2,500)

Olga Kachook



Scholarship Donations

A&WMA gratefully acknowledges all of the contributions made to the Scholarship Endowment Trust Fund from April 1, 2015, through March 31, 2016, with special appreciation to the following contributors of US\$100 or more.

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Leo Stander	\$202	Jayne Graham	\$100
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John Higuchi	\$200	Richard Wales	\$100
Edith Ardiente	\$100	Susan Wierman	\$100
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If you are interested in making a donation to the A&WMA Scholarship Endowment Trust Fund, please contact Gerald Armstrong at garmstrong@awma.org. Contributions are tax deductible.



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