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Education:

1982 Ph. D. (Physical Chemistry) York University. Thesis: "Photolysis of Nitrogen Dioxide in the Stratosphere."
1978 M. S. (Electrical Engineering) Cornell University. Thesis: "Electronic to Vibrational Energy Transfer from O_2* to HF(v)."
1975 M. Engr. (Engineering Physics) Cornell University.
1974 B. S. (Engineering Physics) Cornell University.

Employment:

1997 - Senior Scientist, National Center for Atmospheric Research (NCAR), Boulder, Colorado.
1988 - 1997 Scientist II and III, NCAR.
1987 - 1988 Senior Research Associate, Atmospheric Sciences Research Center, State University of New York, Albany, New York, and Visiting Scientist, NCAR.
1985 - 1987 Scientist I, NCAR.
1981 - 1985 Chemical Physicist, AeroChem Research Labs., Princeton, New Jersey.

Other appointments:

2013 - Research Associate, Dept. of Atmospheric and Oceanic Sciences, U. Colorado.
2015 - Adjunct Member of the Graduate Faculty, Texas A&M U.
2017 - 2022 Affiliate Member of the Graduate Faculty, U. Alabama Huntsville.

Research Interests: Atmospheric chemical, physical and radiative processes related to tropospheric air quality, regional and global climate, and stratospheric ozone. Modeling and interpretation of atmospheric observations. Lifecycles of atmospheric chemical compounds, including sources, transformations, and removal processes. Non-linear photochemistry of tropospheric Ox, HOx, NOx and hydrocarbons. Detailed chemical mechanisms and kinetics for the atmospheric oxidation of hydrocarbons and organic aerosol formation. Gas-aerosol-radiation interactions. Ultraviolet radiation in the atmosphere and its effect on the biosphere. Impacts of the export of urban pollution to regional and global scales. Development and evaluation of regional and global chemistry-transport models.

Professional Societies: American Geophysical Union, European Geophysical Union, American Physical Society, American Chemical Society, Royal Society of Chemistry.

Selected Professional Activities: Editorial board, J. of Atmospheric Chemistry [2009-]. Panel on Effects of Ozone Depletion, United Nations Environment Programme [1989-2001; 2009-]. Scientific consultant, ICF Consulting [1994-]. Secretary, Atmospheric Sciences Section of the American Geophysical Union [2010-2012]. Advisory committee, DOE Aerosol and Climate Initiative [2006-2011]. Steering Committee of Scientific Research on Climate and Chemical Composition in the Yangtze River Delta Region [2006-2010]. Guest editor, Atmospheric Chemistry and Physics, special issue on MILAGRO [2006-2010]. Science steering committee, DOE Atmospheric Sciences Program [2005-2009]. Chair, scientific steering committee for Megacities Impacts on Regional and Global Environments (MIRAGE) [2002-2008]. Convenor, MILAGRO Science Meetings [2006, 2007]. Chief Scientist, Megacity Impacts on Local and Global Scales, Research Observations (MILAGRO) field campaign [2006]. Guest editor, Atmospheric Environment, special issue on Transport and Air Pollution [2005-2006].

Convenor, joint MILAGRO/INTEX-B workshop, Boulder [2005]. Coordinating lead author, Intergovernmental Panel on Climate Change (IPCC) Special Report on Ozone and Climate [2003-2005]. Organizer, 13th International Symposium on Transport and Air Pollution, Boulder [2004]. Scientific organizing committee, 11th - 14th International Symposia on Transport and Air Pollution [2001-2005]. Scientific advisory group on UV monitoring, World Meteorological Organization (WMO) [1994-2003]. Convenor, 1st workshop on MIRAGE, Boulder [2002]. Steering committee for UV Monitoring, U.S. Department of Agriculture (USDA) [1990-2001]. Co-convenor, workshop on Modeling Chemistry in Cloud and Mesoscale Models, Boulder [2000]. Co-convenor, workshop on Mixing and Reactive Turbulence, Boulder [1999]. Convenor, session on UV Radiation Measurements and Modeling, International Radiation Symposium, Fairbanks [1996]. Steering committee, UV Issues, Department of Energy (DOE) [1992-1993]. Technical advisory panel on UV Monitoring, EPA [1992]. Convenor, Global Tropospheric Chemistry Program (GTCP) International Workshop, Boulder, Colorado [1989]. Review panels [EPA 1990, 1996, 2006; USDA 2001; NASA 2012].

Service within NCAR/UCAR: Appointments Review Group [1999-2001, 2007-2009; chair 2001, 2009; charter and bylaws committee, 2010-2011]. Workforce Management Plan subcommittee on Scientific and Research Engineer Appointments [2009]. Head, Theoretical Studies and Modeling section of ACD [1997-2008]. Assistant to the NCAR Director for Scientific Liaison [2002-2003]. Human Resources advisory council [2002]. Jury for Distinguished Achievement/Outstanding Performance award [1999-2001]. Geophysical Turbulence Program [1996-; chair, 2000]. Acting director, ACD & ACOM [occasionally, 2000-].

Honors: NCAR Special Recognition Awards [2003; 2012]. Citations for Excellence for Contributions to the Protection of the Ozone Layer, United Nations Environment Programme [1990; 1995; 1998; 2012]. NASA Group Achievement Award for "Intercontinental Chemical Transport Experiment" [2007]. WMO/UNEP Recognition for contributing to the award of the Nobel Peace Prize to the IPCC [2007]. ISI Highly Cited [Geosciences, 1986-2006]. Distinguished Visiting Professor, Academia Mexicana de Ciencias [2001]. NCAR Outstanding Publication Award Nomination [2000]. NOAA Outstanding Publication Award [1998]. The Donnel Foster Hewett Lecturer, Lehigh University [1993]. Editor's Citation for Outstanding Refereeing, Journal of Geophysical Research [1993]. Cornell National Scholar [1970-1974].

Post-Docs supervised: Bernard Aumont (U. Paris), Bernhard Mayer (U. Munich), Ken Minschwaner (New Mexico Tech. U.), Didier Hauglustaine (CNRS, France), Kathy Lantz (NOAA), Daniel Lack (NOAA), Craig Stroud (Environment Canada), Alma Hodzic (NCAR/ACOM), Zhang-Ho Shon (Dong-Eui U., Korea), Camille Mouchel-Vallon (U. Paris).

Graduate Students supervised: Main advisor for Irina Petropavlovskikh (U. Brussels). Committee member for Katja Dzepina (U. Colorado), Gerardo Palancar (U. Cordova), Maria-Isabel Micheletti (U. Rosario), Sophie Szopa-Laval (U. Paris), Zhuming Ying (York U.), Peifeng Yu (U. Colorado), Misti Levy-Zamora (Texas A&M U.), Mauro Morichetti (Marche Polytechnic U., Ancona). Mentor for SOARS interns: Stephanie Rivale, Loraine Calame, Annareli Morales, Summer Sands, Roberto Cancel.

Publications: Approximately 215 (185 peer reviewed).
Full list at: https://acomstaff.acom.ucar.edu/sasha/Madronich_publications.pdf

Citations (Sep 2018): Thompson-Reuter 9500, H=55; Google Scholar 17700, H=70.