Dr. Jun Wang
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Academic Background

Ph.D.	2005	Atmospheric Science, University of Alabama in Huntsville
M.S.	1999	Institute of Atmospheric Physics, Chinese Academy of Sciences
B.S.	1996	Nanjing University of Information Science and Technology, China

Academic Experience

07/2024- present	Lichtenberger Family Chair in Chemical Engineering, University of Iowa (U. Iowa)
07/2024- present	Chair, Dept. of Chemical and Biochemical Engineering, U. Iowa
07/2022-06/2024	Interim Chair, Dept. of Chemical and Biochemical Engineering, U. Iowa
2020-2024	James E. Ashton Professor, College of Engineering, University of Iowa
2018-present	Assistant/Associate (since 07/25) Director, Iowa Technology Institute, U. Iowa
2016-present	Professor, Dept. of Chemical and Biochemical Engineering, U. Iowa
2013-2016	Associate Professor, Earth & Atmospheric Sciences, U. Nebraska-Lincoln
2007-2013	Assistant Professor, Earth & Atmospheric Sciences, U. Nebraska-Lincoln
2005-2007	NOAA Climate and Global Change Postdoctoral Fellow, Harvard University

Other Research Experience

Visiting Faculty	NCAR Lab for Atmospheric Chemistry Observations & Modeling, 4-8/2015
Visiting Faculty	NCAR Climate and Global Dynamics Division, 4-8/2009
Visiting Faculty	NOAA Joint Center for Satellite Data Assimilation, 6-7/2010
Yoram Kaufman Visiting Scientist	NASA Goddard Space Flight Center, 1-8/2008

Early Career Development and Mid-Career Awards

- AMS Fellow (elected 2024); AGU Joanne Simpson Medal, 2024.
- AGU Atmospheric Section ASCENT Award, 2022. IEEE Senior Member, 2024.
- NASA New Investigator Award, 2008.
- NOAA Climate and Global Change Postdoctoral Fellowship, 2005.
- NASA Earth System Science Graduate Student Fellowship, 2003.
- Student Paper Award, AMS 13th Conference on Satellite Meteorology and Oceanography, 2004.
- Best Poster Award, AMS 12th Conference on Satellite Meteorology and Oceanography, 2002.

Recognitions for Services

- The most popular session convener, Asia Oceania Geosciences Society, 2021, 2022, 2023, 2024.
- Certificate "for professionalism, dedication, and teamwork demonstrated in support of the Atmospheric Chemistry Committee", AMS, 2020.
- AGU 2017 Editors' Citation for Excellence in Refereeing.

Other Awards and Recognitions

- 2024 Regents Award for Faculty Excellence, the highest honor for faculty achievement, U. Iowa.
- 2024 "Scholar of the year" award, U. Iowa. Only one recipient is selected from all faculty members.
- Seven journal cover/highlight articles in the following issues: *Environmental Science & Technology: Air*, April 2024; *GeoHealth*, July 2022; *Environmental Science and Technology*, May 2021; *Atmosphere*, March 2020; *Atmospheric Measurement Technique*, June 2019; *IEEE Transactions on Geoscience & Remote Sensing*, Sep. 2016; *IEEE Geoscience and Remote Sensing Letters*, June 2015.
- NASA Group Achievement Award, TEMPO (2013), Suomi-NPP (2013), and FIREX-AQ (2020).
- Faculty Excellence Award for Research, College of Engineering, University of Iowa, 2019.
- Academic Star" award for "taking the art of mentoring to new heights" and "bringing extraordinary collegiality", College of Arts and Sciences, University of Nebraska – Lincoln, 2009.
- Susan J. Rosowski Professorship Award in recognition of "distinguished scholarship", UNL, 2015.

Science Team Membership & Leadership

- Deputy PI, STRIVE satellite mission - the Stratosphere Troposphere Response using Infrared Vertically-Resolved Light Explorer; NASA Earth System Explorers Program, May 2024.
- Science team lead, NASA's Stratospheric Aerosol and Gas Experiment (SAGE) III, 2021-present.
- NASA Earth Science senior review panel, 2017, 2020, and 2023.
- Aerosol group co-lead, NASA GEO-CAPE satellite mission science definition team, 2010-2018.
- Science team member of NASA's *satellite missions*: Glory (2010-2013), Suomi-NPP (since 2011), TEMPO mission (since 2012), Aura (2014-2019), DSCOVR (since 2014), CLARREO (2014-2019), MAIA (2016-), Terra and Aqua (2018-); *field campaigns*: KORUS-AQ (2017-2019), FIREX-AQ (2018-2021), Asia-AQ (2023-); *Health & Air Quality Applied Sciences Team* (since 2021).

Professional Memberships and Services

- AGU, AMS, both 2002-present; IEEE, AAAS, and AIChE, all 2022-present;
- Member of GEO-Chem model steering committee (2012-) and co-chair for GEOS-Chem adjoint model and data assimilation working group (2016-); ; International Radiation Council (2025-).
- AMS committee on SATellite Meteorology, Oceanography, and Climatology or SATMOC (2019-).
- Science advisor for AGU Eos (2024 -); Editor for *Earth Science Review* (2018 -); associate editor for *J. Geophys. Res. – Atmos*. (2022-); new direction editor (2013–2017) and editorial board member (2013-), *Amtos. Environ*.; assoc. editor for *Atmospheric Measurement Technique* (2018-).
- Guest Associate Editor (2020-2021) of *JGR-Atmos* for AGU collection: "Fire in the Earth System".
- Co-editor (2021-present) for *Copernicus AMT-ACP inter-journal special issue* "Cloud, Aerosol and Monsoon Processes Philippines Experiment (CAMP2Ex)".
- Session chair/convener: IEEE Geoscience and Remote Sensing Society 2020-2024; AMS 2015-2023, AGU 2005, 2009, 2011, 2014-2018, 2021, 2023; AOGS 2015, 2016, & 2019-2024; Goldschmidt 2014; NCAR ECSA Junior Faculty Forum on Future Scientific Directions 2010.

Books Edited

- Islam, T., Y. Hu, A. Kokhanovsky, and J. Wang (editors), Remote Sensing of Aerosols, Clouds, and Precipitation, pp347, ISBN: 9780128104378, Elsevier, 2018.
- Liu, Y., J. Wang, and O. Torres (editors), Remote Sensing of Atmospheric Pollution, pp342, ISBN 978-3-03842-640-0, MPDI, 2018.

Data Products

- Hourly aerosol optical centroid height data product from EPIC/DSCOVR satellite. Algorithm delivered and data routinely generated for open access at NASA Atmospheric Science Data Center.
- Fire combustions efficiency data product from VIIRS on SNPP/NOAA-20 satellite. Algorithm delved and data routinely generated for open access at NASA Land Processes Data Center.

STEM Education, Research Community Engagement, and Broad Impact

- Supervised 32 undergraduate research assistants, 15 MS, 12 Ph.D., and 10 postdocs; 40% are female.
- Passionate about communicating science and research to the public. Have been interviewed by NASA, AGU, various TV and radio stations, newspaper, and other media (such as CBS, the Hills, National Geographic magazine, etc.). Click here for details.
- PI of two travel grants that supported a total of 20 graduate students and postdoctoral researchers from the U.S. to attend the 18th Conference on Electromagnetic and Light Scattering" in China in June 2018 and the "Advancement of Polarimetric Observations: Instruments, Calibration, and Improved Aerosol and Cloud Retrievals" (APOLO) conference in France in November 2019.
- Lead for the development of the UNified, Linearized, and Vector Radiative Transfer Model (UNL-VRTM) that has been used by ~45 groups around the world (https://unl-vrtm.org/).
- 105 invited talks and 350 other (oral and poster) presentations in venues such as AGU, EGU, AMS, AOGS, AAAR, IGAC, IEEE, Gordon conference, AEROCENTER, and academic seminars, etc.

Publication

Detailed list of these papers can be found at Prof. Wang's group website or Google Scholar.

Authored over 235 peer-reviewed papers. Of these, Of these, 63 have been published in AGU journals (17 GRL, 2 GeoHealth, 43 JGR, 1 WRR); 20 in journals with an impact factor (IF) larger than 10, including *Lancet Planet Health* (1 paper), *Nature Communication* (2), *Proceedings of the National Academy of Sciences* (1), *Remote Sensing of Environment* (14), *Environmental Science & Technology* (3), and *Environmental International* (1); 30 in EGU journals, i.e., *Atmospheric Physics and Chemistry* (23), *Atmospheric Measurement Technique* (4), and *Geoscientific Model Development* (3); 9 in AMS journals, i.e., *BAMS* (4), *Journal of Hydrology* (1), and *Journal of Applied Meteorology and Climatology* (4); and 11 in *Journal of Quantitative Spectroscopy and Radiative Transfer* (JQSRT).

While these papers cover quite a few research areas in several disciplines that are of interest to AGU, such as atmospheric sciences, public health, natural disasters, hydrology, informatics, and global environmental change, they can be grouped into two main research themes: (a) development of remote sensing theory and algorithms for characterizing atmospheric aerosol particles and surface sources, especially fires; and (b) development and application of atmospheric models and satellite data to studies in air quality, climate, and public health. These papers encompass significant advances in satellite retrievals, including the groundbreaking work of quantifying smoke aerosol optical depth at night with the moonlight measurements from space, novel techniques for passive sensing aerosol layer height, and transformative data products of fire combustion efficiency; theoretical grounding for new satellite mission concepts; studies of long-range transport of smoke, dust, and volcanic aerosols, from their sources to their injections and radiative feedbacks; process understanding and data assimilation to advance prediction and analysis of surface air quality and atmospheric composition from the surface to the stratosphere; and collaborative work that transects the disciplines of air pollution, ecology, and public health in rural and urban communities.

Research grants

Principal Investigator (PI) or Co-Principal Investigator (Co-PI) on 63 research projects funded by federal agencies (NASA, NOAA, NSF, USDA, DoT, and NRL/DoD), private industry partners (Ball Aerospace, Raytheon, IBM, etc.), and non-profit organizations (e.g., EarthWatch). Also served as Co-Investigator (Co-I) or institutional PI on approximately 17 additional federally funded projects. Since 2004, J. Wang and his team have received a total of $35M grants and contracts.