Ping Jing, Ph.D.

Associate Professor
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EDUCATION

Georgia Institute of Technology, Ph.D. in Earth and Atmospheric Sciences, 2004
Chinese Academy of Meteorological Science, M.S. in Atmospheric Environment, 1999
Nanjing Institute of Meteorology (now Nanjing University of Information Science & Technology), B.S. in Atmospheric Physics, 1996

EXPERIENCE

RESEARCH EXPERIENCE

Loyola University Chicago – Associate Professor (Jul 2019–present)
Study the impact of climate change on weather and air quality in the Midwest; enhance STEM education through engaging students in inclusive research on air pollution.

Loyola University Chicago – Assistant Professor (Aug 2013–Jun 2019)
Investigated the impact of climate change on weather conditions; studied ozone trends in the Midwest in response to emission controls and climate change.

NOAA/NESDIS/STAR/SMCD – Supporting Scientist III (contractor) (Jul 2008–Jul 2009)
Supported the calibration plan for the next-generation weather satellite GOES-R; developed a radiometric reference standard to ensure integrity of climate data records from different satellite observations; provided technical support to the National Weather Service.

Georgia Institute of Technology – Postdoctoral Fellow (May 2004–Jun 2006)
Analyzed satellite observations from the Ozone Monitoring Instrument (OMI) and the Microwave Limb Sounder (MLS) on NASA's Aura mission; interpreted the variations in tropospheric ozone using a regional chemistry and transport model over the United States; assessed the modeling results with ozonesonde data from the World Ozone and Ultraviolet Radiation Data Centre.

Georgia Institute of Technology – Graduate Research Assistant (Aug 1999–May 2004)
Investigated ozone exchange between the extra-tropical lower stratosphere and the subtropical upper troposphere using trajectory models; analyzed the association of the cross-tropopause transport with Rossby wave breaking; analyzed meteorological and chemical data from NASA's Transport and Chemical Evolution over the Pacific (TRACE-P) campaign and the Pacific Exploratory Mission-West (PEM-West) A & B.

TEACHING EXPERIENCE

Loyola University Chicago – Faculty (Aug 2009–present)
Prairie State College – Adjunct Faculty (Aug 2006–May 2009)
Aurora University – Adjunct Faculty (Aug 2006–Jun 2008)
Georgia Institute of Technology – Graduate Teaching Assistant (Fall 2002–May 2004)

GRANTS

- **Jing, P.,** NSF ADVANCE INSPIRED micro-grant, 2022–2023, $2,000.
- **Jing, P. (PI),** Schusler, T., Fischer, E., Pollack, I. Collaborative Research: GP-UP: Developing STEM Identity by Engaging URM Undergraduate Students in Research on Air Pollution in Chicago Communities. NSF GEOPAths, 2021–2024, $193,994.
- **Jing, P.** School Indoor Air Quality Assessment and Remediation. The American Lung Association of the Upper Midwest, 2017–2018, $1,500.
- **Jing, P. (PI)** Development of a Rossby wave breaking index as an indicator for the National Climate Assessment. NASA ROSES 2014 A29 Climate Indicators and Data Products for Future National Climate Assessments, 2016–2019, $171,909.

PUBLICATIONS

JOURNAL ARTICLES

- **Jing, P.,** Goldberg, D., 2022. Influence of Conducive Weather on Ozone in the Presence of Reduced NOx Emissions: A Case Study in Chicago during the 2020 Lockdowns. *Atmospheric Pollution Research*, 13, 101313. https://doi.org/10.1016/j.apr.2021.101313
- **Jing, P.,** Banerjee, S., Barrera, M., 2020. Impact of Rossby wave breaking on ozone variation in the upper troposphere and lower stratosphere, 1985–2015. *Atmospheric Environment*, 222, 117112. https://doi.org/10.1016/j.atmosenv.2019.117122
- **Jing, P.,** Banerjee, S., 2018. Rossby wave breaking and isentropic stratosphere-troposphere exchange during 1981–2015 in the Northern Hemisphere. *Journal of Geophysical Research*, 123, 9011–9025. https://doi.org/10.1029/2018JD028997
- **Jing, P.**, Lu, Z., Steiner, A.L., 2017. The ozone climate penalty in the Midwestern U.S. *Atmospheric Environment*, 170, 130–142. https://doi.org/10.1016/j.atmosenv.2017.09.038
- **Jing, P.**, O'Brien, T., Streets, D.G., Patel, M., 2016. Relationship of ground-level ozone with weather patterns in Chicago. *Urban Climate*, 17, 161–175. https://doi.org/10.1016/j.uclim.2016.08.002
- **Jing, P.**, Lu, Z., Xing, J., Streets, D.G., Tan, Q., O'Brien, T., Kamberos, J., 2014. Response of the summertime ground-level ozone trend in the Chicago area to emission controls and temperature changes 2005–2013. *Atmospheric Environment*, 99, 630–640. https://doi.org/10.1016/j.atmosenv.2014.10.035
- **Jing P.**, Cunnold, D., Choi, Y., and Wang, Y., 2006. Summertime tropospheric ozone columns from Aura OMI/MLS measurements versus regional model results over the United States. *Geophysical Research Letters,* 33, L17817. https://doi.org/10.1029/2006GL026473
- **Jing, P.**, Cunnold, D.M., Yang, E.-S., Wang, H.-J., 2005. Influence of isentropic mixing on seasonal ozone variations in the lower stratosphere and upper troposphere. *Journal of Geophysical Research,* 110, D10110. https://doi.org/10.1029/2004JD005416
- **Jing, P.**, Cunnold, D.M., Wang, R., Yang, E., 2004. Isentropic cross-tropopause ozone transport in the Northern Hemisphere. *Journal of the Atmospheric Sciences,* 61, 1068–1078. https://doi.org/10.1175/1520-0469(2004)061<1068:ICOTIT>2.0.CO;2

RECENT CONFERENCE PRESENTATIONS

- **Jing, P.,** Impact of Weather Conditions on Ozone in Chicago in Summer 2020, 24th Conference on Atmospheric Chemistry at the American Meteorological Society 102nd Annual Meeting, Houston, TX and online, 2022.
- **Jing, P.**, The Ozone Climate Penalty in the Midwestern U.S., NASA Health and Air Quality Applied Sciences Team 4th Meeting (HAQAST4), Madison, Wisconsin, 2018.
- **Jing, P.,** Relationship of Ground-level Ozone with Synoptic Weather Conditions in the Midwestern U.S., American Geophysical Union, Fall Meeting, New Orleans, Louisiana, 2017.
- **Jing, P.**, Patel, M., Rossby wave breaking and its relationship with climate and ozone stratosphere-troposphere exchange, American Geophysical Union, Fall Meeting, San Francisco, California, 2016.
- **Jing, P.**, Lu, Z., Xing, J., Streets, D. G., Tan, Q., Response of the Summertime Ground-level Ozone Trend in the Chicago Area to Emission Controls and Temperature Changes, 2005–2013, American Geophysical Union, Fall Meeting, San Francisco, California, 2014.

SERVICES

Loyola University Chicago

Student Advising

- Research mentor for Emma McBride, Carbon Scholar (Spring 2022–present)
- Research advisor for Alyssa Berrios and Matt Lorentz (Spring 2022)
- Research advisor for Uplift Community High School environmental science projects (Fall 2021)
- Research advisor for undergraduate students, Lori Cornelius and Tyler Jensen, to support the First-Year Research Experience (May 2021)
- Research advisor for undergraduate student, Riley Miller (March 2019–March 2020)
- Research advisor for undergraduate students, Alyssa Berrios, Alyssa Mendoza, Calista Navarrete, and Daisy Reyes, to support the First-Year Research Experience (May 2019)

- Research advisor for undergraduate student, Megan Barrera (Summer 2018)
- Faculty mentor of Diana Huang for the First Year and Transfer Undergraduate Women of Color of the Loyola University Chicago Empowering Sisterhood (LUCES) Mentoring Program (LMP) (Fall 2017–Spring 2018)
- Research advisor for undergraduate students, Kanyarak Anuchitlertchon, Megan Barrera, Madison McMahon Ward, and Andrew Landsem (Spring 2018)
- Research advisor for undergraduate student, Paul Campion (Spring 2017–Spring 2018)
- Research advisor and prelim committee member of Ph.D. candidate, Yuxi Suo, Northwestern University (June 2017–December 2018)
- Research advisor for undergraduate student, Megha Patel (Summer 2015–Summer 2016)
- Research advisor for undergraduate students, Kevin Brannon and Joseph Kamberos (Summer 2014)
- Research advisor for McNair Scholar, Jorge L. Meraz (Spring 2013–Fall 2013)
- Faculty mentor for the Achieving College Excellence program (Fall 2011–Spring 2012)

University and Institute Services

- Member of Loyola University Chicago's Research Advisory Council (October 2021–present)
- Graduate Program Director for the Research Track of MS in Environmental Science & Sustainability (November 2019–June 2022)
- Chair of the NTT Promotion Committee of SES (Fall 2020)
- Member of the SES Academic Council: BS degree in Environmental Science (Summer 2013–present)
- Co-organizer of the 2015/16 SES seminar series (Fall 2015–Spring 2016)
- Chair of the Atmospheric Chemistry committee of SES curriculum development (Fall 2016)

Georgia Tech

- Instructor for two online courses *Practical Meteorology* and *Science and Young Children* to middle-grade teachers in support of Georgia Tech–Gwinnett County Schools Math Science Partnership (Fall 2005 – Spring 2006)
- Instructor for Saturday science classes in support of Georgia Tech's K-12 outreach program, KIDS Club (Fall 2005)

PROFESSIONAL SERVICE

- Reviewer of applications to the NASA Postdoctoral Program, 2022.
- Judge for the student presentations at the AMS Meeting, 2022.
- Reviewer for *Environmental Science & Technology*, *Journal of Geophysical Research*, *Atmospheric Environment*, *Environmental Pollution*, and *Atmosphere*
- Judge for the Outstanding Student Paper Awards at the AGU Fall Meeting, New Orleans, 2017

AWARDS

- The Provost's Award for Excellence in Teaching Freshmen, Loyola University Chicago (2013)
- Research Excellence Award from the School of Earth and Atmospheric Sciences, Georgia Institute of Technology (2003)

MEDIA COVERAGE

- Featured in *The air we breathe Researchers at Loyola investigate the stark difference in air quality on Chicago's South and North Sides* at https://stories.luc.edu/airquality.
- Featured in *What must be done? Climate change is a universal problem that demands universal solutions* at https://stories.luc.edu/climatechangesolutions.
- Interviewed by Loyola Phoenix in August 2021 on the IPCC Report and Climate Change, text online at http://loyolaphoenix.com/2021/09/phoenix-101-the-ipcc-report-and-climate-change/
- Interviewed by the Yale Center for Environmental Communication on ozone and climate change in March 2015, audio online at http://directory.libsyn.com/episode/index/id/3673883

PROFESSIONAL AFFILIATIONS

- Member, American Geophysical Union (1999–present)
- Member, American Meteorological Society (2016–present)
- Member, National Center for Faculty Development and Diversity (2020–present)