Chunsong Lu

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● Research Interests

Cloud/fog physics; entrainment-mixing processes in clouds; interactions between microphysics, dynamics and thermodynamics in clouds; aerosol-cloud-climate interactions.

● Academic Appointments

2016.1-Present Full Prof., Nanjing University of Information Science and Technology, China
2014.7-2015.12 Assoc. Prof., Nanjing University of Information Science and Technology, China
2012.9-2014.6 Assist. Prof., Nanjing University of Information Science and Technology, China
2013.8-2013.10 Visiting Scholar, International Center for Theoretical Physics, Italy
2009.9-2012.8 Research Scholar, Brookhaven National Laboratory, US

● Education

2008.9-2012.6 Nanjing University of Information Science and Technology, China
Ph. D., Atmospheric Physics and Atmospheric Environment
2005.9-2008.6 Nanjing University of Information Science and Technology, China
M. S., Atmospheric Physics and Atmospheric Environment
2001.9-2005.6 Nanjing Institute of Meteorology, China
B. S., Physics

● Awards and Honors (Selected)

2015.6 **Holton Junior Scientist Award,** American Geophysical Union, US
2016.7 **Yuxiang Young Scholar Award,** Chinese American Oceanic and Atmospheric Association, US.
2012.4 **Exceptional Service Award,** Brookhaven National Laboratory, US.
2012.6 **Outstanding Student Paper Award.** American Geophysical Union, US.
2011.3 **Student Poster Award,** Office of Science, Department of Energy, US.
2012.6 **Top-Cited Author of Atmospheric Research (2010).** Editorial office of Atmospheric Research, Netherlands.
2015.10 **TU Changwang Youth Meteorological Science and Technology Award,** Chinese Meteorological Society, China.
2013.12 **XIE Yibing Youth Meteorological Science and Technology Award,** Peking University, China.
2015.10 **High-Level Talent of the "Six Talent Peak" Project.** Department of Human Resources and Social Security of Jiangsu Province, China.
2013.6 **Excellent Doctoral Dissertation Award,** Education Department of Jiangsu, China.
2014.3 **Excellent Young Teacher Award,** Education Department of Jiangsu, China.

● Professional Activities and Memberships

Editor of *Atmos. Oceanic Sci. Lett.*
Editor of *Tran. Atmos. Sci*.
Member of Atmospheric Physics Committee in Chinese Meteorological Society.
Member of American Geophysical Union.
Member of Chinese Meteorological Society.
Member of Jiangsu Society of Particuology.
Reviewer for *Geophys. Res. Lett., J. Geophys. Res., J. Atmos. Sci., J. Atmos. Ocean Tech., Atmos. Environ., Adv. Atmos. Sci., Atmos. Sci. Lett.*, etc.

● Research Grants (Selected)

2016.7-2019.6 **Interaction between entrainment-mixing mechanisms and aerosol in stratocumulus clouds.** National Science Foundation of Jiangsu Province for Distinguished Young Scholars (Principal Investigator).

2016.1-2018.12 **Improvement of cloud microphysics scheme in general circulation model (F/SAMIL) and its application in Tibetan Plateau research.** National Natural Science Foundation of China (Principal Investigator).

2014.1-2016.12 **Studies on entrainment mixing processes in cumulus clouds based on observational data and numerical simulations.** National Natural Science Foundation of China (Principal Investigator).

2013.7-2016.6 **Large eddy simulations of entrainment mixing processes in cumuli in Nanjing area, China.** National Natural Science Foundation of Jiangsu Province, China (Principal Investigator).

2014.1-2016.12 **Entrainment-mixing processes in stratocumulus clouds and the effects on cloud microphysics and optical properties.** The Specialized Research Fund for the Doctoral Program of Higher Education, China (Principal Investigator).

2013.8-2013.10 **Academic exchange project between National Natural Science Foundation of China and International Center for Theoretical Physics in Italy.** National Natural Science Foundation of China (Principal Investigator).

2013.8-2015.12 **The effects of entrainment mixing processes on precipitation initiation in cumuli in Nanjing area, China.** Natural Science Foundation of the Higher Education Institutions of Jiangsu Province, China (Principal Investigator).

● Peer-Reviewed Publications (Selected)

Lu C., Liu Y., Zhang G., Wu X., Endo S., Cao L., Li Y., Guo X., Improving parameterization of entrainment rate for shallow convection with aircraft measurements and large eddy simulation, ***J. Atmos. Sci.***, 2016, 73, 761-773.

Lu C., Liu Y., Niu S., Endo S., Scale dependence of entrainment-mixing mechanisms in cumulus clouds, ***J. Geophys. Res.***, 2014, 119, 13877-13890.

Lu C., Niu S., Liu Y., Vogelmann A., 2013, Empirical relationship between entrainment rate and microphysics in cumulus clouds, ***Geophys. Res. Lett.***, 40, 2333-2338.

Lu C., Liu Y., Niu S., Krueger S., Wagner T., 2013, Exploring parameterization for turbulent entrainment-mixing processes in clouds, ***J. Geophys. Res.***, 118, 185-194.

Lu C., Liu Y., Yum S., Niu S., Endo S., 2012, A new approach for estimating entrainment rate in cumulus clouds, ***Geophys. Res. Lett.***, 39, L04802.

Lu C., Liu Y., Niu S., Vogelmann A., 2012, Lateral entrainment rate in shallow cumuli: Dependence on dry air sources and probability density functions, ***Geophys. Res. Lett.***, 39, L20812.

Lu C., Liu Y., Niu S., Vogelmann A., 2012, Observed impacts of vertical velocity on cloud microphysics and implications for aerosol indirect effects, ***Geophys. Res. Lett.***, 39, L21808.

Lu C., Liu Y., Niu S., 2011, Examination of turbulent entrainment-mixing mechanisms using a combined approach, ***J. Geophys. Res.***, 116, D20207.

Lu C., Niu S., Tang L., L ü J., Zhao L., Zhu B., 2010, Chemical composition of fog water in Nanjing area of China and its related fog microphysics, ***Atmos. Res.***, 97(1-2), 47-69.

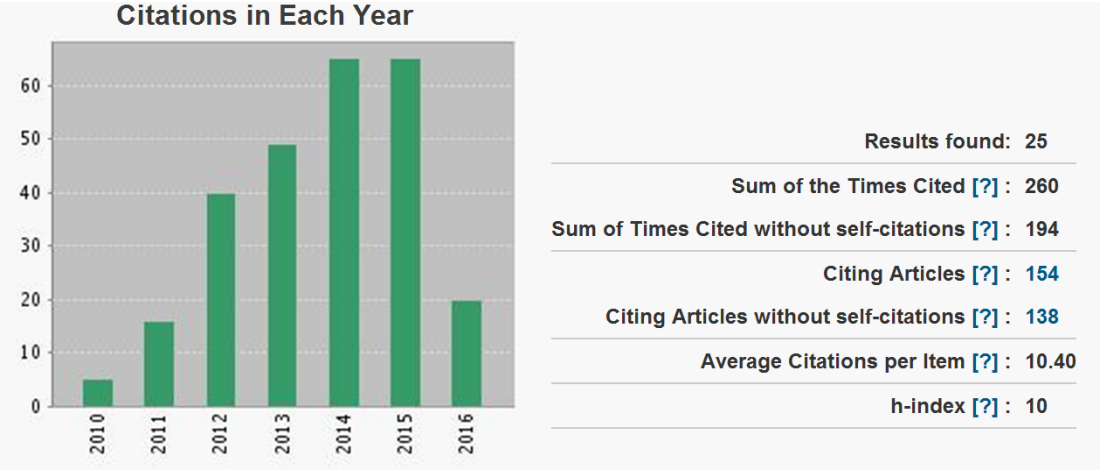
Lu C., Liu Y., Niu S., 2014, Entrainment mixing parameterization in shallow cumuli and effects of secondary mixing events, ***Chin. Sci. Bull.***, 59(9), 896-903.

Lu C., Liu Y., Niu S., 2013, A method for distinguishing and linking turbulent entrainment mixing and collision-coalescence in stratocumulus clouds, ***Chin. Sci. Bull.***, 58, 545-551.

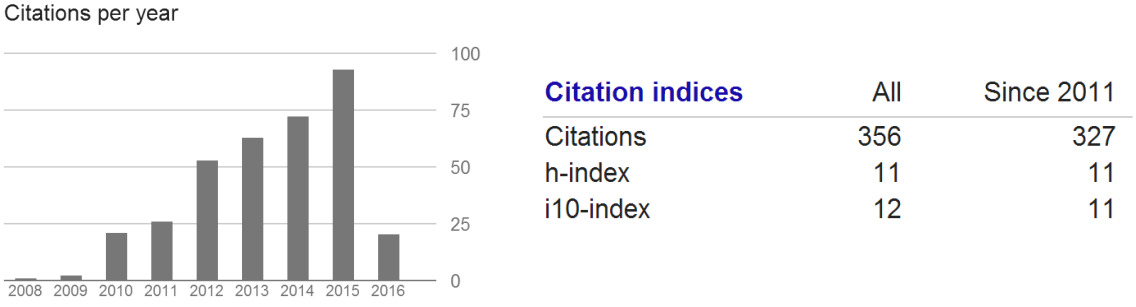
Lu C., Liu Y., Niu S., Zhao L., Yu H., Cheng M., 2013, Examination of microphysical relationships and corresponding microphysical processes in warm fogs, ***Acta Meteor. Sinica***, 27(6), 832-848.

● Citations

(1) From Web of Science



(2) From Google Scholar



● Invited/Oral Presentations (Selected)

[1] Lu C., Liu Y., Zhang G., Wu X., Endo S., Cao L., Li Y., Guo X., Relationships of entrainment rate with dynamical and thermodynamic properties in shallow convection, American Geophysical Union (AGU) 2015 Fall Meeting, San Francisco, California, US, December 14-18, 2015.

[2] Lu C., Niu S., Liu Y., Yum S., Endo S., Vogelmann A., Krueger S., Wagner T., Aircraft observations and parameterizations of turbulent entrainment-mixing processes in clouds, Yonsei University, Seoul, Korea, November 3, 2015.

[3] Lu C., Niu S., Liu Y., Endo S., Scale dependence of entrainment-mixing mechanisms in shallow cumuli, Annual Meeting of Key Laboratory of Meteorological Disaster of Ministry of Education, Nanjing, Jiangsu, China, December 8, 2014.

[4] Lu C., Liu Y., Niu S., Seeking a unified understanding of fogs and low-level clouds, The 6th International Conference on Fog, Fog Collection and Dew, Yokohama, Japan, May 19-24, 2013.

[5] Lu C., Liu Y., Niu S., Krueger S., Wagner T., Exploring parameterization for entrainment-mixing processes in clouds for large scale models, The Second China-US Symposium on Meteorology: Severe Weather and Regional Climate Variability and Predictability, Qingdao, Shandong, China, June 25-27, 2013.

[6] Lu C., Liu Y., Niu S., Krueger S., Yum S., Endo S., Wagner T., Observational and numerical studies on turbulent entrainment-mixing processes, Multiphase Turbulent Flows in the Atmosphere and Ocean Workshop, Boulder, Colorado, US, October 13-17, 2012.

[7] Lu C., Liu Y., Niu S., Krueger S., Wagner T., Investigation of the relationship between homogeneous mixing fraction and transition scale number with the Explicit Mixing Parcel Model, The third Science Team Meeting of the Atmospheric System Research (ASR) program, Arlington, Virginia, US, March 12-16, 2012.

[8] Lu C., Liu Y., Niu S., Examination of entrainment-mixing mechanisms using a combined approach, The second Science Team Meeting of the Atmospheric System Research (ASR) program, San Antonio, Texas, US, March 28-April 1, 2011.

[9] Lu C., Liu Y., Niu S., Comparison of different entrainment-mixing mechanisms in drizzling and non-drizzling clouds, Science Team Meeting of FAst-physics System TEstbed and Research (FASTER), New York City, New York, US, November 10, 2010.

[10] Lu C., Liu Y., Niu S., Some results from aircraft microphysical measurements during the March 2000 cloud IOP, The first Science Team Meeting of the Atmospheric System Research (ASR) program, Bethesda, Maryland, March 15-19, 2010.