



请输入关键字

[首页](#) [学院概况](#) [师资队伍](#) [科学研究](#) [人才培养](#) [发展与校友](#) [支撑平台](#)



汪名怀，安徽省安庆桐城人，南京大学大气科学学院教授，大气物理系系主任，博士生导师，入选第五批江苏省特聘教授，中组部第十一批青年人才项目。主要研究方向是气溶胶，云和气候相互作用，气候模式中气溶胶和云的模拟。在南京大学大气科学系和北京大学大气科学系分别获得学士及硕士学位，后赴美国密西根大学大气海洋空间系攻读博士学位。2009年博士毕业后到美国能源部下的太平洋西北国家实验室接受博士后训练，负责多尺度气溶胶气候模式的研发及应用，后被聘为太平洋西北国家实验室的二级科学家（2011年5月）及三级科学家（2013年1月）。2014年底全职回到南京大学，现任职于南京大学大气科学学院/全球变化研究院。已在国际主流SCI期刊上发表文章50多篇，这些论文在ISI Web of Science上被引用1400多次，H指数22。目前担任美国地球物理协会杂志Journal of Geophysical Research - Atmosphere副主编。

教育经历

- 2009.08 美国密西根大学大气海洋空间系 博士
- 2002.07 北京大学大气科学系 硕士
- 1999.07 南京大学大气科学系 学士

工作及兼职经历

- 2016.01-现在 Journal of Geophysical Research - Atmosphere副主编
- 2015.12-现在 南京大学大气科学学院大气物理系 系主任
- 2014-现在 南京大学大气科学学院 教授
- 2013-2014 美国太平洋西北国家实验室 三级科学家
- 2011-2013 美国太平洋西北国家实验室 二级科学家

2009-2011 美国太平洋西北国家实验室 博士后

在研项目

2016.01-2019.12 国家重点研发计划 “我国东部沿海大气复合污染天空地一体化监测技术” , 参与

2016.01-2018.12 中组部项目 (第六批), 主持

2016.01-2019.12 国家自然科学基金面上项目 “基于观测约束的气溶胶间接气候效应研究” , 主持

2015.01-2017.12 江苏省特聘教授经费, 主持

2015.01-2017.12 南京大学引进人才自主启动课题项目, 主持

Minghuai Wang

School of Atmospheric Sciences, Nanjing University

163 Xianlin Road, Nanjing, Jiangsu, China, 210023

Email: Minghuai.Wang@nju.edu.cn; Tel: 01186-25-89681165

Researcher ID: <http://www.researcherid.com/rid/E-5390-2011>

Google Scholar: <http://scholar.google.com/citations?user=dqLVuOEAAA&hl=en>

-

EDUCATION

University of Michigan, Ann Arbor Ph.D. 2009

Peking University M.S. 2002

Nanjing University B.S. 1999

-

APPOINTMENTS

2016.01-present **Associate Editor**, Journal of Geophysical Research-Atmospheres

2015.12-present **Head**, Department of Atmospheric Physics, Nanjing University, Nanjing, China
2014-present **Professor**, School of Atmospheric Sciences, Nanjing University, Nanjing, China
2011-2014 **Scientist**, Pacific Northwest National Laboratory, Richland, U.S.
2009-2011 **Post-doctoral Associate**, Pacific Northwest National Laboratory, Richland, U.S.

JOURNAL PUBLICATIONS (* indicates as a corresponding author; ISI Web of Science citations > 1400 times with h-index 22)

50. E. Elliott, S. Yu, G. Kooperman, H. Morrison, **M. Wang**, and M. Pritchard, Sensitivity of summer ensembles of super-parameterized US mesoscale convective systems to cloud resolving model microphysics and resolution, *Journal of Advances in Modeling Earth Systems*, doi:[10.1002/2015MS000567](https://doi.org/10.1002/2015MS000567), 2016
49. C. Zhou, J. E. Penner, G. Lin, X. Liu, and **M. Wang**, What controls the low ice number concentration in the upper troposphere? *Atmos. Chem. Phys.*, 16, 12411-12424, doi:10.5194/acp-16-12411-2016, 2016.
48. X. Huang, A. Ding, L. Liu, Q. Liu, K. Ding, X. Niu, W. Nie, Z. Xu, X. Chi, M. Wang, J. Sun, W. Guo, and C. Fu: Effects of aerosol-radiation interactions on precipitation during biomass-burning season in East China, *Atmos. Chem. Phys.*, 16, 10063-10082, 10.5194/acp-16-10063-2016, 2016.
47. Huang, X., Zhou, L., Ding, A., Qi, X., Nie, W., **Wang, M.**, Chi, X., Petäjä, T., Kerminen, V.-M., Roldin, P., Rusanen, A., Kulmala, M., and Boy, M.: Comprehensive modelling study on observed new particle formation at the SORPES station in Nanjing, China, *Atmos. Chem. Phys.*, 16, 2477-2492, doi:10.5194/acp-16-2477-2016, 2016
46. Ding, A. J., X. Huang, W. Nie, J. N. Sun, V.-M. Kerminen, T. Petäjä, H. Su, Y. F. Cheng, X.-Q. Yang, **M. H. Wang**, et al., Enhanced haze pollution by black carbon in megacities in China, *Geophys. Res. Lett.*, 43, 2873–2879, doi:[10.1002/2016GL067745](https://doi.org/10.1002/2016GL067745), 2016.
45. S. Ghan, **M. Wang**, S. Zhang, et al., Constraining Anthropogenic Aerosol Effects on Cloud Radiative Forcing Using Present-day Spatiotemporal Variability, *Proceedings of the National Academy of Sciences*, doi: 10.1073/pnas.1514036113, 2016.
44. Zhang S., **Wang, M. (*)**, Ghan, S. J., Ding, A., Wang, H., Zhang, K., Neubauer, D., Lohmann, U., Ferrachat, S., Takeamura, T., Gettelman, A., Morrison, H., Lee, Y., Shindell, D. T., Partridge, D. G., Stier, P., Kipling, Z., and Fu, C.: On the characteristics of aerosol indirect effect based on dynamic regimes in global climate models, *Atmos. Chem. Phys.*, 16, 2765-2783, doi:10.5194/acp-16-2765-2016, 2016.
43. Thayer-Calder, K., Gettelman, A., Craig, C., Goldhaber, S., Bogenschutz, P. A., Chen, C.-C., Morrison, H., Hoffmann, J., Raut, E., Griffin, B. M., Weber, J. K., Larson, V. E.,

Wyant, M. C., **Wang, M.**, Guo, Z., and Ghan, S. J.: A unified parameterization of clouds and turbulence using CLUBB and subcolumns in the Community Atmosphere Model, *Geosci. Model Dev.*, 8, 3801-3821, doi:10.5194/gmd-8-3801-2015, 2015.

42. H. Yan, Y. Qian, C. Zhao, H. Wang, **M. Wang**, B. Yang, X. Liu, and Q. Fu, A new approach to modeling aerosol effects on East Asian climate: parametric uncertainties associated with emissions, cloud microphysics and their interactions, *Journal of Geophysical Research*, in press, 2015.
41. Suzuki, K., A. Bodas-Salcedo, **M. Wang**, J. Golaz, T. Yokohata, and G. Stephens: Evaluation of the warm rain microphysical processes in global models using the CloudSat/A-Train multi-sensor satellite observations, *Journal of Atmospheric Science*, doi:10.1175/JAS-D-14-0265.1, 2015.
40. Ma, P., P. Rasch, **M. Wang**, H. Wang, S. Ghan, R. Easter, W. Gustafson, X. Liu, Y. Zhang, H. Ma: How Does Increasing Horizontal Resolution in a Global Climate Model Improve the Simulation of Aerosol-Cloud Interactions?, *Geophysical Research Letters*, doi:10.1002/2015GL064183, 2015
39. Guo, Z., **M. Wang***, Y. Qian, V. Larson, S. Ghan, P. Bogenschutz, A. Gettelman: Parametric behaviors of CLUBB in simulation of low clouds in the Community Atmosphere Model CAM5, *Journal of Advances in Modeling Earth Systems*, 7, doi:[10.1002/2014MS000405](https://doi.org/10.1002/2014MS000405) , 2015.
38. Wong, M., M. Ovchinnikov, **M. Wang**, Evaluation of subgrid-scale hydrometeor transport schemes using a high-resolution cloud-resolving model, *Journal of Atmospheric Sciences*, doi: <http://dx.doi.org/10.1175/JAS-D-15-0060.1>, 2015.
37. Guo, Z., T. Zhou, **M. Wang**, Y. Qian: Impact of Cloud Radiative Heating on East Asian Summer Monsoon Circulation, *Environmental Research Letters*, accepted, 2015.
36. Qian Y., H. Yan, C. Zhao, Z. Hou, H. Wang, **M. Wang**, and P. Rasch: Parametric sensitivity analysis of precipitation at global and local scales in the Community Atmosphere Model Cam5, *Journal of Advances in Modeling Earth Systems*, 7, doi:[10.1002/2014MS000354](https://doi.org/10.1002/2014MS000354) , 2015.
35. **Wang, M.**, V. Larson, S. Ghan, M. Ovchinnikov, D. Schanen, H. Xiao, X. Liu, Z. Guo, and P. Rasch: A multiscale modeling framework model (superparameterized CAM5) with a higher-order turbulence closure: Model description and low-cloud simulations, *Journal of Advances in Modeling Earth Systems*, 7, doi:[10.1002/2014MS000375](https://doi.org/10.1002/2014MS000375) , 2015.
34. Storer, R., B. M. Griffin, J. Hoft, E. Raut, V. E. Larson, **M. Wang**, and P. J. Rasch: Parameterizing deep convection using the assumed probability density function method, *Geosci. Model Dev.* , 8, 1-19, doi:10.5194/gmd-8-1-2015, 2015.
33. Zhang, C., **M. Wang**, H. Morrison, R. Somerville, K. Zhang, X. Liu, and J. Li: Investigating Ice Nucleation in cirrus clouds with an aerosol-enabled multi-scale modeling framework, *Journal of Advances in Modeling Earth Systems*, 6, doi: 10.1002/2014MS000343,2014.

32. **Wang, M.**, X.Liu, K. Zhang, and J. Comstock: Aerosol indirect effects on cirrus through ice nucleation in CAM5 with a statistical cirrus cloud scheme, in press, *Journal of Advances in Modeling Earth Systems*, 6, doi:10.1002/2014MS000339, 2014.
31. Guo, Z, **M. Wang***, Y. Qian, V. Larson, P. Bogenschutz, G. Lin, S. Ghan, M. Ovchinnikov, C. Zhao, and T. Zhou: A sensitivity analysis of cloud properties to CLUBB parameters in the Single Column Community Atmosphere Model (SCAM5), *Journal of Advances in Modeling Earth Systems*, 6, doi:10.1002/2014MS000315, 2014.
30. Wang Y., **M. Wang**, R. Zhang, S. Ghan, Y. Lin, J. Hu, B. Pan, M. Levy, J. Jiang, and M. Molina: Assessing the effects of anthropogenic aerosols on Pacific storm track using a multi-scale global climate model, *Proceedings of the National Academy of Sciences*, 111, doi: 10.1073/pnas.1403364111, 2014.
29. Randall D., M. Branson, **M. Wang**, SJ Ghan, C Craig, A Gettelman, and J Edwards: A Community Atmosphere Model with superparameterized clouds, *Eos*, 94(25), 221-228, 2013.
28. Wang H, RC Easter, Jr, PJ Rasch, **M. Wang**, X Liu, SJ Ghan, Y Qian, JH Yoon, PL Ma, and V Vinoj: Sensitivity of remote aerosol distributions to representation of cloud-aerosol interactions in a global climate model, *Geoscientific Model Development*, 6(3), 765-782, doi:10.5194/gmd-6-765-2013, 2013.
27. Zhang, K., X. Liu, **M. Wang**, J. M. Comstock, D. L. Mitchell, S. Mishra, and G. G. Mace, Evaluating and constraining ice cloud parameterizations in CAM5 using aircraft measurements from the SPARTICUS campaign, *Atmospheric Chemistry and Physics*, 13(9), 4963-4982, 2013.
26. Ghan, S. J., S. J. Smith, **M. Wang**, K. Zhang, K. Pringle, K. Carslaw, J. Pierce, S. Bauer, and P. Adams: A simple model of global aerosol indirect effects, *Journal of Geophysical Research-Atmospheres*, 118(12), 6688-6707, 2013.
25. Jiang, Y., X. Liu, X. Yang, and **M. Wang**: Effects of anthropogenic aerosols on East Asian summer monsoon with Community Atmospheric Model Version 5, *Atmospheric Environment*, 70, 51-63, 2013.
24. Yang B., Y Qian, G. Lin, R. Leung, P. Rasch, G. Zhang, S. McFarlane, C. Zhao, Y. Zhang, H. Wang, **M. Wang**, and X. Liu: Uncertainty quantification and parameter tuning in CAM5 Zhang-McFarlane convective scheme and physical impact of improved convection on the global circulation and climate, *J. Geophys. Res.*, 118(2), 395-415, 2013.
23. Shi, X., B. Wang, X. Liu, and **M. Wang**: Two-moment bulk stratiform cloud microphysics in the Grid-point Atmospheric Model of IAP LASG (GAMIL), *Advances in Atmospheric Sciences*, 30(3), 868-883, 2013.
22. Kooperman G., M. Pritchard, S. Ghan, **M. Wang**, R. Somerville, and L. Russell: Constraining the influence of natural variability to improve estimates of global aerosol indirect effects in a nudged version of the Community Atmosphere Model 5, *J. Geophys. Res.*, 117, D23204, doi:10.1029/2012JD018588, 2012.
21. Yang, Q., Gustafson Jr., W. I., Fast, J. D., Wang, H., Easter, R. C., **Wang, M.**, Ghan, S. J., Berg, L. K., Leung, L. R., and Morrison, H.: Impact of natural and anthropogenic

aerosols on stratocumulus and precipitation in the Southeast Pacific: a regional modelling study using WRF-Chem, *Atmos. Chem. Phys.*, 12, 8777-8796, 2012.

20. Chand D., R. Wood, S. Ghan, **M. Wang**, M. Ovchinnikov, P. Rasch, S. Miller, B. Schichtel, T. Moore: Aerosol optical depth enhancement in partly cloudy conditions, *J. Geophys. Res.*, 117, D17207, doi:10.1029/2012JD017894, 2012.
19. **Wang, M.**, S. Ghan, X. Liu, T. L'Ecuyer, K. Zhang, H. Morrison, M. Ovchinnikov, R. Easter, R. Marchand, D. Chand, Y. Qian and J. Penner, 2012, Constraining cloud lifetime effects of aerosols using A-Train Satellite observations, *Geophys. Res. Lett.*, 39, L15709, doi:10.1029/2012GL052204, 2012. (**Highlighted in *Science***, 337, 1150, 2012)
18. Larson V., D. P. Schanen, **M. Wang**, M. Ovchinnikov, and S. Ghan: PDF parameterization of boundary layer clouds in models with horizontal grids from 2 to 16 km, *Mon. Wea. Rev.*, 140, 285-306, 2012
17. Penner, J. E., C. Zhou, L. Xu, and **M. Wang**, Reply to Quaas et al.: Can satellites be used to estimate indirect climate forcing by aerosols? *Proceedings of the National Academy of Sciences*, 108, E1100-E1101, doi: 10.1073/pnas.1116135108, 2011
16. Penner, J. E., L. Xu, and **M. Wang**, Satellite methods underestimate indirect climate forcing by aerosols, *Proceedings of the National Academy of Sciences*, 108, 13404-13408, doi: 10.1073/pnas.1018526108, 2011
15. **Wang, M.**, Ghan, S., Ovchinnikov, M., Liu, X., Easter, R., Kassianov, E., Qian, Y., and Morrison, H.: Aerosol indirect effects in a multi-scale aerosol-climate model PNNL-MMF, *Atmos. Chem. Phys.*, 11, 5431-5455, doi:10.5194/acp-11-5431-2011, 2011
14. **Wang, M.**, S. Ghan, R. Easter, M. Ovtchinnikov, X. Liu, E. Kassianov, Y. Qian, W. Gustafson, V. Larson, D. Schanen, M. Khairoutdinov, and H. Morrison: The multi-scale aerosol-climate model PNNL-MMF: model description and evaluation, *Geosci. Model Dev.*, 4, 137-168, doi:10.5194/gmd-4-137-2011, 2011. (This article is featured in a **"Nowcast" article in *Bulletin of the American Meteorological Society***, 92, 963, 2011)
13. Shi, X., B. Wang, X. Liu, **M. Wang**, L. Li and L. Dong: Aerosol indirect effects on warm clouds in the Grid-Point Atmospheric Model of IAP LASG (GAMIL), *Atmospheric and Oceanic Science Letters*, 3(4), 237-241, 2010
12. **Wang, M.** and J. E. Penner, Cirrus clouds in a global climate model with a statistical cirrus cloud scheme, *Atmos. Chem. Phys.*, 10, 5449-5474, doi:10.5194/acp-10-5449-2010, 2010
11. Quaas, J., Ming, Y., Menon, S., Takemura, T., **Wang, M.**, Penner, et al., Aerosol indirect effects – general circulation model intercomparison and evaluation with satellite data, *Atmos. Chem. Phys.*, 9, 8697-8717, 2009
10. Graversen, R. G. and **M. Wang**, Polar amplification in a coupled climate model with locked albedo, *Climate Dynamics*, 33, 629-643, doi: 10.1007/s00382-009-0535-6, 2009. (Featured in ***New Scientist***, February 18, 2009)
9. **Wang, M.**, J. E. Penner, and X. Liu, The coupled IMPACT aerosol and NCAR CAM3 model: evaluation of predicted aerosol number and size distribution, *J. Geophys. Res.*, 114, doi: d063020.1029/2008jd010459, 2009

8. Penner, J. E., Y. Chen, **M. Wang**, and X. Liu, Possible influence of anthropogenic aerosols on cirrus clouds and anthropogenic forcing, *Atmos. Chem. Phys.*, 9, 879-896, 2009
7. Liu, X., J. E. Penner and **M. Wang**, Influence of anthropogenic sulfate and black carbon on upper tropospheric clouds in the NCAR CAM3 model coupled to the IMPACT global aerosol model, *J. Geophys. Res.*, 114, doi: d0320410.1029/2008jd010492, 2009
6. **Wang, M.**, and J. E. Penner, Aerosol indirect forcing in a global model with particle nucleation, *Atmos. Chem. Phys.*, 9, 239-260, 2009
5. Lee, S. S., J. E. Penner, and **M. Wang**, Comparison of a global-climate model simulation to a cloud-system resolving model simulation for long-term thin stratocumulus clouds, *Atmos. Chem. Phys.*, 9, 6497-6520, 2009
4. Liu, X., J.E. Penner, S. Ghan, and **M. Wang**, Inclusion of ice microphysics in the NCAR community atmospheric model 3 (CAM3), *Journal of Climate*, 20, 4526-4547, 2007
3. Rotstayn, Leon D., W. Cai, D. R. Martin, F. D. Graham, Y. Feng, G. Paul, M. Herzog; A. Ito, J. E. Penner, R. L. Michael, and **M. Wang**, Have Australian rainfall and cloudiness increased due to the remote effects of Asian anthropogenic aerosols?, *J. Geophys. Res.*, 112, doi: d0920210.1029/2006JD007712, 2007. (Featured in a **“News Focus” article in Science**, 315, 1217, 2007)
2. Liu, X., J. E. Penner, B. Das, D. Bergman, J. M. Rodriguez, S. Strathan, **M. Wang**, and Y. Feng, Uncertainties in global aerosol simulations: Assessment using three meteorological data sets, *J. Geophys. Res.*, 112, doi: d1121210.1029/2006JD008216, 2007.
1. **Wang, M.**, and B. Tan: Characteristics of baroclinic wave packets in GCM data, *Acta Scientiarum Naturalium Universitatis Pekinensis*, 39, 1, 2003 (in Chinese).

[南京大学 南大OA](#) [中尺度实验室](#) [气候变化协同创新中心](#) [大气与地球系统科学实验室](#)
[气候预测研究实验室](#) [雷达实验室](#) [大气环境研究中心](#) [中尺度动力与台风团队](#)

- 南京大学仙林校区大气科学楼
江苏省南京市栖霞区仙林大道163号
210023