



# Hao Fu

Institute of Atmospheric Physics (IAP),  
Chinese Academy of Sciences (CAS)

Beijing, China

Tel: 86-15101097927

E-mail: [fuhao@lasg.iap.ac.cn](mailto:fuhao@lasg.iap.ac.cn)

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## EDUCATION

2015-present **University of Chinese Academy of Sciences,**  
Geophysical Fluid Dynamics, Master Degree Candidate, China.

2011-2015 **Nanjing University,**  
Atmospheric Sciences B.S., China

## RESEARCH INTERESTS

Moist convection; Atmospheric dynamics; Computational fluid dynamics;  
Fluid experiment technique

## CONFERENCE PRESENTATIONS

- H. Fu and Y. Lin. (2016) A Parallel Boussinesq Solver in Vorticity-Velocity Formulation, LASG State Key Laboratory Annual Meeting, Beijing, China, 22-24 Dec.
- H. Fu and S. Sun. (2016) Studying Vortex Dynamics of Rotating Convection with High-resolution PIV Measurement, 69th APS Meeting on Fluid Dynamics, Portland, USA, 21-23 Nov.
- H. Fu and S. Sun. (2015) A Laboratory Study of Vortical Structures of Rotating Convection Plumes, American Physical Society, 68th APS Meeting on Fluid Dynamics, Boston, USA, 22-24 Nov.

## RESEARCH EXPERIENCE

**Graduate researcher** (2015–present)

Advisor: Dr. Yihua Lin

Institute of Atmospheric Physics, Chinese Academy of Sciences

- Independently developing a parallelized Boussinesq DNS code in vorticity-velocity formulation (20K lines+) for simulating moist Rayleigh-Bénard Convection.
- Deriving a precipitation scheme for Moist Rayleigh-Bénard Convection and illustrating its physics with an idealized analytical model.
- Independently developing a parallelized shallow water equation code with spectral method, for learning GFD only.

**Undergraduate researcher (2013-2015)**

Advisor: Dr. Yuan Wang, Dr. Bowen Zhou

School of Atmospheric Sciences, Nanjing University

- Leading a student team to build a rotating tank apparatus for studying the structure of rotating Rayleigh-Bénard convection, and developed a prototype CFD code.
- Leader and co-founder of Student Geophysical Fluid Dynamics Lab in Nanjing University. website: [www.njugfd.org](http://www.njugfd.org)

**IMPORTANT COURSES TAKEN**

- Theoretical mechanics, statistical physics, electrodynamics, method of mathematical physics, modern applied mathematics
- Fluid mechanics, computational fluid dynamics, geophysical fluid dynamics

**SELECTED AWARDS**

- Excellent Thesis Team of Jiangsu Province (with Shiwei Sun), “Combining laboratory and numerical simulation to study the structure of rotating Rayleigh-Bénard convection” (2015)
- College Physics Competition of Jiangsu Province, First Prize Team (2013)