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EDUCATION

Ph.D., Geophysics, University of Science and Technology of China, China (2012)

Visiting Scholar, College of Marine Science, University of South Florida, (2010-2012)

B. S., Atmospheric Sciences, Sun Yat-Sen University, China (2007)

RESEARCH INTERESTS

Regional system modeling and data assimilation (clouds, aerosols and greenhouse gases)

Urban greenhouse gas transports

Upper tropospheric and lower stratospheric and cross-tropopause processes and their roles in climate change

RESEARCH EXPERIENCE

Postdoctoral Scholar: Joint Institute for Regional Earth System Science and Engineering, University of California, Los Angeles & NASA Jet Propulsion Laboratory, 2010.6 – present

- Greenhouse gas modeling (WRF-GHG, WRF-VPRM)
- Regional modeling and data assimilation (WRF)
- Aerosol modeling and data assimilation (WRF-CHEM)

Visiting Scholar: Data Assimilation Group, College of Marine Science, University of South Florida, 2010.10 – 2012.5

- Verification for Antarctica severe weather simulation
- Regional system modeling and data assimilation
- Overshooting convections

Research Assistant: School of Earth and Space Sciences, University of Science and Technology of China, 2007.9 – 2010.9

- Tropopause and its role in climate change

- Overshooting convections
- Precipitation and clouds under subtropical high conditions

PROJECTS

Megacities Carbon Project, 2014.9 – present

Faster-physics System Testbed and Research (FASTER) Project, 2012.6 – 2014.9

Upper Tropospheric and Lower Stratospheric and Cross-Tropopause Processes, China, 2009.9 – 2012.5

Clouds and Precipitation in the Subtropical Highs, China, 2007.9 – 2009.8

AWARDS and HONORS

Chu Yuet Wah Award for Outstanding Ph.D. Student, Chinese Academy of Sciences, 2012

Outstanding Graduate, Anhui Province, China, 2012

Joint Ph.D. scholarship, China Scholarship Council, 2010–2012

Scholarship Award for Excellent Doctoral Student, Ministry of Education of the People's Republic of China, 2011

Qiu Shi Graduate Student Scholarship, Qiu Shi Science & Technologies Foundation, Hong Kong, 2011

Dankong Graduate Student Scholarship, Dankong Industry and Trade Group Co., Ltd, China, 2009

TEACHING EXPERIENCE

Teaching Assistant: Equation of mathematical physics (A) for sophomore, University of Science and Technology of China, 2008–2009

EDITOR ROLES

Review Editorial Board of Air Pollution

PUBLICATIONS

Feng S., Z. Li, Y. Liu, W. Lin, M. Zhang, A. M. Vogelmann, T. Toto, and S. Endo, 2015: Fine-Resolution Analyses and Expanded Properties of Large-Scale Forcing. Part II:

Scale-Awareness and Application to Single-Column Model Experiments. ***J. Geophys. Res.,*** 10.1002/2014JD022245

Li, Z., **S. Feng**, Y. Liu, W. Lin, M. Zhang, A. M. Vogelmann, T. Toto, and S. Endo, 2015: Fine-Resolution Analyses and Expanded Properties of Large-Scale Forcing. Part I: Methodology and Evaluations. ***J. Geophys. Res.,*** doi: 10.1002/2014JD022245

Lin, W., Y. Liu, A. M. Vogelmann, A. Fridlind, S. Endo, H. Song, **S. Feng**, T. Toto, Z. Li, and M. Zhang, 2015: RACORO Continental Boundary Layer Cloud Investigations. Part III: Separation of Parameterization Biases in Single-Column Model CAM5 Simulations of Shallow Cumulus. ***J. Geophys. Res.,*** doi: 10.1002/2014JD022524

Vogelmann A. M., A. Fridlind, T. Toto, S. Endo, W. Lin, Y. Liu, J. Wang, **S. Feng**, Y. Zhang, D. Turner, Z. Li, S. Xie, A. Ackerman, M. Zhang, M. Khairoutdinov, 2015: RACORO Continental Boundary Layer Cloud Investigations. Part I: Case Study Generation and Ensemble Large-Scale Forcings. . ***J. Geophys. Res.*** (special issue), *accepted*

Feng S., Z. Li, W. Lin, Y. Liu, M. Zhang, A. M. Vogelmann, T. Toto, and S. Endo, 2014: Fine-Resolution Analyses and Expanded Properties of Large-Scale Forcing. Part III: Hydrometeor forcing and Application to Single-Column Model Experiments. ***J. Geophys. Res***.(special issue), *under review*

Feng S., Y. Fu, and Q. Xiao, 2012: Trends in the thickness of tropopause layer revealed by radiosonde. ***Geophys. Res. Lett.,*** doi: 10.1029/2012GL053460

Liu, P., Y. Wang, **S. Feng**, C. Li, and Y. Fu, 2012: Climatological Characteristics of Overshooting Convective Precipitation in Summer and Winter over the Tropical and Subtropical Regions. ***J. Atmos. Sci***., 36 (3): 579-589

Feng S., Y. Fu, and Q. Xiao, 2011: Is the tropopause higher over the Tibetan Plateau? Observational evidence from COSMIC Data. ***J. Geophys. Res***., doi:10.1029/2011JD016140

Feng, S., Q. Liu, and Y. Fu, 2010: Cloud variations under subtropical high conditions, ***Adv. Atmos. Sci***. doi: 10.1007/s00376-010-9194-0

Feng, S., and Y. Fu, 2009: Seasonal characteristics of precipitation occurrences in the core area of the subtropical high. ***J. Meteor. Res.,*** 23(6), 681-690, and 2008, 66(6), 932-941

Feng, S., Q. Liu, and Y. Fu, 2009: Precipitation under subtropical high conditions: Evidence and implications, ***Atmos. Oceanic Sci. Lett.,*** 2(4): 244-249

Fu, Y., **S. Feng**, P. Liu, A. Cao, X. Liu, R. Li, Q. Liu, Y. Wang, 2010: Cumulonimbus incus in summer Asia detected by TRMM PR, ***Acta Meteor. Sini*ca**, 68(2): 195-206

Liu P., Y. Fu, **S. Feng**, A. Cao, Y. Yang, T. Li, and Y. Zi, 2010: A comparison of the precipitation from rain gauge observations with from TRMM PR measurements in the southern China. ***Acta Meteor. Sinica***, 68(6):822-835

Liu, Q., Y. Fu, and **S. Feng**, 2009: Geographical patterns of cloud amount derived from ISCCP and the correlation with NCEP reanalysis datasets, ***Acta Meteor. Sinica***, 68(5): 689-704

Fu, Y., Q. Liu, Y. Zi, **S. Feng**, Y. Liu, and G. Liu, 2008: Summer precipitation and latent heating over the Tibetan Plateau based on TRMM measurements, ***Plateau and Mountain Meteorology Research,*** 28(1), 8-18

Yang, Y., Y. Fu, L. Sun, P. Liu, and **S. Feng**, 2010: Response of the upper ocean to typhoon Tingting observed from multiplatform satellite and Argo float, ***J. Univ. Sci. & Tech. of China,*** 40(1), 1-7

Fu, Y., A. Zhang, Y. Liu, Y. Zheng, Y. Hu, **S. Feng**, and A. Cao, 2008: Characteristics of seasonal scale convective and stratiform precipitation in Asia based on measurements by TRMM Precipitation Radar, ***Acta Meteor. Sinica***, 66(5): 730-746

PRESENTATIONS

Feng, S., Li, Z., Y. Liu, W. Lin, M. Zhang, T. Toto, A. Vogelmann, A. Fridlind, 2014: Development of Fine-Resolution Analyses and Investigation of Single-Column Model CAM5 Simulation, California Institute of Technology, Pasadena, CA, October 2014 (*Invited*)

Feng, S., Li, Z., Y. Liu, W. Lin, M. Zhang, T. Toto, A. Vogelmann, A. Fridlind, S. Endo, 2014: Development of a Multi-Scale Data Assimilation System for Model-Observation Integration and Climate Model Evaluation. 2014 ASR Science Team Meeting, Potomac, Maryland, March 10-13, 2014

Lin, Wuyin, A. M. Vogelmann, A. Fridlind, S. Endo, H. Song, **S. Feng**, T. Toto, Y. Liu, and Z. Li, 2014: 3. RACORO-FASTER: Single-Column Model Simulations and Bias Attribution. 2014 ASR Science Team Meeting, Potomac, Maryland, March 10-13, 2014

Voglmann, Andrew M., A. Fridlind, T. Toto, S. Endo, W. Lin, Y. Liu, J. Wang, G. McFarquhar, R. Jackson, Z. Li, **S. Feng**, A. Ackerman, M. Zhang, S. Xie, and Y. Zhang, 2014:

RACORO-FASTER: Case Study Generation for Continental Boundary Layer Clouds. 2014 ASR Science Team Meeting, Potomac, Maryland, March 10-13, 2014

Feng, S., Li, Z., Y. Liu, W. Lin, M. Zhang, T. Toto, A. Vogelmann, A. Fridlind, S. Endo, 2013: Expanded Large-Scale Forcing Properties Derived from the Multi-Scale Data Assimilation and Its Application to Single-Column Models. A31A-0032, 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec. 2013

Feng, S., Li, Z., Y. Liu, W. Lin, T. Toto, and A. Vogelmann, 2013: Improved Hydrometeor Simulations Using Cloud Resolving WRF and Multi-Scale Data Assimilation and Applications to Climate Model Evaluation. 2013 ASR Science Team Meeting, Potomac, Maryland, March 18-21, 2013

Li, Z., S**. Feng**, Y. Liu, W. Lin, T. Toto, and A. Vogelmann, 2013: Aerosol Reanalysis Using a Multi-scale Aerosol Data Assimilation System. 2013 ASR Science Team Meeting, Potomac, Maryland, March 18-21, 2013

Feng, S., Li, Z., Z. Ye, Y. Liu, W. Lin, T. Toto, and A. Vogelmann 2012: Improved Hydrometeor Simulations Using Cloud Resolving WRF and Multi-Scale Data Assimilation and Applications to Climate Model Evaluation. A23D-0248, 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec. 2012

Xiao, Q., K. Chu, **S. Feng**, Ying-Hwa Kuo, and D. Bromwich, 2011: Intercomparison of WRF 3/4-dimensional variational (3/4D-Var) data assimilation methods for Antarctic applications over the month of October 2007, 11th Conference on Polar Meteorology and Oceanography, *American Meteorological Society*, 2-5 May, 2011, Boston, MA, USA