

Dr. Jianping Huang
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Country of Citizenship: United States

Veteran's Status: No

OBJECTIVE

Seeking a position as a Physical Scientist at Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service (NWS), National Centers for Environmental Prediction (NCEP), and Environmental Modeling Center (EMC) in College Park, MD (Announcement number: NWS NCEP-23-12136975-DHA, Control number: 753356100).

EMPLOYMENT EXPERIENCE

Physics Scientist III, Project Lead

Lynker, assigned to NWS/the National Centers for Environmental Prediction (NCEP)/Environmental Modeling Center (EMC), College Park, MD, 20740

09/2022-Present, 40 hours per week, \$110,000 annually

FOM: Fanglin Yang (301) 683-3722.

- Lead the development of the Unified Forecast System (UFS)-Air Quality Model (AQM) or Online-Community Multiscale Air Quality (CMAQ) modeling system to improve the representation of wildfires and their impact on air quality, weather, and climate predictions.
- Designed the model computational and writing domains and grids, refine model configurations including dynamic, physics and chemical parameters to support the AQM v7 operational implementation.
- Developed a new feature with online-calculation of hourly-averaged values for tracers through FV3 dynamic core to improve FV3 writing component and reduce the size of model 3-D history files
- Modified the GFS Scale-aware TKE-based Moist Eddy-Diffusion Mass-Flux (EDMF) PBL scheme to improve chemical species (e.g., O₃) predictions in the stable boundary conditions with the UFS-AQM system.
- Improved the representation of wildfire on diurnal variation, intensity, plume-rise algorithm and the UFS-AQM predictions during heavy wildfire events.
- Led the official evaluation of AQMv7 to support the operational implementation.
- Act as the code manager, integrating different components into the UFS-AQM system with rich experience of code testing, debugging, and troubleshooting, and operational transition.

Senior Research Scientist, Task Lead

I. M. Systems Group (IMSG) Inc., assigned to NWS/NCEP/EMC, College Park, MD, 20740.

08/2012-08/2022, 40 hours per week, \$98,408 annually.

FOM: Fanglin Yang, (301) 683-3722.

- Acted as a contract Task Lead supporting Air Quality Prediction, and Product Generation of all operational prediction models (e.g., GFS, GEFS, HFS, Ocean, AQ) at NWS/NCEP/EMC.
- Supported development and improvement of the Unified Forecast System (UFS)-based online CMAQ for air quality application through external and internal collaborations.

- Quantified impact of different boundary layer parameterization schemes on dispersion and transport of air pollutants.
- Conducted scientific analysis of numerical predictions, published papers, and presented research results at national and international academic conferences.

Support Scientist

Science Applications International Corporation, assigned to NOAA/NWS/NCEP/EMC

Camp Spring, MD

07/2009-08/2010, 40 hours per week, \$69,500 annually

Supervisor: Jeffery T. McQueen, (301) 683-3736, permission to contact.

- Developed and maintained the NOAA atmospheric environmental prediction models for operational use.
- Completed the pre-implementation test and operational implementation of surface O₃ and PM_{2.5} for Hawaii and Alaska.
- Conducted detailed scientific analyses and presented results on the impact of convection and planetary boundary layer schemes on air quality predictions.

Postdoctoral Research Associate

School of Forestry & Environmental Studies

Yale University

New Haven, CT 06511

11/2006-06/2009, 40 hours per week, \$45,500 annually

Supervisor: Professor Xuhui Lee, (203)432-6271, permission to contact.

- Developed a subroutine of online calculation of fluxes into a large-eddy simulation (LES) model.
- Coupled a land surface module with the LES model to investigate the land-atmosphere interactions of heat, water vapor, and CO₂ between ecosystem and the atmosphere.
- Used the LES-LSM predictions as a benchmark to evaluate the LSM scheme on predictions of sensible, latent heat, and CO₂ fluxes in climate models.

Postdoctoral Research Associate

Department of Marine, Earth, and Atmospheric Sciences

North Carolina State University

Raleigh, NC 27607.

10/2015-10/2016, 40 hours per week, \$36,000 annually

Supervisor: Professor Yang Zhang

- Coupled the Weather Research and Forecasting (WRF) model with a chemistry module for improving tropospheric O₃ predictions.
- Investigated the interactions of climate change and future air quality through numerical modeling.

Assistant Professor

Department of Atmospheric Physics

Nanjing Institute of Meteorology (now Nanjing University of Information Sciences and Technology)

Nanjing, Jiangsu, China

08/1998-08/2000, 40 hours per week.

- Deputy Director of the teaching and research group on Atmospheric Physics.
- Teaching undergraduate courses on *Cloud and Precipitation Microphysics*, *Atmospheric Physics*, *Atmospheric Observations: Instrument and Methods*.
- Advised 6~7 undergraduate students' thesis research each year.
- Completed two research projects: 1) Characteristics of cloud microphysics over the North China, 2) Improving numerical forecasting of radiation fogs in Shanghai area, China.

EDUCATION

Ph.D. in Applied Mathematics, the Hong Kong University of Science and Technology, Hong Kong, China, 08/2001-08/2005

Relevant courses: *Weather, Climate and Pollution; Computational Fluid Dynamics for Viscous Flows; Waves in Fluids; Data Analysis in Atmospheric and Oceanic Sciences, Atmospheric Chemistry.*

Dissertation: “Numerical Simulation Study of Ozone Episodes in Complex Terrain and Coastal Region”

Ph.D. Candidate in Atmospheric Sciences, Peking University, China, 09/2000-08/2001.

Relevant courses: *Atmospheric Turbulence, Atmospheric Radiation & Optics, Air Pollution Meteorology, Numerical Simulation in Atmospheric Sciences, Atmospheric Chemistry.*

M.S., in Atmospheric Sciences, Nanjing Institute of Meteorology (now Nanjing University of Information Sciences and Technology), Nanjing, China, 09/1995-07/1998

Relevant courses: *Statistical Theory of Turbulence, Theory of Atmospheric Diffusion, Meso-scale Meteorological Modeling, Dynamics of Atmospheric Boundary Layer, Spectral Method in Numerical Weather Forecast, Atmospheric Aerosols, Processing and Application of Remote Sensing Image.*

Dissertation: “Numerical Study of Formation Mechanism of Radiation Fog in Tropical Forecast”

SKILLS AND EXPERTISE

- Extensive experience in developing a variety of numerical models such as UFS-AQM, WRF/Chem, Large-Eddy Simulation, and land-surface model.
- Proficient in multiple computer languages, including Fortran, Python and Shell Scripts, with excellent programming skills.
- Strong problem-solving and trouble-shooting abilities to support code development and improve model performance.
- Experienced in code management and integration of a complex numerical modeling system.

PRESENTATIONS AND INVITED TALKS

Huang, J., I. Stajner, F. Yang, et al., Development and evaluation of the next generation regional air quality forecast system: UFS-AQM, the 103rd AMS Annual Meeting, January 8-12, 2023, Denver, CO.

Huang, J., R. Montuoro, B. Baker, et al., Development and evaluation of the RRFS-CMAQ inline system at NOAA, the 102nd AMS Annual Meeting, January 23-27, 2022, Houston, Texas.

Huang, J., J. McQueen, et al., Impact of global scale FV3 versus regional scale NAM meteorological driver model predictions on regional air quality forecasting. The 100th AGU Fall Meeting, December 9-13, 2019, San Francisco, CA.

Huang, J., J. McQueen, et al., Improvement of NOAA NAQFC ozone nighttime over-predictions through offline system of FV3GFS/CMAQ. The 99th AMS Annual Meeting, January 6-10, 2019, Phoenix, AZ.

Huang, J., J. McQueen, et al., Development and evaluation of offline coupling of FV3-based GFS with CMAQ at NOAA, the 17th CMAS Conference, October 22-24, 2018, UNC-Chapel Hill, NC.

Huang, J., McQueen, et al., Impact of cloud parameterization on NOAA’s NAQFC surface ozone predictions: evaluation and sensitivity studies, 98th Annual AMS Annual meeting, January 7-11, 2018. Austin, TX.

Huang, J., J. McQueen, et al., Meteorological factor analyses of NOAA NAQFC surface ozone predictions' biases and improvement with a bias correction approach, the 16th CMAS Conference, October 23-25, 2017, UNC-Chapel Hill, NC.

Huang, J., J. McQueen, et al., Testing of two bias correction approaches for reducing biases of developmental NOAA NAQFC PM_{2.5} predictions, the 14th CMAS Conference, October 7, 2015, UNC-Chapel Hill, NC.

Huang, J., J. McQueen, et al., Impact of meteorological inputs on NOAA PM_{2.5} predictions, the 13th CMAQ Annual Conference, October 27, 2014, UNC-Chapel Hill, NC.

Huang, J., J. McQueen, P. Shafran, et al., Impact of meteorological inputs on wild-fire predictions over the CONUS, 94th AMS Annual Meeting, 4 February 2014, Atlanta, GA.

Huang, J., J. McQueen, Y. Tang, et al., Improving air quality forecasting over lakes and surrounding regions, 92nd AMS Annual Meeting, 26 January 2012, New Orleans, LA.

Huang, J., J. McQueen, B. Farrier, et al., The Impact of change in land use and land cover characterization air quality forecasting, the 10th CMAS Annual Conference, 24 October 2011, UNC-Chapel, NC.

Huang, J., J. McQueen, Y. Tang, et al., Impact of marine boundary layer parameterization scheme on surface ozone prediction in coastal regions, 91st AMS Annual Meeting, 27 January 2011, Seattle, WA.

Huang, J., Modeling Study of Flux Imbalance of Heat, Water Vapor, and CO₂, AOCD Seminar, Department of Geology and Geophysics, Yale University, 29 January 2009, New Haven, CT.

Huang, J., Numerical Modeling of Vegetation-Atmosphere Exchange of Energy, Water Vapor, and CO₂, Moorcroft Lab, Harvard University, 12 January 2009, Cambridge, MA.

Huang, J., X. Lee, and E. Patton, A Modeling Study of Flux Imbalance and the Influence of Entrainment in the Convective Boundary Layer, 28th Conference on Agriculture and Forestry Meteorology, 28 April – 2 May 2008 Orlando, FL.

Zhang, Y., **J. Huang**, D. K. Henze and J. H. Seinfeld, The Role of Isoprene in Secondary Organic Aerosol Formation: A 1-Year 3-D Regional Model Simulation and Examination, the 2006 International Aerosol Conference, 10-15 September 2006, St. Paul, MN.

Zhang, Y., **J. Huang**, J.-L. Hu, and K. Vijayaraghavan, Linking Regional Air Quality to Global Climate and Emission Changes, the 2006 Western Pacific Geophysics Meeting, 24-27 July 2006, Beijing, China.

Huang, J., X. Hu, Y. Zhang, G. Sarwar, T. Otte, R. Gilliam, and K. Schere, Implementation and Testing of the 2005 Version of Carbon Bond Mechanism in WRF-chem, the 7th Annual WRF User's Workshop, 19-22 June 2006, Boulder, CO.

Huang, J., J. Fung, Y. Zhang, A. Lau, and Y. Qin, Process Analysis of Different Synoptic Patterns of O₃ Episodes in Hong Kong, the 86th AMS Annual Meeting/the 8th Conference on atmospheric chemistry, Atlanta, GA, 27 Jan.–3 Feb. 2006.

Zhang, Y., K. Vijayaraghavan, **J. Huang**, and M. Jacobson, 2006, Probing into Regional O₃ and PM Pollution: A 1-year CMAQ Simulation and Process Analysis over the United States, the 86th AMS Annual Meeting/the 8th Conference on atmospheric chemistry, Atlanta, GA., 27 Jan.–3 Feb. 2006.

Zhang, Y., X. Hu, K. Wang, and **J. Huang**, Jerome D. Fast and William I. Gustafson Jr., D. Allen Chu, Carey J. Jang, Evaluation of WRF/Chem MADRID with Satellite and Surface Measurements: Chemical and Optical Properties of Aerosols, the 2005 AGU Fall Meeting, San Francisco, CA., 5–9 Dec., 2005.

Huang, J., J. Fung, Y. Zhang, A. Lau, R. Kwok, and J. Lo, Improvement of Air Quality Modeling in Hong Kong by Using MM5 Coupled with LSM, the 2005 Models-3 Workshop, Chapel Hill, NC.

September 26-28, 2005.

Huang, J., J. Fung, K. Lau, and Y. Qin, Numerical Simulation Study on the Ozone Episodes in Hong Kong, 13th World Clean Air and Environmental Protection Congress and Exhibition, London, 2004.

Huang, J., J. Fung, K. Lau, and Y. Qin, Numerical Simulation of Particulate Air Pollution Episodes, Proc. of the 3rd Asian Aerosol Conference, Hong Kong, 2003.

Huang, J., J. Fung, K. Lau, and Y. Qin, Process Analysis of Ozone Episode Formation in Hong Kong Region, the 10th National Atmospheric Environment Conference of China, 82-89, Nanning, China, 2003.

Huang, J., J. Fung, K. Lau, and Y. Qin, Numerical Study of Air Quality in Hong Kong, the 9th National Atmospheric Environment Conference of China, 353-359, Urumchi, China, 2002.

Li, Z., **J. Huang**, Y. Huang, and Y. Huang, Macroscopic Development Characteristics of Winter Valley Fog in Xishuangbanna Region, 7th WMO Scientific Conference on Weather Modification International Conference, Chiang Mai, Thailand, 1999.

Chen, B., Z. Li, **J. Huang**, J. Gu, Y. Huang, and Y. Huang, The Microphysical Structure of Winter Fog in Xishuangbanna, China, 7th WMO Scientific Conference on Weather Modification International Conference, Chiang Mai, Thailand, 1999.

Huang, J., Z. Li, Y. Huang, and Y. Huang, Three Dimensional Model Study on the Mountain Valley Fog Part II: Sensitivity Experiments, 7th WMO Scientific Conference on Weather Modification International Conference, Chiang Mai, Thailand, 1999.

Huang, J., Z. Li, Y. Huang, and Y. Huang, Three Dimensional Model Study on the Mountain Valley Fog Part I: Numerical Model, 7th WMO Scientific Conference Weather Modification International Conference, Chiang Mai, Thailand, 1999.

PUBLICATIONS

Ma, X., **J. Huang***, M. I. Hegglin, P. Jöckel, and T. Zhao, 2023: Causes of growing middle-upper tropospheric ozone over the Northwest Pacific region. *Atmospheric Chemistry Physics* (egusphere-2023-2411, under review) (* denotes corresponding author)

Liu, C., **J. Huang***, C. Hu, C. Cao, K. Yue, X. Fang, R. Zhu, X. Lee, 2023: Sensitivity of surface downward longwave radiation to aerosol optical depth over the Lake Taihu region, *Journal of Geophysical Research* (2023JD039026, under review)

Zhao, K., Y., Wu, **J. Huang***, G. Gronoff, T. Berkoff, M. Arend, and F. Moshary, 2023: Identification of the roles of urban plume and local chemical production in ozone episodes observed in Long Island Sound during LISTOS 2018: Implications for ozone control strategies, *Environ. Int.*, <https://doi.org/10.1016/j.envint.2023.107887>

Liu, C., H. Liu, **J. Huang**, H. Xiao, 2021: Varying Partitioning of Surface Turbulent Fluxes Regulates Temperature-Humidity Dissimilarity in the Convective Atmospheric Boundary Layer, *Geophysical Research Letter*, <https://doi.org/10.1029/2021GL095836>

Zhao, K., **J. Huang***, Y. Wu, Z. Yuan, Y. Wang, Y. Li, X. Ma, X. Liu, W. Ma, Y. Wang, and X. Zhang, 2021: Impact of stratospheric intrusion on ozone enhancement in the lower troposphere and implication to air quality in Hong Kong and other South China regions, *Journal of Geophysical Research*, <https://doi.org/10.1029/2020JD033955>.

Liu, C., **J. Huang***, X. Hu, C. Hu, Y. Wang, X. Fang, L. Luo, H. Xiao, H. Xiao, 2021: Evaluation of WRF-Chem simulations on vertical profiles of PM_{2.5} with UAV observations during a haze pollution event. *Atmospheric Environment*, 252, 118332, <https://doi.org/10.1016/j.atmosenv.2021.118332>.

Liu, C., **J. Huang***, X. Tao, L. Deng, X. Fang, Y. Liu, L. Luo, Z. Zhang, H. Xiao, H. Xiao, 2021: An

observational study of boundary-layer vertical structures and entrainment under aerosol-polluted conditions. *Atmospheric Research*, 250 (2021), 105348, <https://doi.org/10.1016/j.atmosres.2020.105348>.

Ma, X., **J. Huang***, T. Zhao, C. Liu, K. Zhao, J. Xing, and W. Xiao, 2021: Rapid increase in summer surface ozone over the North China Plain during 2013-2019: a side effect of particulate matters reduction control? *Atmospheric Chemistry and Physics*, 21, 1-16, 2021, <https://doi.org/10.5194/acp-21-1-2021>.

Liu, C., **J. Huang***, Y. Wang, X. Tao, C. Hu, L. Deng, J. Xu, H. Xiao, L. Luo, X. Xiao, W. Xiao, 2020: Vertical distribution of PM_{2.5} and interactions with the atmospheric boundary layer during the development stage of a heavy haze pollution event. *Science of the Total Environment*, 704, 135329.

Zhang, X., **J. Huang***, G. Li, Y. Wang, C. Liu, K. Zhao, X. Tao, X. Hu, and X. Lee, 2019: Improving lake-breeze simulation with WRF nested LES and lake-model over a large shallow lake, *J. Appl. Meteor. Climatol.*, DOI: 10.1175/JAMC-D-18-0282.1.

Zhao, K., Y. Bao, **J. Huang***, et al., 2019: A high-resolution modeling study of a heat wave-driven ozone exceedance event in New York City and surrounding regions. *Atmos. Environ.* <https://doi.org/10.1016/j.atmosenv.2018.10.059>.

Liu, C., E. Fedorovich, **J. Huang***, X. M., Hu, Y. Wang, and X. Lee, 2019: Impact of aerosol shortwave radiative heating on entrainment in the atmospheric convective boundary layer: a large-eddy simulation study. *J. Atmos. Sci.*, 76(3), 785-799.

Liu, C., **J. Huang***, E. Fedorovich, X.M. Hu, Y. Wang, and X. Lee, 2018: The effect of aerosol radiative heating on turbulence statistics and spectra in the atmospheric convective boundary layer: A large-eddy simulation study. *Atmos.*, 9(9), 347.

Liu, C., E. Fedorovich, E., and **J. Huang**, 2018: Revisiting entrainment relationships for shear-free and sheared convective boundary layers through large-eddy simulations. *Q. J. Roy. Meteor. Soc.*, 144(716), 2182-2195.

Huang, J., J. McQueen, J. Wilczak, et al., 2017: Improving NOAA NAQFC PM_{2.5} predictions with a bias correction approach, *Wea. Forecasting*, 32:407-421, doi: 10.1175/WAF-D-16-0118.1.

Wang, Y., Y. Gao, H. Qin, **J.-P. Huang***, et al., 2017: Spatiotemporal Characteristics of Lake Breezes over Lake Taihu, China, *J. Appl. Meteor. Climatol.*, 56:2053-2065, doi: 10.1175/JAMC-D-16-0220.1. (Corresponding author)

Lee, P., J. McQueen, I. Stajner, **J. Huang**, et al., 2017: NAQFC Developmental Forecast Guidance for Fine Particulate Matter (PM_{2.5}), *Wea. Forecasting*, 32:343-360, doi: 10.1175/WAF-D-15-0163.1.

Hu, X., **J. Huang**, et al. 2016: Advances in Boundary-Layer/Air Pollution Meteorology, *Advance Meteorol.* Article ID: 2825019, 2 pages, <https://www.hindawi.com/journals/amete/2016/2825019>

Huang, J., C. Zhou, X. Lee, et al., 2013: The effects of rapid urbanization on the levels in tropospheric nitrogen dioxide and ozone over East China, *Atmos. Environ.* 77: 558-567.

Lee, X., **J. Huang**, E. Patton, 2012: A large-eddy simulation study of water vapour and carbon dioxide isotopes in the atmospheric boundary layer, *Boundary-Layer Meteorol.*, 145:229-248, doi: 10.1007/s10546-011-9631-3.

Huang, J., X. Lee, and E. Patton, 2009, Dissimilarity of scalar transport in the convective boundary layer in inhomogeneous landscapes, *Boundary-Layer Meteorol.*, 130:327-345.

Huang, J., X. Lee, and E. Patton, 2008, A Modeling Study of Flux Imbalance and the Influence of Entrainment in the Convective Boundary Layer, *Boundary-Layer Meteorol.*, 127:273-292.

Zhang, Y., **J. Huang**, D. Henze, and J. Seinfeld, 2007, The Role of Isoprene in Secondary Organic Aerosol Formation on a Regional Scale, *J. Geophys. Res.*, doi:10.1029/2007JD008675.

- Huang, J.**, J. Fung, and K. Lau, 2006, Integrated Processes Analysis and Systematic Meteorological Classification of Ozone Episodes, *J. Geophys. Res.*, 111, D20309, doi:10.1029/2005JD007012.
- Huang, J.**, J. Fung, K. Lau, and Y. Qin, 2005, Numerical Simulation and Process Analysis of Typhoon-related Ozone Episodes in Hong Kong, *J. Geophys. Res.*, 110, D05301, doi:10.1029/2004JD004914.
- Zhang, Y, **J. Huang**, and B., Zhu, 2001, Raindrops Spectrum in Harbin, *Journal of Nanjing Institute of Meteorology*, 24(4), 505 - 512. (in Chinese with English abstract)
- Huang, J.**, H. Li, Y. Huang, and Y. Huang, 2000, A Numerical Study of Fog in Xishuangbanna of Yunnan Province, *Chinese Journal of Atmospheric Sciences*, 24(3), 219-233.
- Huang, Y., Y. Huang, Z. Li, B. Chen, **J. Huang**, and J. Gu, 2000, The Microphysical Structure and Evolution of Winter Fog in Xishuangbanna, *Acta Meteorologica Sinica*, 55(6), 715-725. (in Chinese with English abstract)
- Huang, J.**, Z. Li, Y. Huang, and Y. Huang, 2000, A Three-Dimensional Model Study of Complex Terrain Fog, *Chinese Journal of Atmospheric Sciences*, 24(6), 821-834. (in Chinese with English abstract)
- Zhu, B., Z. Li, **J. Huang**, J. Yang, Y. Huang, and Y. Huang, 2000, Chemical Compositions of the Fogs in the city and suburban of Xishuangbanna, *ACTA Scientiae Circumstantiae*, 20(3), 316-321. (in Chinese with English abstract)
- Li, Z., **J. Huang**, B. Sun, 1999, Burst Characteristics During the Development of Radiation Fog, *Chinese Journal of Atmospheric Sciences*, 23(5), 623-631. (in Chinese with English abstract)
- Li, Z., **J. Huang**, Y.S. Huang, Z.Y. Yang, and Q. Wang, 1999, Study on the Physical Processes of Winter Valley Fog in Xishuangbanna Region, *Acta Meteorologica Sinica*, 13(4), 494-508.
- Li, Z., **J. Huang**, Y. Zhou, and S. Zhu, 1999, Physical Structures of the Five-day Sustained Fog Around Nanjing in 1996, *Acta Meteorologica Sinica*, 57(5), 622-631. (in Chinese with English abstract)
- Huang, J.**, Q. Mei, Y. Jin, and Z. Li, 1998, Microphysical Structure Features and Evolution Processes of Radiation Fog in Hu-Ning Region. *Journal of Meteorology in China*, 24(5), 3-8. (In Chinese with English abstract)
- Huang, J.**, S. Zhu, and B. Zhu, 1998, Characteristics of the Atmospheric Boundary Layer during Radiation Fog, *Journal of Nanjing Institute of Meteorology*, 21(2), 258-265. (in Chinese with English abstract).

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ERES Ref #: 20-01-076

January 30, 2020

■ Applicant Information

♦ Name on Application: JIANPING HUANG
♦ Name on Documents: JIANPING HUANG
♦ Date of Birth: May 01, 1968

■ Review of Education**▶ Credential I:**

♦ Country: PEOPLE'S REPUBLIC OF CHINA
♦ Credential: Certificate of Graduation (*Zhuanke*)
♦ Major / Specialization: Application of Microcomputers
♦ Institution Attended: Nanjing University &
Jiangsu Higher Education Self Taught Examination Committee
♦ Length of Program: Two Years
♦ Date Awarded: June, 1992
♦ Awarded By: Nanjing University &
Jiangsu Higher Education Self Taught Examination Committee
♦ Admission Requirement: Senior High School Graduation Certificate and entrance examination
♦ Comments: This program represents two years of postsecondary education and may be considered for undergraduate admission to colleges and universities in the United States with transfer credit to be determined through a course-by-course analysis.
♦ U.S. EQUIVALENCE: Two years of undergraduate study in Application of Microcomputers



■ Review of Education (cont'd)

▶ Credential II:

- ♦ Country: PEOPLE'S REPUBLIC OF CHINA
- ♦ Credential: Master of Science Degree
- ♦ Major / Specialization: Atmospheric Physics
- ♦ Institution Attended: Nanjing Institute of Meteorology
- ♦ Length of Program: Three Years
- ♦ When Attended: September, 1995 – June, 1998
- ♦ Date Awarded: June 24, 1998
- ♦ Awarded By: Nanjing Institute of Meteorology
- ♦ Admission Requirement: Bachelor' degree or it's equivalence or by passing examination
- ♦ Comments: This program may be considered for admission to further graduate studies at universities in the United States.

♦ U.S. EQUIVALENCE: Master's Degree in Atmospheric Physics

▶ Credential III:

- ♦ Country: PEOPLE'S REPUBLIC OF CHINA (HONG KONG)
- ♦ Credential: Doctor of Philosophy Degree
- ♦ Major / Specialization: Atmospheric Physics & Atmospheric Environment
Mathematics
- ♦ Institution Attended: Peking University
The Hong Kong University of Science and Technology
- ♦ Length of Program: Three Years
- ♦ When Attended: 2000 – 2005
- ♦ Date Awarded: November 11, 2005
- ♦ Awarded By: The Hong Kong University of Science and Technology
- ♦ Admission Requirement: Master's degree or it's equivalence or by passing examination
- ♦ Comments: Represents 9 to 14 years of postsecondary education. Grants access to postdoctoral study & employment.

♦ U.S. EQUIVALENCE: PhD in Philosophy majoring in Mathematics

JIANPING HUANGERES Reference No: **20-01-076**

Evaluation with Course-by-Course Detail

**■ Status of Institution**

All institutions previously mentioned in this report are internationally recognized educational institutions whose coursework and degrees are generally accepted by regionally accredited institutions in the United States.

■ Documentation

As evidence of the educational achievement described above, we were provided with original official documents issued by the above institution. We have examined the documentation carefully and have no reason to doubt its authenticity.

■ Course List

Courses completed in the above studies are converted to U.S. credits and grades.			
♦ Level: L=Lower Division; U=Upper Division; G=Graduate			
Course Title	U.S. Credits	U.S. Grade	Level
Jiangsu Higher Education Self Taught Examination Committee, China (Zhuanke's Program)			
Academic Year 1988-1992			
Philosophy	4.0	C	L
English	7.0	C	L
Advanced Mathematics	8.0	A	L
Linear Algebra	3.0	C	L
Digital Logical Circuits	6.0	A	L
General Physics	8.0	A	L
Programming Languages	4.0	A	L
Political Economics	4.0	B	L
Basic Languages	4.0	A	L
Microcomputer and Its Applications	7.0	B	L
Operating System	4.0	C	L
Computer Fundamentals	5.0	C	L
Information System Manage	3.0	Pass	L
Calculating Method	4.0	B	L
Discrete Mathematics	4.0	B	L
Database Conspectus	4.0	Pass	L
Total:	79.0		
Certificate of Graduation (Zhuanke): 1992			

(Continued)

JIANPING HUANG

ERES Reference No: 20-01-076

Evaluation with Course-by-Course Detail



■ Course List (cont'd)

Course Title	U.S. Credits	U.S. Grade	Level
Nanjing Institute of Meteorology, China (Master's Program)			
Academic Year 1995-1996			
Dialectics	2.0	A	G
An Introduction to PC System	2.0	B	G
Writing, Oral and Aural English	--	C	G
Application of Functional Analysis	3.0	A	G
Statistical Theory of Turbulent	3.0	A	G
C Language	2.0	A	G
English	4.0	C	G
Theory of Atmospheric Diffusion	2.0	A	G
Theory and Practice of Scientific Socialism	2.0	A	G
Meso-Scale Meteorological Modeling	2.0	A	G
Dynamics of Atmospheric Boundary Layer	2.0	A	G
Selected Lessons of Differential Equation	3.0	A	G
Operating System	1.0	A	G
Academic Year 1996-1997			
Spectral Method in Numerical Weather Forecast	2.0	A	G
Processing and Application of Remote Sensing Image	2.0	B	G
Numerical Solution of Partial Differential Equation	2.0	A	G
Atmospheric Aerosol	2.0	A	G
English in Specialty	1.0	B	G
Atmospheric Chemistry	2.0	A	G
Fluid Dynamics	--	A	G
Total:	39.0		
Master of Science Degree: 1998			

Course Title	U.S. Credits	U.S. Grade	Level
Peking University, China (Doctor's Program)			
Academic Year 2000-2001			
English Writing	2.0	A	G
English Reading	2.0	B	G
English Listening	2.0	A	G
English Speaking	1.0	A	G
Atmospheric Turbulence	4.0	A	G
Atmospheric Chemistry	4.0	A	G
Atmospheric Radiation & Optics	4.0	A	G

(Continued)

JIANPING HUANG

ERES Reference No: **20-01-076**

Evaluation with Course-by-Course Detail



■ **Course List (cont'd)**

Course Title	U.S. Credits	U.S. Grade	Level
Air Pollution Meteorology	3.0	B	G
Numerical Simulation in Atmospheric Sciences	4.0	A	G
Total:	26.0		

Course Title	U.S. Credits	U.S. Grade	Level
The Hong Kong University of Science and Technology, China (Doctor's Program)			
Academic Year 2001-2002			
Measurement of Air Pollutants	3.0	B	G
Stochastic Processes	3.0	A	G
Weather, Climate and Pollution	3.0	A	G
Mathematics Seminars	1.0	Pass	G
Computational Fluid Dynamics for Viscous Flows	3.0	A	G
Waves in Fluids	3.0	A	G
Mathematics Seminars	1.0	Pass	G
Academic Year 2002-2003			
Mathematics Seminars	1.0	Pass	G
Data Analysis in Atmospheric and Oceanic Sciences	3.0	A	G
Mathematics Seminars	1.0	Pass	G
Doctoral Thesis Research	--	--	G
Academic Year 2003-2004			
Doctoral Thesis Research	--	--	G
Doctoral Thesis Research	--	--	G
Academic Year 2004-2005			
Doctoral Thesis Research	--	--	G
Doctoral Thesis Research	--	Pass	G
Transfer Credits	(18.0)	TR	G
Total:	22.0		
Doctor of Philosophy Degree: 2005			

JIANPING HUANG

ERES Reference No: 20-01-076

Evaluation with Course-by-Course Detail



■ Summary of U.S Equivalence

It is the judgment of *Educational Records Evaluation Service* that the above studies have the equivalence of the following completed at regionally accredited institutions of higher education in the United States:

- Two years of undergraduate study in Application of Microcomputers; and
- Master's Degree in Atmospheric Physics; and
- PhD in Philosophy majoring in Mathematics

Certified by:

Yezi Kong

International Education Specialist

Approved by:



This evaluation is advisory in nature and subject to the policies of the institution to which it is presented.

References:

- ♦ *Postsecondary Institutions of the People's Republic of China-(A Comprehensive Guide to Institutions of Higher Education in China)*, published by William Paver, 1992
- ♦ *Pier World Education Series-The People's Republic of China Workshop Report*, AACRAO & NAFA, 2000
- ♦ *Chinese Universities & Colleges*, 4th Edition, published by the Higher Education Press, 2004
- ♦ *International Handbook of Universities*, 23rd ed., published by the International Association of Universities, 2012

NEW EMPLOYEE EDUCATION DATA

AUTHORITY: 5 U.S.C. 7201 (Education)

PRINCIPLE PURPOSE: Collected information is used to create new employee record in the agency's personnel system and to coordinate transfer of civilian Federal employees from one Federal agency to another, as appropriate.

ROUTINE USES: None.

DISCLOSURE: Voluntary; however, if not furnished, your new employee record in your agency's personnel system will be incomplete.

DATA STANDARD: <https://dw.opm.gov/datastandards/dataStandard/1467?index=1>

PERSONAL INFORMATION

Name (Last Suffix, First Middle):

Huang, Jianping

Social Security Number (SSN):

684-09-0961

BASIC EDUCATION INFORMATION

Complete this section using the highest level of education you have achieved.

21 Enter the code related to the highest level of education you have achieved, from the list below

Education Levels

- 01 - No Formal Education Or Some Elementary School - Did Not Complete
- 02 - Elementary School Completed - No High School
- 03 - Some High School - Did Not Graduate
- 04 - High School Graduate Or Certificate Of Equivalency
- 05 - Terminal/Technical Occupational Program - Did Not Complete
- 06 - Terminal/Technical Occupational Program - Certificate Of Completion, Diploma Or Equivalency
- 07 - Some College-Less than One Year-Less than 30 Credits
- 08 - 1 Year College (30-59 semester or 45-89 quarter hours)
- 09 - 2 Years College (60-89 semester or 90-134 quarter hours)
- 10 - Associate Degree
- 11 - 3 Years College (90-119 semester or 135-179 quarter hours)

- 12 - 4 Years College (More than 119 semester or 179 quarter hours)
- 13 - Bachelor's Degree
- 14 - Post Bachelor's
- 15 - First Professional Degree
- 16 - Post-First Professional
- 17 - Master's Degree
- 18 - Post Master's
- 19 - Sixth-Year Degree
- 20 - Post-Sixth Year
- 21 - Doctorate Degree
- 22 - Post-Doctorate

HIGHER EDUCATION

If your education level is greater than High School (04), complete this section using the highest level of education you achieved.

C Enter the code that describes the type of school (institution of learning) where you achieved your highest level of education, from the list below.

Type of School or Learning Institution

- S - Secretarial, business or commercial school
- V - Vocational, trade or technical school at high school level
- W - Vocational, trade or technical school at above high school level
- B - Junior college
- C - College or university

Name of the School or Learning Institution

The Hong Kong University of Science and Technology

Location of School or Learning Institution (City, State, Country)

Hong Kong, China

Instructional Program Code

270399

Instructional Program Description

APPLIED MATHEMATICS, OTHER

Instructional Program Emphasis:

☒ Major ☐ Minor ☐ Not Major or Minor

Month/Year of Degree/Certificate (mm/yyyy)

11/2005

Number of Credit Hours Earned

22

Type of Credit Hours Earned

☐ Quarter ☒ Semester ☐ Other

CERTIFICATION

I certify that the information provided above is complete and accurate to the best of my knowledge.

Employee Signature:

Electronically Signed by Jianping Huang

Signature Date:

3/30/2024