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EDUCATION

Doctor of Philosophy in Civil Engineering (Environmental System Analysis)

North Carolina State University, Raleigh, North Carolina, 2000

(Advisor: E. Downey Brill, Jr.)

Master of Science in Civil and Environmental Engineering

The University of California at Los Angeles (UCLA), Los Angeles, California, 1994

Bachelor of Science in Environmental Engineering

National Cheng Kung University, Tainan, Taiwan, R.O.C., 1986

EXPERIENCE

Professor , Department of Civil and Environmental Engineering, The University of Tennessee	2014-present
Affiliated Faculty , Joint Institute for Computational Sciences, The University of Tennessee and Oak Ridge National Laboratory	May, 2013-present
Professor in the Core Faculty and Environmental Health Coordinator , Institute of Biomedical Engineering, The University of Tennessee	April, 2013 - present
Joint Faculty Appointment , Computer Science and Mathematics Division, Oak Ridge National Laboratory	Sept, 2012-present
Inaugural Professor , UTK-ORNL Center for Interdisciplinary Research and Graduate Education (Energy Science and Engineering Ph.D. program)	December, 2010-present
Associate Professor , Department of Civil and Environmental Engineering, The University of Tennessee	August, 2009-2014
Extended Senior Research Staff , Computational Earth Sciences Group, Computer Science and Mathematics Division, Oak Ridge National Laboratory	August, 2009-present
Research Associate Professor , Department of Civil and Environmental Engineering, The University of Tennessee	July, 2008-July, 2009
Research Assistant Professor , Dept. of Civil and Environmental	Oct., 2000-

Engineering, The University of Tennessee	June, 2008 October, 2005-present
Honorary Professor , Chinese Research Academy of Environmental Sciences, China	
Senior Scientific Applications Analyst and Software Engineer , Lockheed Martin Information Services in the U.S. EPA National Supercomputing Center	May, 1999- September, 2000
Research Assistant , Department of Civil Engineering, North Carolina State University	June, 1994- May, 1999
Course Assistant , Mechanical Engineering and Mathematical Science Department, UCLA	January-June, 1994
Adjunct Researcher , National Tainan Hydraulics Laboratory, Tainan, Taiwan	Nov., 1988- May, 1992
Research and Teaching Assistant , Institute of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan	1988-1991
Database Programmer , Army Engineering Department, ROC	1986-1988
Research Assistant , Department of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan	1983-1986

HONORS AND AWARDS

Research Recognition Award , Department of Civil and Environmental Engineering, The University of Tennessee	2014
Most Cited Article Award , Atmospheric Environment, Elsevier Limited.	2013
Significant Event Award , Oak Ridge National Laboratory; for accomplishments on the Arctic Black Carbon program	2013
Research Fellow Award , College of Engineering, The University of Tennessee	2013
Scholar Recognition Award , Department of Civil and Environmental Engineering, The University of Tennessee	2013
Chancellor Award for Professional Promise in Research and Creative Achievement , The University of Tennessee	2012
Research Fellow Award , College of Engineering, The University of Tennessee	2012

Shanghai Air Quality Forecasting System, named a 2012 Computerworld Honors Laureate	2012
Scholar of the Week , Office of Research, The University of Tennessee	Oct. 21, 2011
Research Recognition Award , Department of Civil and Environmental Engineering, The University of Tennessee	2011
Research Fellow Award , College of Engineering, The University of Tennessee	2010
Scholar Recognition Award , Department of Civil and Environmental Engineering, The University of Tennessee	2009
Scholar Recognition Award , Department of Civil and Environmental Engineering, The University of Tennessee	2008
Honorary Professorship , Chinese Research Academy of Environmental Sciences, China	2005-present
Who's Who in America	2007-present
Lightening Award , Lockheed Martin Corporation	1999
Honorary Member of Chi Epsilon Society	1995-present
Scholarship and Prize of the Thoughts of Dr. Sun Yat-Sen, the Ministry of Education, Taiwan, R.O.C.	1983

RESEARCH GRANTS (more than \$7 M funded as funding receive as PI or Co-PI)

59. Pilot Deployment of Connected Vehicle Environment (PDCVE) in Chattanooga, Tennessee: Maximizing Mobility & Minimizing Environmental Impact for Economic Growth. Funding Agency: US Department of Transportation. Co-PI. (\$30,000,000) (not funded)	2015-2018
58. Critical Infrastructure Resilience Center of Excellence: Critical Infrastructure Resilience Research and Integrated Security (CIRRIS). Funding Agency: Department of Homeland Security. PI. (\$23,505,267) (not funded)	2015-2020
57. Wildfires in the Rocky Mountains Region: Current and Future Impacts on PM _{2.5} , Health, and Policy. Funding Agency: USEPA STAR. Co-PI.	2015-2018
56. Development of Input Data for the Motor Vehicle Emissions	

- Simulator (MOVES) and Its Modeling. Funding Agency: **Tennessee Department of Transportation. PI.**
55. Stochastic Parameterization approach to explore landscape, heterogeneity and dynamic landscape variability, CLM-CMIP and Biomass Burning. Funding Agency: **ORNL/UT- Battelle. PI.** 2015-2016
 54. Air quality assessment to MeadWestvaco on potential VOC emission controls in Beijing, China. Funding Agency: **MeadWestvaco. PI.** 2015-2016
 53. Assistance of Air Benefit and Attainment Assessment and Cost Analysis System in Taiwan. **Funding Agency: Taiwan EPA/CJCU. PI.** 2015-2016
 52. The Economic Value of Water Infrastructure Resilience. **Department of Homeland Security. Co-PI.** 2014-2015
 51. Arctic Black Carbon Study. **ORNL/DOE. PI.** 2015
 50. Stochastic Parameterization approach to explore landscape, heterogeneity and dynamic landscape variability, CLM-CMIP and Biomass Burning. Funding Agency: **ORNL/UT- Battelle. PI.** 2014-2015
 49. Energy, Economic and Climate Project. Funding Agency: **ORNL/UT- Battelle. PI.** 2014-2015
 48. Air Quality Management and Assessment CoST-CE model Capacity Building and Training in China,. Funding Agency: **Energy Foundation. PI.** 2014-2015
 47. Assistance of Air Benefit and Attainment Assessment and Cost Analysis System in Taiwan. **Funding Agency: Taiwan EPA/CJCU. PI.** 2014-2015
 46. Air Quality Management and Assessment Capacity Building and Training in China. Funding Agency: **Energy Foundation. PI.** 2014-2015
 45. Stochastic Parameterization Approach to Explore Landscape Heterogeneity and Dynamic Landscape Variability. Funding Agency: **ORNL/UT-B, PI.** June 1-Sept. 30, 2014
 44. Air quality assessment to MeadWestvaco on potential VOC emission controls in Beijing, China. Funding Agency: **MeadWestvaco. PI.** 2014-2015
 43. Air Pollution and Climate Modeling. Funding Agency: **USEPA, PI.** 2013-2014
 42. An evaluation of the Economic Costs and Greenhouse Gases Emissions of a Biofuel Supply Chain. Funding Agency: 2013-2014

USDOT/UTIA, PI.

41. Air Quality Simulation & Comparative Analysis, Funding Agency: **Toyota, PI.** 2013-2014
40. Climate Change Impacts on Energy Infrastructures - Regional Analysis and Local Impacts. **ORNL/DOE. PI.** 2013-2015
39. Input Data Development for MOVES2010b. Funding Agency: **Tennessee Department of Transportation, PI.** 2013-2017
38. Air Pollution and Climate Modeling. Funding Agency: **USEPA Office of Air Quality Planning and Standards. PI.** 2009-2014
PI, Air Quality Management Decision Support System- Air Benefit and Attainment Cost Assessment System (**ABACAS**) including new BenMAP –health effect model and SMAT- attainment tool. It is a community edition and open sources.
37. Rural Economic Impacts of Green Energy Production from the Agricultural and Forestry Sectors. Funding Agency: **USDA. Co-PI.** 2012-2015
36. Chemistry in CESM-SE: Evaluation, Performance and Optimization. Funding Agency: **DOE through NCAR.** Co-PI. with PI. John Drake 2011-2014
35. Air Quality Management and Assessment Capacity Building and Training in China. Funding Agency: **Energy Foundation. PI.** 2012-2013
34. Arctic Combined Heat and Power (ACHP) Project. Funding Agency: **Department of Energy through ORNL. PI.** 2011-2013
33. Energy, Economic and Climate Project. Funding Agency: **ORNL/UT-Battelle. PI.** 2012-2013
32. Air quality assessment to MeadWestvaco on potential VOC emission controls in Beijing, China. Funding Agency: **MeadWestvaco. PI.** 2012-2013
31. A Cumulative Risk Assessment of Climate Related Health Threats in the Eastern U. S.: Air Pollution, Heat Waves, and Vector-Borne Diseases. Funding Agency: **Center for Disease Control and Prevention. Co-PI.** with John Drake (Co-PI, ORNL), Yang Liu (PI, Emory) 2009-2013
30. Synergy of Satellite/Surface Observations and Light-Scattering/Radiative-Transfer Modeling for Aerosol Research. Funding Agency: **Goddard Space Flight Center/NASA. PI.** 2009-2012
29. Evaluation of Strategies to Mitigate Public Health, Climate, and Life-Cycle Damages from Electricity Generation Using Power Plant 2011-2012

- Dispatch, Risk Assessment, and Life Cycle Assessment. Funding Agency: **Harvard University School of Public Health. PI.**
28. Truck Technology Efficiency Assessment. Funding Agency: **Federal Highway Safety Administration through ORNL. PI.** 2011-2012
27. Short-Term Strategies to Develop Input Data for MOVES2010a for Transportation Conformity analyses and the State Implementation Plans. Funding Agency: **Tennessee Department of Transportation. PI.** 2011-2012
26. Evaluating the Impacts of Biomass Feedstock Transportation on Air Quality and Traffic Safety: A Case Study of Tennessee. Funding Agency: **Southeastern Transportation Center. PI.** April 1-Sept. 30, 2011
25. Global Change and Air Pollution (GCAP) Phase 2: Implications for U.S. Air Quality and Mercury Deposition of Multiple Climate and Global Emission Scenarios for 2000-2050. Funding Agency: **USEPA STAR. Co- PI.** with Daniel Jacob (PI, Harvard) 2007-2011
24. CO₂ and Chemical Transport Modeling using GEOS-5 numerical simulations. Funding Agency: **Oak Ridge National Laboratory. PI.** 2009-2011
23. Climate Change Impacts on Energy Infrastructures - Regional Analysis and Local Impacts. **JDRD/DOE/ORNL. PI.** 2010-2011
22. Risk-Based Prioritization Among Air Pollution Control Strategies in Yangtze River Delta, China: World Expo 2010 as a Case Study. Funding Agency: **Harvard University/Energy Foundation. Co-PI** with Jonathan Levy (PI, Harvard SPH) 2009-2010
21. Air Quality Policy Issues – Policies to Reduce Diesel Truck Highway Emission. Funding Agency: **Tennessee Department of Transportation. Co-PI.** with Kevin Robinson. 2010-2011
20. Technical Support on USEPA’s Proposed Transport Rule. Funding Agency: Shaw/Exelon 2010-2011
19. Development of New PATH Air Policy and Decision System for Hong Kong Environmental Protection Department. Funding Agency: **Hong Kong Government. Co-PI.** with Ralph Morris (ENVIRON), 2007-2010
18. Improving Heavy Truck Ergonomics to Reduce Fatigue and Improve Driver Health and Performance. Funding Agency: **USDOT Federal Motor Carrier Safety Administration (FMCSA). PI.** 2007-2009
17. Conducting Air Quality Services in 2007 – 2009 for Air Pollution 2007-2009

- Control Division, the State of Tennessee. Funding Agency: **Air Quality Division of Tennessee Department of Environmental Conservation. Co-PI** with Terry Miller.
16. Intercontinental Transport and Climatic Effects of Air Pollutants (Phase 3). Funding Agency: **USEPA Office of Air Quality Planning and Standards (OAQPS). Co-PI** with Robert Zerbonia (PI. Research Triangle Institute) 2005-2009
 15. Investigate Aerosol Pollution in Pearl River Region and Beijing. Funding Agency: **Hong Kong University of Science and Technology. PI.** 2007-2008
 14. US-China Bilateral Air Quality Management: Air Quality Modeling Assessment for 2008 Olympic Game in Beijing, China. Funding Agency: **USEPA OAR. PI.** 2005-2008
 13. Application of a Unified Aerosol-Chemistry-Climate GCM to Understand the Effects of Changing Climate and Global Anthropogenic Emissions on U.S. Air Quality. Funding Agency: **USEPA. Co-PI** with Daniel Jacob (PI, Harvard)(**EPA STAR Grant**) 2003-2006
 12. Development and Maintenance of Emission Inventories and PM_{2.5} Modeling. Funding Agency: **Air Pollution Control Division, Department of Environmental Conservation, State of Tennessee. Co-PI.** with Terry Miller (PI, UT). 2006-2007
 11. Characterizing Heavy-duty Truck Air Quality Impacts by Ambient Air Monitoring. Funding Agency: **ORNL/FHWA. PI.** 2004-2006
 10. China Integrated Environmental Strategy and Air Quality Modeling. Funding Agency: **National Renewable Energy Laboratory/DOE. PI.** 2005-2006
 9. US-Taiwan Bilateral Project on Air Quality Modeling Assessment and Cost-Effective Control Strategies. Funding Agency: **USEPA Office of International Affairs (OIA). PI.** 2004-2005
 8. Development of Local Scale Modeling of Air Toxics. Funding Agency: **USEPA/University of Houston. PI.** 2002-2005
 7. Intercontinental Transport and Climatic Effects of Air Pollutants (Phase 2). Funding Agency: **USEPA Office of Air Quality Planning and Standards (OAQPS). Co-PI** with Hanna Adel (PI. UNC-Environmental Modeling Center) 2003-2004
 6. United States-Taiwan Bilateral Project on Air Quality Modeling and Emission Tools. Funding Agency: **USEPA Office of International** 2002-2003

Affairs. PI.

5. Demonstration Project of National Air Quality Modeling Assessment in China. Funding Agency: **USEPA/OAQPS. PI.** 2002-2003
4. Emission Processing for Air Quality Modeling in the Houston Metropolitan Area. Funding Agency: **USEPA/University of Houston. PI.** 2002
3. Real-Time Large Scale Monitoring and Tracking for Ozone Mapping System: EMPACT Project-**USEPA.** 1999-2000
2. Web Applications and Database Management for Particulate Matter Research Program-Funding Agency: **USEPA** Office of Research and Development. **PI.** 1999-2000
1. Information Technology Applications for Data Storage Management-U.S. **EPA AIRNOW** National Computer Center. Operation budget. 1999-2000

PUBLICATIONS**Authored Books**

Air Quality, Fifth Edition. Thad Godish, Wayne T. Davis, **Joshua S. Fu**, CRC Press, 2015

Referred journal publications (*: serve as advisor or mentor; +: advisee or mentee)

103. Streets, D. G., **J. S. Fu**, C. Jang, J. Hao, K. He, X. Tang, Y. Zhang, Z. Li⁺, Q. Zhang⁺, L. Wang⁺, B. Wang, and C. Yu (2007). **Air quality during the 2008 Beijing Olympic games.** *Atmospheric Environment*, 41, (3), 480-492.
<http://dx.doi.org/10.1016/j.atmosenv.2006.08.046>
Highlighted in Editor's Choice on Atmospheric Science Research: Clean Competition, *Science*, vol 314, November 24.
Awarded and certificated "Most Cited Article" Atmospheric Environment 2007-2012. One of the Top 10 downloaded articles in Atmospheric Environment journal since the journal started. (SCI, IF=3.11)
102. Winston, R. J., A. P. Smolek, J. D. Dorsey, J. M. Hathaway, **J. S. Fu**, and W. F. Hunt (2015). Modeling the Hydrologic Performance of Bioretention Stormwater Controls under Climate Change Scenarios in Ohio, USA. *Water Research* (submitting)
102. Dong, X., **J. S. Fu**, K. Huang, and D. Tong (2015). Model development of dust emission and heterogeneous chemistry within the Community Multiscale Air Quality modeling system and its application over East Asia. *Atmospheric Chemistry and Physics Discussion* (in review)

101. Chuang⁺, M.-T., **J. S. Fu**, C.-T. Lee, N.-H. Lin, **Y. Gao**⁺, S.-H. Wang, G.-R. Sheu, T.-C. Hsiao, J.-L. Wang, M.-C. Yen, T.-H. Lin, N. Thongboonchoo (2015). Simulating the long-range transport biomass burning plume approaching a high-mountain observatory in East Asia during the 7-SEAS/2010 Dongsha Experiment. *Aerosol and Air Quality Research* (accepted)
100. Allen, M., S. J. Fernandez, **J. S. Fu** (2015). Impacts of Climate Change on Sub-regional Electricity Demand and Distribution. *Nature Energy* (in review)
99. Li, N., T.-M. Fu, J. J. Cao, J. Y. Zheng, Q. Y. He, X. Long, Z. Z. Zhao, N. Y. Cao, J. S. Fu, and Y. F. Lam⁺ (2015). Observationally-constrained carbonaceous aerosol source estimates for the Pearl River Delta area of China. *Atmospheric Chemistry and Physics Discussion* (in revision)
98. Li, C., N. C. Hsu, A. M. Sayer, N. A. Krotkov, J. S. Fu; L. N. Lamsal, J. Lee, S.-C. Tsay (2015). Satellite observation of pollutant emissions from gas flaring activities near the Arctic. *Atmospheric Environment* (submitted)
97. Stowell, Jennifer D., Young-min Kim, Yang Gao, **Joshua S. Fu**, Howard H. Chang, Ying Zhou, Yang Liu (2015). Emissions mitigation may offset ozone-related mortality due to climate change. *Environmental Research Letters* (in review)
96. Wang, Q., G. Zhuang, K. Huang, T. Liu, C. Deng, Q. Fu, **J. S. Fu**, J. Chen (2016). Evolution of particulate sulfate and nitrate along the Asian dust pathway: secondary transformation and primary pollutants via long-range transport. *Atmospheric Research*. Volume 169, Part A, 86–95.
[doi:10.1016/j.atmosres.2015.09.013](https://doi.org/10.1016/j.atmosres.2015.09.013)
95. Yu, E., B. English, L. Xia, J. Larson, J. Calcagno⁺, **J. S. Fu**, B. Wilson (2015). Analyzing Economic and Environmental Performance of Switchgrass Biofuel Supply Chains. *BioEnergy Research* DOI: 10.1007/s12155-015-9699-6
94. Li⁺, J., Q. Fu⁺, J. Huo, D. Wang, W. Yang, Q. Bian, Y. Duan, Y. Zhang, J. Pan, Y. Lin, K. Huang⁺, S-H Wang, **J. S. Fu**^{*}, P. K.K. Louie (2015). Tethered Balloon-Based Black Carbon Profiles within the Lower Troposphere of Shanghai in the 2013 East China Smog. *Atmospheric Environment*
[doi:10.1016/j.atmosenv.2015.08.096](https://doi.org/10.1016/j.atmosenv.2015.08.096)
93. Wang, J., S. X. Wang, S. A. Voorhees, B. Zhao⁺, C. Jang, J. Jiang, **J. S. Fu**, D. Dian, Y. Zhu, J. M. Hao (2015). Assessment of short-term PM_{2.5}-related mortality due to different emission sources in the Yangtze River Delta, China. *Atmospheric Environment*. DOI:10.1016/j.atmosenv.2015.05.060
92. Dian Ding, Yun Zhu, Carey Jang, Che-Jen Lin, Shuxiao Wang, **Joshua S. Fu**, Jian Gao, Shuang Deng, Junping Xie, Xuezhen Qiu. Evaluation of Health Benefit Using BenMAP-CE with an integrated scheme of Model and Monitor Data during Guangzhou Asian Games. *Journal of Environmental Sciences*,

[doi:10.1016/j.jes.2015.06.003](https://doi.org/10.1016/j.jes.2015.06.003) (in press)

91. Huang⁺, K. **J. S. Fu**^{*}, V.Y. Prikhodko, J. M. Storey, A. Romanov, E. L. Hodson, J. Cresko, I. Morozova, Y. Ignatieva (2015). Russian anthropogenic black carbon: Emission reconstruction and Arctic black carbon simulation. *Journal of Geophysical Research – Atmospheres*, 120, DOI: 10.1002/2015JD023358
90. Wang⁺, L., Z. Wei, W. Wei, **J. S. Fu**, C. Meng and S. Ma (2015). Source Apportionment of PM_{2.5} in Top Polluted Cities in Hebei, China Using the CMAQ Model. *Atmospheric Environment*, 122, 723-736
[doi:10.1016/j.atmosenv.2015.10.041](https://doi.org/10.1016/j.atmosenv.2015.10.041)
89. Qiu, X., Y. Zhu, C. Jang, C.-J. Lin, S.X. Wang, **J. S. Fu**, J. Xie, J. Wang, D. Ding, S. Long (2015). Development of an integrated policy making tool for assessing air quality and human health benefits of air pollution control. *Front. Environ. Sci. Eng.*, December 2015, Volume 9, Issue 6, pp 1056-1065
DOI 10.1007/s11783-015-0796-8
88. Wang, Q., G. Zhuang, K. Huang⁺, T. Liu⁺, C. Deng, J. Xu, Z. Guo, Y. Chen, Q. Fu⁺, **J. S. Fu**, J. Chen (2015). Probing the severe haze pollution in three typical regions of China: characteristics, sources and regional impacts. *Atmospheric Environment*. 120, 76-88. [doi:10.1016/j.atmosenv.2015.08.076](https://doi.org/10.1016/j.atmosenv.2015.08.076)
87. Pino-Cortés, Ernesto, Luis A. Díaz-Robles, Francisco Cubillos, **Joshua S. Fu**, and Alberto Vergara-Fernández. (2015). Sensitivity Analysis of Biodiesel Blends on Benzo[a]pyrene and main Emissions using MOVES: A case study in Temuco, Chile. *Science of the Total Environment*. Vol 537, 352-359.
[doi:10.1016/j.scitotenv.2015.07.143](https://doi.org/10.1016/j.scitotenv.2015.07.143)
86. Dong⁺, X. and **J. S. Fu**^{*} (2015). Understanding biomass burning from Peninsular Southeast Asia, part I: model evaluation and analysis of systematic errors. *Atmospheric Environment*. 116, 293-307. [doi:10.1016/j.atmosenv.2015.06.026](https://doi.org/10.1016/j.atmosenv.2015.06.026)
85. Dong⁺, X. and **J. S. Fu**^{*} (2015). Understanding interannual variations of biomass burning from Peninsular Southeast Asia, part II: variability and different influences in lower and higher atmosphere levels. *Atmospheric Environment*. 115, 9-18. <http://dx.doi.org/10.1016/j.atmosenv.2015.05.052>
84. Chuang, M-T⁺, **J. S. Fu**^{*}, Lin, N-H., Lee, C-T, Gao, Y., Wang, S-H, Sheu, G-R, Hsiao, T-C, Wang, J-L, Yen, M-C, Lin, T-H, Thongboonchoo, N., Chen, W-C. (2015). Simulating transport and chemical evolution of biomass burning pollutants originating from Southeast Asia during 7-SEAS/2010 Dongsha Experiment. *Atmospheric Environment*. 112, 294-305.
[doi:10.1016/j.atmosenv.2015.04.055](https://doi.org/10.1016/j.atmosenv.2015.04.055)
83. Sun⁺, J., **J. S. Fu**^{*}, K. Huang⁺, Y. Gao⁺ (2015). Estimation of future PM_{2.5}- and ozone-related mortality over the continental US in a changing climate: An application of high-resolution dynamical downscaling technique. *Journal of Air*

and Waste Management Association. Vol. 65, Issue 5, 611-623.
DOI:10.1080/10962247.2015.1033068

82. Wong, D. C., C. E. Yang⁺, **J. S. Fu**, K. Wong, and Y. Gao⁺ (2015). An Approach to Enhance pnetCDF Performance in Environmental Modeling Applications. *Geoscientific Model Development*. 8, 1033–1046, doi:10.5194/gmd-8-1033-2015
81. Dong⁺, X., M. Tschantz, **J. S. Fu**^{*} (2015). Estimating Evaporative Vapor Generation From Automobiles Based on Parking Activities. *Environmental Pollution*. Volume 202, 104–111, doi:10.1016/j.envpol.2015.03.010
80. Wang, H., Y. Zhu, C. Jang, C-J, Lin, S. Wang, **J.S. Fu**, J. Gao, S. Deng, J. Xie, D. Ding, X. Qiu, S. Long (2015). Design and demonstration of a next-generation air quality attainment assessment system for PM_{2.5} and O₃. *Journal of Environmental Sciences*. DOI: 10.1016/j.jes.2014.08.023
79. Zhao⁺, B., S. X. Wang, K. Fu, J. Xing, **J. S. Fu**^{*}, C. Jang, Y. Zhu, X. Y. Dong⁺, Y. Gao⁺, W. J. Wu, and J. M. Hao (2015). Assessing the nonlinear response of fine particles to precursor emissions: development and application of an Extended Response Surface Modeling technique (ERSM v1.0). *Geoscientific Model Development*. 8, 115-128, doi:10.5194/gmd-8-115-2015
78. Zhu, Y., Y. Lao, C.J. Jang, C-J, Lin, J. Xing, S. Wang, **J. S. Fu**, S. Deng, J. Xie, S. Long (2015). Development and case study of a science-based software platform to support policy making on air quality. *Journal of Environmental Sciences*. Vol 27, 97-107. DOI: 10.1016/j.jes.2014.08.016 (SCI, IF=1.92)
77. Kim, Y.-M., Y. Zhou, Y. Gao⁺, **J. S. Fu**, B. A. Johnson, C. Huang, Y. Liu (2014). Spatially resolved estimation of ozone-related mortality in the United States under two Representative Concentration Pathways (RCPs) and their uncertainty, *Climatic Change*. Volume 128, Issue 1-2, pp 71-84. DOI: 10.1007/s10584-014-1290-1
76. Huang⁺, K., **J. S. Fu**^{*}, E. L. Hodson, X. Dong, J. Cresko, V. Y. Prikhodko, J. M. Storey, M.-D. Cheng (2014). Identification of Missing Anthropogenic Emission Sources in Russia: Implication for Modeling Arctic Haze, *Aerosol and Air Quality Research*. 14: 1799–1811. DOI: 10.4209/aaqr.2014.08.0165
75. Allen⁺, M. S., S. J. Fernandez, **J. S. Fu**^{*}, K. A. Walter (2014). Electricity Demand Evolution Driven by Storm Motivated Population Movement, *Journal of Geography and Natural Disaster*. 4:126, 1-10. doi:10.4172/2167-0587.1000126.
74. Hathaway, J. M., R. Brown, **J. S. Fu**, W. Hunt (2014). Bioretention Function Under Climate Change Scenarios in North Carolina, USA. *Journal of Hydrology*. Volume 519, Part A, Pages 503–511. DOI: 10.1016/j.jhydrol.2014.07.037

73. LaClair, T., J. Calcagno⁺, **J. S. Fu** (2014). Development of a Short-Duration Drive Cycle to Represent Long-Term Measured Drive Cycle Data for the Evaluation of Truck Efficiency Technologies in Class 8 Tractor-Trailers. *Transportation Research Record: Journal of the Transportation Research Board*. No. 2428, 63-74.
72. Lin, Y., K. Huang⁺, G. Zhuang, **J. S. Fu**, Q. Wang, T. Liu⁺, C. Deng, Q. Fu⁺ (2014). A multi-year evolution of aerosol chemistry impacting visibility and haze formation over an Eastern Asia megacity, Shanghai. *Atmospheric Environment*. 92, 76-86. <http://dx.doi.org/10.1016/j.atmosenv.2014.04.007> (SCI, IF=3.11)
71. Langan, R., R. Archibald, M. Plumlee, S. Mahajan, D. Ricciuto, C. Yang⁺, R. Mei, J. Mao, X. Shi, **J. S. Fu** (2014). Stochastic Parameterization to Represent Variability and Extremes in Climate Modeling, *Procedia Computer Science*. Volume 29, Pages 1146-1155, ISSN 1877-0509, <http://dx.doi.org/10.1016/j.procs.2014.05.103>.
70. Buonocore, J. J., X. Dong⁺, J. D. Spengler, **J. S. Fu**, J. I. Levy (2014). Using the Community Multiscale Air Quality (CMAQ) Model to Estimate Public Health Impacts of PM_{2.5} from Individual Power Plants. *Environment International*. Volume 68, 200-208. <http://dx.doi.org/10.1016/j.envint.2014.03.031> (SCI, IF=6.248)
69. Li⁺, L., C. Huang, H.Y. Huang, Y.J. Wang, R.S. Yan, G.F. Zhang, M. Zhou, S.R. Lou, S.K. Tao, H.L. Wang, L.P. Qiao, C.H. Chen, D.G. Streets, **J.S. Fu*** (2014). An integrated process rate analysis of a regional fine particulate matter episode over Yangtze River Delta in 2010. *Atmospheric Environment*. Volume 91, Pages 60–70. <http://dx.doi.org/10.1016/j.atmosenv.2014.03.053> (SCI, IF=3.11)
68. Dong⁺, X., J. Li⁺, **J. S. Fu***, Y. Gao, K. Huang⁺, G. Zhuang (2014). Inorganic aerosols responses to emission changes in Yangtze River Delta, China. *Science of the Total Environment*. Volume 481, Pages 522–532. <http://dx.doi.org/10.1016/j.scitotenv.2014.02.076> (SCI=3.286)
67. Sun⁺, J., J. Schreifels, J. Wang, **J. S. Fu***, S. Wang (2014). Cost estimate of multi-pollutant abatement from the power sector in the Yangtze River Delta region of China. *Energy Policy*. <http://dx.doi.org/10.1016/j.enpol.2014.02.007> (SCI, IF=2.743)
66. Wu, J., Y. Zhou, Y. Gao⁺, **J. S. Fu**, B. A. Johnson, C. Huang, Y.-M. Kim, and Y. Liu (2014). The Time Trend Temperature–Mortality as a Factor of Uncertainty Analysis of Impacts of Future Heat Waves: Wu et al. Respond. *Environmental Health Perspectives*. Volume: 122 Issue: 5 Pages: A118-A119. DOI:10.1289/ehp.1308042R (SCI, IF=7.01)
65. Díaz-Robles⁺, L.A., **J. S. Fu***, L. N. Schiappacasse, P. Etcharren, G. D. Reed, M. P. Silva (2014). Health risks caused by short term exposure to ultrafine particulate matter generated by residential wood combustion: a case study of

- Temuco, Chile. *Environment International*. Volume 66, Pages 174–181.
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86. **Fu, J. S.**, Y. Gao, J. B. Drake, Y. Liu, J-F Lamarque (2013). Study of regional extreme climate and its impact on air quality in US. 12th Annual CMAS

Conference, Chapel Hill, NC, October 28-30.

85. Zhang, Y., L. Bielory, Z. Mi, T. Cai, Y. Gao, L. R. Leung, **J. S. Fu**, P. G. Georgopoulos (2013). Modeling climate change effects on spatiotemporal dynamics of allergenic *Ambrosia* (ragweed) and *Artemisia* (mugwort) pollen in the Contiguous US (CONUS). 12th Annual CMAS Conference, Chapel Hill, NC, October 28-30.
84. Huang, K., **J. S. Fu**, X. Dong (2013). Assessment of black carbon in the Arctic: new emission inventory of Russia, model evaluation and implications. 12th Annual CMAS Conference, Chapel Hill, NC, October 28-30.
83. **Fu, J. S.**, Y. Gao, J. B. Drake and J-F Lamarque (2013). More Intense and Frequent Heat Waves Under Representative Community Pathways in the 21st Century. A&WMA's 106th Annual Conference, Chicago, Illinois, June 25-28.
82. **Fu, J. S.**, Y. Gao, J. B. Drake, J-F Lamarque and Y. Liu (2013). High Resolution Modeling Studies of Extreme Weather Events. A&WMA's 106th Annual Conference, Chicago, Illinois, June 25-28.
81. Luis Diaz, **J. S. Fu**, G. D. Reed (2013). Source Apportionment of Ultrafine Particles in Temuco, Chile, Using Chemical Mass Balance Receptor Modeling and MOUDI Sampling. A&WMA's 106th Annual Conference, Chicago, Illinois, June 25-28.
80. Luis Diaz, **J. S. Fu**, G. D. Reed (2013). Physic-chemical Characterization of the 11 Most Used Trees in Chile for Residential Wood Combustion. A&WMA's 106th Annual Conference, Chicago, Illinois, June 25-28.
79. **Fu, J. S.**, X. Dong, K. Huang, Y. Gao, C. J. Jang (2012). Using Hemispheric-CMAQ to Provide Initial and Boundary Conditions for Regional Model Application. 11th Annual CMAS Conference, Chapel Hill, NC, October 15-17.
78. Huang, K., **J. S. Fu**, N. C. Hsu, Y. Gao, X. Dong, S.-C. Tsay, Y. F. Lam (2012). Modeling impact of biomass burning on air quality in Southeast and East Asia. 11th Annual CMAS Conference, Chapel Hill, NC, October 15-17.
77. Gao, Y., **J. S. Fu**, J. B. Drake, Y. Liu, J.-F. Lamarque, K. Huang, X. Dong and D. Wong (2012). Improvement of extreme climate predictions from dynamical climate downscaling. 11th Annual CMAS Conference, Chapel Hill, NC, October 15-17.
76. Dong, X., **J. S. Fu**, C. J. Jang, and H-C Lai, and C-K Liang (2012). Assessment of air quality response to anthropogenic emission changes over Taiwan using response surface modeling method. Poster. 11th Annual CMAS Conference, Chapel Hill, NC, October 15-17.
75. Gao, Y., **J. S. Fu**, J. Drake and Y-F Lam (2011). Regional Climate Downscaling

Study in Eastern United States. 10th Annual CMAS Conference, Chapel Hill, NC, October 24-26.

74. Lam, Y.-F., **J. S. Fu**, D. J. Jacob, C. Jang and P. Dolwick (2011). Evaluation of effects of stratospheric ozone to policy relevant background ozone. 10th Annual CMAS Conference, Chapel Hill, NC, October 24-26.
73. Gao, Y., **J. S. Fu**, J. B. Drake, Y. Lam (2011). Downscale Global Climate Modeling to Study a Finer Resolution of Regional Climate. A&WMA's 104th Annual Conference, Orlando, Florida, June 21-24.
72. Gao, Y., **J. S. Fu**, Y.-F. Lam, J. Drake and K. Evens (2010). Dynamical Downscaling of CCSM Using WRF/CMAQ. 9th Annual CMAS Conference, Chapel Hill, NC, October 11-13.
71. Lam, Y.-F. **J. S. Fu**, D. J. Jacob, C. J. Jang and P. Dolwick (2010). 2006-2008 GEOS-Chem Simulations for CMAQ Initial and Boundary Conditions. 9th Annual CMAS Conference, Chapel Hill, NC, October 11-13.
70. Li, J., **J. S. Fu**, Y. Gao, G. Zhuang, K. Huang, Y. Zhou, X. Dong (2010). Response of fine aerosol to reduce precursor emissions and its implication to air pollution control strategy in Yangtze River Delta (YRD), China. 9th Annual CMAS Conference, Chapel Hill, NC, October 11-13.
69. **Fu, J. S.**, J. Calcagno and W. T. Davis (2010). Measurement of Noise Level, Whole-body Vibration from Driver and Passenger Seats and Air Quality in the Cabin of Heavy-duty Diesel Vehicles. International Conference on Commercial Driver Health and Wellness. Baltimore, Maryland. November 8–10. Baltimore, Maryland
68. Kim, Y. and **J. S. Fu** (2010). Response of daily maximum 8 hour ozone and RRFs (Relative Response Factors) to changes in meteorological schemes: A comparison of seven scenarios. A&WMA's 103th Annual Conference, Calgary, Canada, June 22-25.
67. Diaz-Robles, L. A., N. Araneda, I. Pérez, N. Schiappacasse, **J. S. Fu** (2010). Polycyclic Aromatic Hydrocarbons (PAHs) Changes Posed by Residential Wood Combustion Scenarios on an Urban Area: an Application in Temuco, Chile. A&WMA's 102th Annual Conference, Calgary, Canada, June 22-25.
66. **Fu, J. S.**, J. Calcagno, W. T. Davis (2010). Evaluation of Noise Level, Whole-body Vibration and Air Quality inside the Cab of Heavy-Duty Diesel Vehicles during Conditions of Parked Engine-idling and On-road Driving, The 89th Transportation Research Board Meeting, Washington, D. C. January 11-15.
65. Lam, Y.-F., **J. S. Fu**, L. J. Mickley, S. Wu, D. G. Streets, D. J. Jacob, D. Rind (2009). The effects of Climate Change to the Future Air Quality in United States. 8th Annual CMAS Conference, Chapel Hill, NC, October 19-21.

64. Kim, Y., **J. S. Fu**, T. L. Miller (2009). Impacts of Meteorological Variations on RRFs (Relative Response Factors) in the Demonstration of Attainment of the National Ambient Air Quality for 8-hr O₃ and PM_{2.5}. 8th Annual CMAS Conference, Chapel Hill, NC, October 19-21.
63. Gao, Y., Y.-F. Lam, **J. S. Fu** (2009). Impact of Emissions on intercontinental long-range transport. 8th Annual CMAS Conference, Chapel Hill, NC, October 19-21.
62. Gao, Y., **J. S. Fu**, Y.-F. Lam, R. Park, D. J. Jacob and Y. Li (2009). Impact of Intercontinental Long Range Transport and Local Emissions on Ozone. A&WMA's 102th Annual Conference, Detroit, Michigan, June 16-19.
61. Du, Y., Y.-F. Lam, **J. S. Fu** (2009). 2006 Updated Asian Emission Inputs for CMAQ Fine Resolution Simulation. A&WMA's 102th Annual Conference, Detroit, Michigan, June 16-19.
60. Calcagno, J. A. III, **J. S. Fu**, C. J. Campbell, W. T. Davis (2009). Heavy-Duty Diesel Vehicle In-Cab Air Quality during Long Duration Engine Idling and while Hauling Freight On-road. A&WMA's 102th Annual Conference, Detroit, Michigan, June 16-19.
59. **Fu, J. S.**, Y.-F. Lam, L. J. Mickley, S. Wu, D. J. Jacob, D. Rind, D. G. Streets (2008) Effects of 2000-2050 Global Change Ozone Air Quality in the United States Using Models-3/CMAQ System. 7th Annual CMAS Conference, Chapel Hill, NC, October 6-8.
58. Kwok R., J. C.H. Fung, A. K.H. Lau; **J. S. Fu**, Z. S. Wang, G. Tonnessen (2008) PM Sulfate in Hong Kong. 7th Annual CMAS Conference, Chapel Hill, NC, October 6-8.
57. Lam, Y.-F., **J. S. Fu**, R. Park and D. J. Jacob (2008) Downscaling effects of GEOS-Chem as CMAQ Initial and Boundary Conditions: "Tropopause effect". 7th Annual CMAS Conference, Chapel Hill, NC, October 6-8.
56. Kim, Y., **J. S. Fu**, Terry Miller (2008) Impact on Ozone Prediction at a Fine Grid Resolution: An Examination of Nudging Analysis and PBL Schemes in Meteorological Model. 7th Annual CMAS Conference, Chapel Hill, NC, October 6-8.
55. Calcagno, J. A. III, **J. S. Fu**, and L. B. Brown, C. J., Campbell and L. Pan, W. T. Davis (2008) Evaluation of Noise and Emission Levels Inside the Cab of Heavy-Duty Diesel Vehicles During Conditions of Parked Engine Idling and On-Road Driving. A&WMA's 101th Annual Conference, Portland, Oregon, June 24-27.
54. **Fu, J. S.**, Carey J. Jang, David G. Streets, Zuopan Li, Roger Kwok, Rokjin Park, Zhiwei Han (2007). Model Inter-comparison to Evaluate Gaseous Pollutants in

- East Asia Using an Advanced Modeling System: Models-3/CMAQ System. 6th Annual CMAS Conference, Chapel Hill, NC, October 1-3.
53. Chuang, M.-T., **J. S. Fu**, C. J. Jang, P.-C. Ni, and C.-T. Lee (2007). Evolution of PM_{2.5} Components in the Long-range Transport Plume accompanied with the Southward Asian Continental Outflow. 6th Annual CMAS Conference, Chapel Hill, NC, October 1-3.
 52. Kwok, R., J. Fung, A. Lau, **J. S. Fu**, (2007). Urban Effects of Hong Kong and Pearl River Delta Region on Sulfur Cycle. 6th Annual CMAS Conference, Chapel Hill, NC, October 1-3.
 51. **Fu, J. S.**, C. J. Jang, D. G. Streets, Z. Li, L. Wang, Q. Zhang (2007). Assessing Regional Impacts of Particulate Matter in Beijing, China. A&WMA's 100th Annual Conference, Pittsburgh, June 26-29.
 50. Roger, K., J. Fung, A. Lau and **J. S. Fu** (2007). Air Quality Modeling in Hong Kong on Particulate Matters. A&WMA's 100th Annual Conference, Pittsburgh, June 26-29.
 49. Diaz, L., J. Ortega, R. Ramírez, **J. S. Fu**, and G. D. Reed (2007). A Hybrid ARIMA and Artificial Neural Networks Model to Forecast Particulate Matter in Urban Areas: The Case of Temuco, Chile. A&WMA's 100th Annual Conference, Pittsburgh, June 26-29.
 48. **Fu, J. S.**, M.-T. Chuang, C.-T. Lee, F.-L. Yeh, H.-C. Chien, C. J. Jang (2007) Quantifying Regional and Local Effects of Air Pollutants in Taiwan Region. The 10th International Conference on Atmospheric Sciences and Applications to Air Quality, Hong Kong, China, May 14 – 16.
 47. **Fu, J. S.**, C. J. Jang, Z. Li, R. Kwok, L. Wang, Q. Zhang, L. Li, D. G. Streets, Z. Han 46. J. Hao, K. He, A. Lau, J. Fung and C. Chen (2007). Regional/Urban Air Quality Modeling Assessment in China. Workshop on Regional Air Quality Management in Rapidly Developing Regions at Zhuhai, China, March 12-13.
 46. Parks, II, James E, John Morse Storey, Terry L. Miller, Joshua S. Fu, Boris, Hromis. (2007). Diesel Truck Idling Emissions – Mobile Source Air Toxics Measured at a Hot Spot. Transportation Research Board 86th Annual Meeting. Proceedings of the Transportation Research Board Meeting, Washington DC. 14p.
 45. **Fu, J. S.**, C. J. Jang, D. G. Streets, Z. Li, J. Hao, K. He, L. Wang, Q. Zhang (2006). Utilizing CMAQ Modeling to Assess Regional Impacts of Air Pollutants in Beijing Area. 5th Annual CMAS Conference, Chapel Hill, NC, October 16-18.
 44. Lin, C.-J., P. Pongprueksa, T. Vanjani, C. Jang, T. C. Ho, J.-H. Woo, D. G. Streets, **J. S. Fu**, and H. Chu (2006). Trans-Pacific Chemical Transport of Mercury: Sensitivity Analysis on Potential Asian Emission Contribution to

- Mercury Deposition in North America Using CMAQ-Hg. 5th Annual CMAS Conference, Chapel Hill, NC, October 16-18.
43. **Fu, J. S.** (2006). Tourism, Transportation and Environment. 13th Recent Advances in Retailing & Services Science Conference, Budapest, July 9-12.
 42. **Fu, J. S.** (2006). Air Quality Modeling Assessment and Planning in Taiwan. A&WMA's 99th Annual Conference, New Orleans, June 20-23
 41. Díaz-Robles, L.A., **J. S. Fu**, and G. D. Reed (2006). "Health Risk Assessment Posed by Primary Diesel Particulate Matter and Vapor Air Toxics in Southeastern US", Peer Review Proceedings: A&WMA's 99th Annual Conference & Exhibition 2006, New Orleans, Louisiana, US, 417-425. June 20-23.
 40. Díaz-Robles, L.A., **J. S. Fu**, and G. D. Reed (2006). "Seasonal Distribution and Modeling of Diesel Particulate Matter in the Southeast US", Peer Review Proceedings: A&WMA's 99th Annual Conference & Exhibition 2006, New Orleans, Louisiana, US. 491-499. June 20-23.
 39. Miller, T., **J. S. Fu**, B. Hromis, J. Storey, and J. Parks (2006). Air Monitoring at a PM2.5 Hot Spot Caused by Diesel Truck Emissions. A&WMA's 99th Annual Conference, New Orleans, June 20-23.
 38. **Fu, J. S.**, L. Diaz and G. Reed, (2006). Seasonal Distribution and Modeling of Diesel Particulate Matter in the Southeast US. East Tennessee Ozone Study 2006 Science Workshop, Oak Ridge, TN, May 17-18.
 37. **Fu, J. S.**, C. J. Jang, D. G. Streets, Z. Li, K. He, L. Wang, Q. Zhang, J.-H. Woo (2005). Regional/Urban Air Quality Modeling in Beijing and Shanghai. 4th Annual CMAS Conference, UNC-Chapel Hill, September 26-28.
 36. Z. Li, **J. Fu**, C. Jang, B. Wang, R. Mathur, L. Wang, Q. Zhang, R. Park and D. J. Jacob (2005). Development of GEOS-CHEM/CMAQ Interface and Comparison Studies Over China During the Episode July 2001, 4th Annual CMAS Conference, UNC-Chapel Hill, September 26-28.
 35. **Fu, J. S.**, H. Chien, C. Jang, H. Leu (2005). Air Quality Modeling Assessment and Planning in Taiwan. Peer Review Proceedings: A&WMA's 98th Annual Conference, Indianapolis, IN, June 21-24.
 34. **Fu J. S.** and R. Gopal (2005). Air Toxic Emissions Distribution and Performance of the Third Generation "CMAQ Air Toxic Model" – A Case study of the Houston region in Texas. Peer Review Proceedings: A&WMA's 98th Annual Conference, Indianapolis, IN, June 21-24.
 33. **Fu, J. S.**, C. J. Jang, D. G. Streets, Z. Li, K. He, L. Wang, Q. Zhang, J.-H. Woo (2005). Regional/Urban Air Quality Modeling in China. Pearl River Delta

Regional Air Quality Management Capacity Building Workshop, May 30-31.

32. **Fu, J. S.**, Y. Kim, W. T. Davis, T. L. Miller (2005). Quality Improvement for Ammonia Emission Inventory. 14th International Emission Inventory Conference-"Transforming Emission Inventories - Meeting Future Challenges Today", Las Vegas, Nevada, April 11 – 14.
31. Diaz, L., **J. S. Fu**, and G. D. Reed (2005). Source Apportionment of Diesel Particulate Matter in the Southeastern United States Using Models3/CMAQ. 14th International Emission Inventory Conference-"Transforming Emission Inventories - Meeting Future Challenges Today", Las Vegas, Nevada, April 11 – 14.
30. **Fu, J. S.**, C. Jang, D. G. Streets (2004). National/Regional Air Quality Modeling Assessment in China Using An Advanced Air Quality Modeling System. Referred Proceedings: 13th World Clean Air and Environmental Protection Congress, London, August 22-27.
29. **Fu, J. S.**, H.-G. Leu, H.-C. Chien and C. Jang (2004). Advanced Air Quality Modeling in Taiwan: Local and Transported Pollutants. Peer Review Proceedings: 13th World Clean Air and Environmental Protection Congress, London, August 22-27.
28. Chen, R. and **J. S. Fu**, (2004). The Uses of Geographic Information Systems in Tourism Destination Development: Visibility, Visitation, and Projection. 11th Recent Advances in Retailing & Services Science Conference, Prague, July 10-14.
27. Díaz, L. A., D. S. Greene, G. D. Reed, and **J. S. Fu** (2004). The Effect of Switching Mobile Sources to Natural Gas on the Ozone in the Great Smoky Mountains National Park. Peer Reviewed Proceedings: A&WMA's 97th Annual Conference, Indianapolis, IN, June 22-25.
26. Gopal, R., **J. S. Fu**, T. L. Miller and D. Byun (2004). Air Toxics Emissions and Processing: A Case Study of Houston area, Texas. Peer Reviewed Proceedings: A&WMA's 97th Annual Conference, Indianapolis, IN, June 22-25.
25. Calcagno, J., N. Lam, **J. S. Fu**, T. L. Miller, and W. T. Davis (2004). Evaluating the Impact of a Highway Corridor Proposal on the Air Quality in the Great Smoky Mountain National Park using the CMAQ Modeling System. Peer Reviewed Proceedings: A&WMA's 97th Annual Conference, Indianapolis, IN, June 22-25.
24. Doraiswamy, P., W. T. Davis, **J. S. Fu** and T. L. Miller (2004), Contribution of On-Road Mobile Sources to PM_{2.5} and Ozone in Eastern TN. Peer Reviewed Proceedings: A&WMA's 97th Annual Conference, Indianapolis, IN, June 22-25.
23. Miller, T. L., W. T. Davis, G. D. Reed, P. Doraiswamy, **J. S. Fu**, G. Indale and A. Goldberg (2004). Ozone Impacts in a National Park Due to Transportation

- Emissions in The Gateway Communities. The 83th Transportation Research Board Meeting, Washington, D. C. January 11-15.
22. **Fu, J. S.**, H.G. Leu, H.C. Chien, and C. J. Jang (2003). Advanced Air Quality Modeling Assessment in Taiwan. Referred Proceedings of the 14th International Union Air Pollution Prevention and Environmental Protection Association, International Conference-Air Quality: Assessment and Policy at Local, Regional, and Global Scales. Dubrovnik, Croatia, October 6-10. pp. 255-260.
 21. **Fu, J. S.**, J.C., Jang, D.G. Streets, Q. Fu, and J.-H. Woo (2003). National/Regional Air Quality Modeling Assessment in China. Referred Proceedings of the 8th International Conference on Applications to Air Quality, Tsukuba, Japan. March 11-13.
 20. D.G. Streets, **J. S. Fu**, Q. Fu, J.C. Jang and J.-H. Woo (2003). An Inventory of Gaseous and Primary Aerosol Emissions in China to Support MODELS-3/CMAQ Applications. Proceedings of the 8th International Conference on Applications to Air Quality, Tsukuba, Japan. March 11-13.
 19. Miller, T. L., W. T. Davis, G. D. Reed, **J. S. Fu**, A. Tang, P. Doraiswamy (2002). Heavy-Duty Vehicle Characteristics in Tennessee- For Use in MOBILE6, Proceedings of the 95th Annual AWMA meeting in Baltimore, MD. June 23-27.
 18. **Fu, J. S.**, W. T. Davis, T. L. Miller, C. H. Norman (2002). A NIF-based Validation/QA Database Management System for the Tennessee Emission Inventory, Proceedings of International Emission Inventory Conference "Emission Inventories - Partnering for the Future," in Atlanta, GA. April 15-18.
 17. Miller, T. L., W. T. Davis, G. D. Reed, **J. S. Fu**, A. Tang, P. Doraiswamy (2002). The Effect of Personal Income on Vehicle Age and Vehicle Emissions, Proceedings of the Transportation Research Board Meeting, Washington DC. January 13-17.
 16. Chen, R.J.C. and **J. S. Fu** (2001). Comparing Forecasting Models in Tourism. Proceedings of Riding the Waves of Change in Learning and Technology, Proceedings of International Society of Travel and Tourism Educators (ISTTE), Vol 13, pp. 144-154.
 15. **Fu, J. S.**, E. D. Brill, Jr., S. Ranjithan, and J. W. Baugh (1999). Conjunctive Use of Air Quality Models to Develop Cost-Effective Control Strategies for Ozone Management, Proceedings of the AWMA 92th Annual Meeting and Exhibition, St. Louis, Missouri, June 20-24.
 14. Loughlin, D. H., J. W. Baugh, E. D. Brill, Jr., **J. S. Fu**, S. V. Kumar, R.N. Kurlagunda, and S. Ranjithan (1999). The Practicality of Using Genetic Algorithms in the Design of Ozone Control Strategies, Proceedings of by the A&WMA 92th Annual Meeting and Exhibition, St. Louis, Missouri, June 20-24.

13. Loughlin, D. H., E. D. Brill, Jr., and S. Ranjithan, and **S.-Y. Fu** (1997). Simulation of Air Quality Management Pollutant Trading Programs Using Mathematical Optimization, Proceedings of the International Symposium on the Emission Inventory: Planning for the Future, Research Triangle Park, North Carolina, October 28-30.
12. Chen, R. J. C., **S.-Y. Fu**, L. D. Gustke, and G. L. Brothers (1997). Tourism Marketing Strategy Development: The Application of Geographic Information Systems to the Analysis of Tourism Data, Proceedings of the Travel and Tourism Research Association 28th Annual Conference, Virginia Beach, Virginia, June 15-18.
11. Frey, H. C., M. D. Kini, S. Ranjithan, and **S. Y. Fu** (1996). Uncertainty, Bias, and Variability in Emission Factors for Light Duty Gasoline Vehicles, Proceedings of the 89th Annual Meeting and Exhibition of the Air & Waste Management Association, June 23-28.
10. **Fu, S.-Y.**, E. D. Brill, Jr., and S. Ranjithan (1996). A Hybrid Nonlinear Optimization Scheme for Decision Support in Air Quality Management, (invited section), Proceedings of the INFORMS Spring Meeting – Analysis To Support Public Sector Decision Making, Washington, DC, May 5-8.
9. Harrison, K.W., **S.-Y. Fu**, E. Solano-Mora, R.D. Dumas, S. Ranjithan, M.A. Barlaz, and E. D. Brill, Jr. (1996). Computer-Based Integrated Solid Waste Management System: A Decision Support System Prototype Demonstration, Proceedings of the INFORMS Spring Meeting – Analysis To Support Public Sector Decision Making, Washington, DC, May 5-8.
8. Frey, H. C., S. Ranjithan, M. D. Kini, and **S.-Y. Fu** (1995). Probabilistic Modeling of Highway Mobile Source Air Pollution Emissions, Proceedings of the International Conference on the Emission Inventory: Programs and Progress, RTP, NC, October.
7. Ranjithan, S. R., M. A. Barlaz, E. D. Brill, Jr, **S.-Y. Fu**, A. Kaneko, S. R. Nishtala, and H. R. Piechottka (1995). Integrated Solid Waste Management: 2. Decision Support System, Proceedings, Second Congress on Computing in Civil Engineering, ASCE, June, pp.1158-1165.pp.75-83.
6. Wen, C. G., **S.-Y. Fu**, H. H. Hwung, and Y. F. Chen (1991). Regulation and Monitoring of Ocean Outfalls on Kaohsiung Coastal Area, Proc. of 3rd IAWQ Regional Conference, ASIAN WATERQUAL '91-Development and Water Pollution Control, pp.6/7-12.
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4. Wen, C. G., **S.-Y. Fu**, Y. T. Shii, and T. M. Lee (1988). "The Planning of Water Quality Management on Tseng-wen River Basin", Proc. First Conference on Environment Planning and Management in R.O.C., Nov. pp.207-223.
3. **Fu, S.-Y.** (1987). "The Study of Water Quality Monitoring Data Management System of Water Supply", National Cheng Kung University, Environmental Engineering Department Publication No.7, June, pp.27-38.
2. Wen, C.G. and **S.-Y. Fu.** (1985). "The Transport of Landfill Leachates in Groundwater", Proc. 10 th Conf. on Wastewater Treatment Technology in R.O.C., Dec., pp.317-329.
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CONFERENCE PRESENTATIONS

Fu, J. S. (2015). Estimating Evaporative Emission from Automobiles. The ASAAQ13 Conference, Kobe, Japan. November 4-6.

Fu, J. S. (2015). Ozone-, PM2.5- and heat wave related mortality over continental US in a changing climate. 2015 Air Benefit and Cost and Attainment Assessment Conference, Guangzhou, China, June 24-25.

Fu, J. S. (2014). Cost estimate and control effect evaluation of multi-pollutant abatement from the power sector in the Yangtze River Delta region of China. 13th Annual CMAS Conference, Chapel Hill, NC, October 27-29.

Fu, J. S. (2014). Study of Regional Extreme Climate and Its Impact on Air Quality and Health in US. A&WMA's 107th Annual Conference, Long Beach, California, June 24-27.

Fu, J. S. (2014). The Importance of Multiple Anthropogenic Emission Control to Avoid Adverse responses on Air Quality over Yangtze River Delta, China 2014 ABaCAS Conference, Beijing, China, May 29-30.

Fu, J. S. (2013) Study of regional extreme climate and its impact on air quality in US. 12th Annual CMAS Conference, Chapel Hill, NC, October 28-30.

Fu, J. S. (2013) More Intense and Frequent Heat Waves Under Representative Community Pathways in the 21st Century. A&WMA's 106th Annual Conference, Chicago, June 25-28.

Fu, J. S. (2013) High Resolution Modeling Studies of Extreme Weather Events. A&WMA's 106th Annual Conference, Chicago, June 25-28.

Fu, J. S. (2013) Study of extreme weather events and climate impact on air quality in U.S. The International Conference on Air Pollution Control Benefit and Cost Assessment (ICAPC 2013). Hangzhou, China. June 6-7.

Fu, J. S. (2012) Using Hemispheric-CMAQ to Provide Initial and Boundary Conditions for Regional Model Application. 11th Annual CMAS Conference, Chapel Hill, NC, October 15-17.

Fu, J. S. (2012) Simulating Arctic Black Carbon with GEOS-Chem/CMAQ Modelling System in Russia, **22nd V.M. Goldschmidt Conference**, Montreal, Canada, June 29.

Fu, J. S. (2012) Assessment of Air Quality Benefit Under Sector Dependent Emission Control Strategies over Megacities in Yangtze River Delta (YRD), China, **Regional Air Quality Management Conference**, Shanghai, China. June 20.

Fu, J. S. (2010) Coupled Global and Regional Climate and Chemistry Models for Studying the Impacts in Human Health and Environment, Keynote Speaker for the International Symposium on Asian Dust/Aerosol and its Impact on the Global Climate Change. Shanghai, China. August 8-10.

Fu, J. S. (2010). Evaluation of Noise Level, Whole-body Vibration and Air Quality inside the Cab of Heavy-Duty Diesel Vehicles during Conditions of Parked Engine-idling and On-road Driving, The 89th Transportation Research Board Meeting, Washington, D. C. January 11-15.

Fu, J. S. (2009) Impacts of NO_x emissions change on surface ozone in East Asia and China : the HTAP SR3 and SR6 cases. 4th GEOS-Chem Users' Meeting, Harvard University, Cambridge, MA, April-7-10.

Fu, J. S. (2008) Evaluation of Noise and Emission Levels Inside the Cab of Heavy-Duty Diesel Vehicles During Conditions of Parked Engine Idling and On-Road Driving. A&WMA's 100th Annual Conference, Portland, Oregon, June 24-27.

Fu, J. S., (2007). Model Inter-comparison to Evaluate Gaseous Pollutants in East Asia Using an Advanced Modeling System: Models-3/CMAQ System. 6th Annual CMAS Conference, Chapel Hill, NC, October 1-3.

Fu, J. S. (2007). Assessing Regional Impacts of Particulate Matter in Beijing, China. A&WMA's 100th Annual Conference, Pittsburgh, June 26-29.

Fu, J. S. (2007). Air Quality Modeling in Hong Kong on Particulate Matters. A&WMA's 100th Annual Conference, Pittsburgh, June 26-29.

Fu, J. S. (2007). Regional/Urban Air Quality Modeling Assessment in China. Workshop on Regional Air Quality Management in Rapidly Developing Regions at Zhuhai, China, March 12-13.

Fu, J. S. (2006). Utilizing CMAQ Modeling to Assess Regional Impacts of Air Pollutants in Beijing Area. 5th Annual CMAS Conference, Chapel Hill, NC, October 16-18.

Fu, J. S. (2006). Air Quality Modeling Assessment and Planning in Taiwan. A&WMA's 99th Annual Conference, New Orleans, June 20-23.

Fu, J. S. (2006). Seasonal Distribution and Modeling of Diesel Particulate Matter in the Southeast US. East Tennessee Ozone Study 2006 Science Workshop, Oak Ridge, TN, May 17-18.

Fu, J. S. (2005). Regional/Urban Air Quality Modeling in Beijing and Shanghai. 4th Annual CMAS Models-3 Users' Conference, September 26-28, 2005, UNC-Chapel Hill

Fu, J. S. (2005). Air Quality Modeling Assessment and Planning in Taiwan. A&WMA's 98th Annual Conference, Indianapolis, IN, June 21-24.

Fu J. S. (2005). Air Toxic Emissions Distribution and Performance of the Third Generation "CMAQ Air Toxic Model" – A Case study of the Houston region in Texas. A&WMA's 98th Annual Conference, Indianapolis, IN, June 21-24.

Fu, J.S. (2004). National/Regional Air Quality Modeling Assessment in China Using An Advanced Air Quality Modeling System. 13th World Clean Air and Environmental Protection Congress, London, August 22-27.

Fu, J. S. (2004). Advanced Air Quality Modeling in Taiwan: Local and Transported Pollutants. 13th World Clean Air and Environmental Protection Congress, London, August 22-27.

Fu, J. S. (2003). Advanced Air Quality Modeling Assessment in Taiwan. The 14th International Union Air Pollution Prevention and Environmental Protection Association, International Conference-Air Quality: Assessment and Policy at Local, Regional, and Global Scales. Dubrovnik, Croatia, October 6-10.

Fu, J. S. (2003) National/Regional Air Quality Modeling Assessment in China. 8th International Conference on Applications to Air Quality, Tsukuba, Japan. March 11-13.

Fu, J. S. (2003) An Inventory of Gaseous and Primary Aerosol Emissions in China to Support MODELS-3/CMAQ Applications. 8th International Conference on Applications to Air Quality, Tsukuba, Japan. March 11-13, 2003.

Fu, J. S. (2003) A Pilot Air Quality Modeling over China. The 96th AWMA Annual Meeting, San Diego, California, June 23-26..

Fu, J. S., W. T. Davis, T. L. Miller, C. H. Norman. A NIF-based Validation/QA Database Management System for the Tennessee Emission Inventory, International Emission Inventory Conference "Emission Inventories - Partnering for the Future," in

Atlanta, GA, April 15-18, 2002.

Fu, J. S., E. D. Brill, Jr., S. Ranjithan, and J. W. Baugh. “Conjunctive Use of Air Quality Models to Develop Cost-Effective Control Strategies for Ozone Management”, Peer Reviewed Proceedings: the AWMA 92th Annual Meeting and Exhibition, St. Louis, Missouri, June 20-24, 1999.

Fu, S.-Y., E. D. Brill, Jr., and S. Ranjithan. A Hybrid Nonlinear Optimization Scheme for Decision Support in Air Quality Management. (invited section), *INFORMS* Spring Meeting – Analysis To Support Public Sector Decision Making, Washington, DC, May 5-8, 1996.

Invited Speaker

- Diurnal Parking Evaporative Vapor Generation. **National Institute of Environmental Studies**, Tsukuba, Japan August 21, 2015
- Development and Applications of Taiwan Emission Control Cost Analysis System (TECAS). **Workshop: Taiwan Air Quality Management-Air Benefit and Cost Assessment**, Taipei, Taiwan June 17-18, 2015
- Dust and Biomass Burning in East Asia: Concern of Regional Climate, Seminar, **National Taipei University of Technology**, Taipei, Taiwan June 16, 2015
- Dust Transport and Chemical Reaction in Asia. Special Seminar, Chang Jung Christian University, Tainan, Taiwan June 11, 2015
- Arctic Black Carbon (ABC): Emission, Origin, and Transport Modeling In Arctic Region. **Workshop: Improving Black Carbon Emission Estimates and Abatement**, Milan, Italy May 13, 2015
- Ozone, Methane and Air Quality Modeling with Transport and Transboundary. **USDA Agricultural Air Quality Task Force**, Knoxville, TN April, 22, 2015
- Status of MICS-Asia Phase III Modeling performance and results. **MICS-Asia (Asian Center for Air Pollution Research and Institute of Atmospheric Physics/Chinese Academy of Sciences)**, Zhuhai, China Feb. 6-7, 2015
- Black Carbon on Glaciers: the role of emissions, numerical simulation, and reduction strategies. **University of Santiago**, Santiago, Chile. Nov. 18, 2014
- Climate Change. **UTIA BRIDGE Symposium**, Knoxville, TN Nov. 7, 2014
- Climate Change and Future Air Quality. **Jackson School of** Nov. 3, 2014

Geosciences, University of Texas, Austin, TX

- Extreme Events and Air Quality, School of Environment, **Tsinghua University**, Beijing, China Aug. 26, 2014
- Extreme weather events and Impact Study toward energy infrastructure. **Japan National Institute of Environmental Studies**, Tsukuba, Japan July 14, 2014
- The Importance of Multiple Anthropogenic Emission Control to Avoid Adverse responses on Air Quality over Yangtze River Delta, China. **National Central University**, Chungli, Taiwan June 11, 2014
- Study of extreme weather events and Impact Study toward energy infrastructure, **Taiwan Government National Development Council**, Taipei, Taiwan June 9, 2014
- The Importance of Multiple Anthropogenic Emission Control to Avoid Adverse responses on Air Quality over Yangtze River Delta, China. **Fudan University**, Shanghai China May 26, 2014
- MICS-Asia Phase III Modeling Status. **MICS-Asia (Asian Center for Air Pollution Research and Institute of Atmospheric Physics/Chinese Academy of Sciences) and UN ECE HTAP**, Beijing, China May 22-23, 2014
- MICS-Asia Phase III (Modeling, Meteorology and Emission Inventories) "Multi-scale model (Global, regional, urban)" - Current Status. MICS-Asia, Xiamen, China Feb. 20-21, 2014
- Study of extreme weather events, **Mars Corporation** Feb. 12, 2014
- Climate-driven Extreme Weather Events toward Future Air Quality and Energy Infrastructure. **Baker Center Interdisciplinary Forum on Environmental Policy, The University of Tennessee** August 29, 2013
- Extreme Weather Events in Southeast US, American Meteorology Society, Smoky Mountains Chapter July 22, 2013
- Study of extreme weather events and climate impact on air quality and energy infrastructure in U.S. **Fudan University** June 9, 2013
- UN ECE Task Force on Hemispheric Transport of Air Pollution (TF HTAP) and Model InterComparison Study – Asia (MICS-Asia) Phase III, International Workshop on Air Quality in Asia, **TOYOTA** invited. June 4, 2013

- Study of extreme weather events and climate impact on air quality in U.S., **City University of Hong Kong**, Hong Kong May 22, 2013
- MICS-Asia Phase III (Modeling and Emission Inventories) "Multi-scale model (Global, regional, urban)" - Current Status and DOE's Arctic Black Carbon Transport Study: Russia Black Carbon Inventory **invited by UN ECE TF HTAP**, Geneva, Switzerland March 20-22, 2013
- Interactions Between Renewal Energy and Climate Change, **UTK CURENT Seminar** July 6, 2012
- Overview of Air Quality Modeling, **Institute of Nuclear Energy Research**, Longtan, Taiwan June 25, 2012
- Overview of China Modeling Efforts at U. Tennessee, Department of Energy Engineering, Zhejiang University, Hangzhou, China June 23, 2012
- Linkage between CoST and RSM, **US EPA Air Benefit and Cost Assessment System Workshop**, Shanghai, China June 18, 2012
- Preliminary Results: CMAQ-RSM Study in Taiwan, **Taiwan Environmental Protection Administration**, Taipei, Taiwan June 12, 2012
- Climate change, environment, energy study in computational science, **Joint Workshop on Large Scale Computer Simulation, JICS/ORNL-German Research School** April 25, 2012
- Studies of Climate Change and Air Quality, **Fudan University**, Shanghai, China March 23, 2012
- Development of Air Pollution Control Benefit and Cost Assessment System and New Climate Change Assessment in Air Pollution. **Chinese Research Academy of Environmental Science**, Beijing, China March 20, 2012
- Linkage Global and Regional Air Quality Modeling and Experiment Design. **UN ECE Task Force Hemispheric Transport of Air Pollution (TF HTAP)** and Climate Change, Pasadena, California Feb. 2, 2012
- Studies of Global Climate Change toward Regional Climate and Air Quality, **Atmospheric Turbulence and Diffusion Division, National Oceanic and Atmospheric Administration (NOAA)** Jan. 10, 2012

- Studies of Global and Regional Climate and Air Quality, Department of Environmental Engineering, National Cheng Kung University, Taiwan Dec. 13, 2011
- Climate Change, Environment, Energy Study, School of Environment, **Tsinghua University**, China Nov. 9, 2011
- Climate Change, Environment, Energy Study through Computational Science, Institute of Atmospheric Physics, **Chinese Academy of Sciences**, China Nov. 8, 2011
- Studies of global heat waves and results of regional climate downscaling, Center for Earth System Science, **Tsinghua University**, China Nov. 8, 2011
- Climate change, Energy, Atmospheric Study through Computation Sciences, **Asia Center for Air Pollution and CAS/Institute of Atmospheric Physics Atmospheric Modeling in East Asia Workshop**, Chengdu, China Sept. 24-25, 2011
- **Featured Speaker**, Computational Science Kickoff, Interdisciplinary Graduate Minor for Computational Science August 19, 2011
- Downscaling of Global Chemistry and Climate Predictions to Study Local Impacts. **National Central University**, Taiwan June 13, 2011
- A new decision support system for air quality management, Taiwan-US Governmental Briefing, **Taiwan EPA** June 1, 2011
- Taiwan-US Bilateral Air Quality Management Collaboration Project. Taipei. Government, Industrial, academic seminar, **Taiwan EPA** May 31, 2011
- Current Status of Global and Regional Climate and Chemistry Modeling. **National Taiwan University** May 26, 2011
- Climate and Air Pollution. **International Seminar on Climate Change**, Catholic University of Temuco, Chile May 12, 2011
- Downscaling of Global Chemistry and Climate Predictions: Regional Analysis and Local Impacts. University of Florida April 4, 2011
- Coupled Global and Regional Climate and Chemistry Models for Studying the Impacts in Human and Environment. **Conference on Air Quality and Climate** Mar 15, 2011
- Downscaling of Global Chemistry and Climate Predictions: Regional Analysis and Local Impact. **Peking University** Oct. 14, 2010

- Downscaling of Global Chemistry and Climate Predictions: Impacts of Air Pollution and Water Resources. **Tsinghua University** Oct. 13, 2010
- Coupled Global and Regional Climate and Chemistry Models for Studying the Impacts in Human and Environment. **Taiwan Environmental Protection Administration** June 29, 2010
- US-Taiwan Bilateral Air Quality Management Decision Support System invited by Taiwan Environmental Protection Administration for presenting the status of the collaboration and technology transport. **Taiwan Environmental Protection Administration** June 28, 2010
- Coupled Global and Regional Climate and Chemistry Models for Studying the Impacts in Human Health. **Multiple universities including National Taiwan University, National Cheng Kung University, Chang Jung Christian University** June 9, 2010
- Applications of Air Quality Modeling for the Development of State Implementation Plans: US Experience. **National Cheng Kung University** June 2, 2010
- Coupled Global and Regional Climate and Chemistry Models for Supporting Environmental Polices and Planning. **National Park Service, GRSM Science Colloquium** Mar. 4, 2010
- Opportunity on Coupling Global and Regional Climate and Chemistry Models. **USEPA Office of Research and Development** Dec. 1, 2009
- Air Pollution and Climate Change. **Technical Society of Knoxville** Nov. 2, 2009
- Taiwan-US Bilateral Air Quality Management Collaboration Project. **National Cheng Kung University** June 22, 2009
- Regional-Global and Air Quality-Climate Linkages. **UN ECE HTAP**, Paris, France June 17-19, 2009
- Coupled Global and Regional Climate and Chemistry Models toward Peta-scale Computing Applications, Oak Ridge National Laboratory, **US-Japan International Specialist Meeting on the Next Generation Models on Climate Change and Sustainability** Mar. 16-18, 2009

- Model Inter-comparison Study-Asia (MICS-Asia), **International Institute for Applied Systems Analysis**, Laxenburg, Austria Feb. 25-26, 2009
- Regional/Urban Air Quality and Climate Modeling with Energy Strategy in China, **UT-Shanghai University** Joint Conference on Renewable Energy and Green Economy, Shanghai, China Oct. 19-20, 2008
- Linkage HTAP and MICS-Asia Study for Pollutants Long Range Transport in East Asia by GEOS-Chem/CMAQ, **UN ECE Task Force Hemispheric Transport of Air Pollution and Climate Change** in Hanoi, Vietnam Oct. 13-14, 2008
- Regional/Urban Air Quality Modeling Assessment in East Asia/China/Beijing – Potential Collaboration with Satellite Retrieval. **Goddard Space Flight Center/NASA**, Greenbelt, MD Sept. 4-5, 2008
- Taiwan-US Bilateral Air Quality Management Collaboration Project, **Taiwan EPA** Aug. 12, 2008
- Regional/Urban Air Quality Modeling Assessment and Strategies in Beijing, China, **National Sun Yat-Sen University**, Kaohsiung, Taiwan June 4, 2008
- The Experience of Beijing Air Quality Modeling and Recommendation for 2008 Olympic Games, Kaohsiung **Municipal Environmental Protection Bureau**, Taiwan May 30, 2008
- Air Quality Management: the Current Role of Air Quality and Climate Modeling, **Hong Kong Environmental Protection Department** May 26, 2008
- Air Quality Management: the Current Role of Air Quality and Climate Modeling , **Fudan University** April 14, 2008
- Regional/Urban Air Quality Modeling Assessment in East Asia/China/Beijing and US, **University of Iowa** March 27, 2008
- Model Inter-comparison Study-Asia (MICS-Asia), **International Institute for Applied Systems Analysis**, Laxenburg, Austria Feb 12-13, 2008
- Climate Change and Air Quality, Center of Environmental Change, **National Taiwan University** July 18, 2007
- Long Range Transport of Air Pollution, Taiwan EPA July 16, 2007
- Model Inter-comparison Study-Asia (MICS-Asia), **International Institute for Applied Systems Analysis**, Laxenburg, Austria Feb.27-28, 2007

- Mobile Source Air Toxics Modeling, **Tsinghua University**, China Oct. 30, 2006
- Air Quality Assessment and Decision Support System for **Taiwan EPA** June 14-15, 2006
- Air Quality Assessment in Pearl River Delta Region, Guangzhou, China March 20-21, 2006
- Model Inter-comparison Study-Asia (MICS-Asia), **International Institute for Applied Systems Analysis**, Laxenburg, Austria Jan.18-19, 2006
- Regional Pollutants Transported to Beijing Air Quality Assessment, **USEPA-China EPA** Regional Air Quality Management Conference, Beijing, China Oct 23-24, 2005
- Air Quality Modeling Capacity Building, **Thailand Environmental Protection Department**, Bangkok, Thailand March 28-29, 2005
- Air Quality Modeling and Management in Beijing. **Beijing Environmental Protection Bureau and 2008 Olympic Games Committee** Sept. 16, 2004
- Current Status of Air Quality Modeling Assessment in China for **EPA China programs** in OIA, OAR/IES, OAQPS Aug. 6, 2004
- Taiwan Air Quality Modeling, **Taiwan EPA** June 30, 2004
- AMS ET Chapter Meeting May 12, 2004
- Climate and Carbon Research Institute, Center for Computational Sciences, **Oak Ridge National Laboratory** March 11, 2004
- Environmental Sciences Division, **Oak Ridge National Laboratory** Feb. 27, 2004
- NASA GISS research collaboration project presentation Nov. 12, 2004
- **Tsinghua University**, Department of Environmental Sciences and Engineering Nov. 4, 2003
- Taiwan Air Quality Modeling Forum, **Taiwan EPA** Oct. 20, 2003
- Emission Subgroup of Intercontinental Air Pollutants Transport, **USEPA** July 11, 2003

- China Air Quality Modeling, China Program, **Harvard University** June 3, 2003
- Air Quality Pollutants Transport, **Taiwan EPA** March 17, 2003
- Intercontinental Air Pollutants Transport, **USEPA** Jan. 31, 2003
- Air Toxics Emission Processing and Modeling, **USEPA** Jan.9-10, 2003

Key Note Speaker and Lecture

- Recent topics of atmospheric research in the US. Japan Society of Atmospheric Environment and Society of Automotive Engineering, Japan Nov. 16, 2015
- Taiwan Emission Cost Analysis System. The 2015 Taiwan ABaCAS workshop June 17, 2015
- Taiwan Emission Cost Analysis System. The 2014 Taiwan ABaCAS workshop June 6, 2014
- New Development of Control Cost for Strategies (CoST). The Second ABaCAS Workshop May 28, 2014
- Control Cost for Strategies (CoST). The First International Conference on Air Benefit and Cost and Attainment Assessment June 5, 2013
- Climate Modeling and Energy. **ESE 511 Guest Lecture, Center for Interdisciplinary Research and Graduate Education** Oct. 24, 2012
- The Modelling and Emission Inventory Training Workshop. **Asian Center for Air Pollution Research, Japan** Jan. 30, 2012
- Climate Change, Environment, Energy Study. **International Lecture, National Cheng Kung University** Dec. 12, 2011
- Climate Change and Climate Modeling. **ESE 511 Guest Lecture, Center for Interdisciplinary Research and Graduate Education** Oct. 19, 2011
- The Modelling Training Workshop, World Meteorological Organization (WMO) and Asian Center for Air Pollution Research served as the Secretariat of the workshop, and funded by **WMO and the Ministry of the Environment, Japan (MOEJ)**. January 24-29, 2011

- Coupled Global and Regional Climate and Chemistry Models for Studying the Impacts in Human Health and Environment, Keynote Speaker for **the International Symposium on Asian Dust/Aerosol and its Impact on the Global Climate Change**, Shanghai, China August 8-10, 2010
- Coupled Global and Regional Climate and Chemistry Models for Studying the Impacts in Human and Environment. **Taiwan Environmental Protection Administration** June 29, 2010
- Asian Dust and Its Impact on Regional/Global Climate Change. **National Cheng Kung University, 92 students** June 3, 2010
- Downscaling effects of GEOS-Chem as CMAQ Initial and Boundary Conditions. **Fudan University** Oct. 16, 2008
- Model inter-comparison study and Assessing Ozone and Particulate Matter in East Asia/China. **Department of Atmospheric Sciences, National Taiwan University** July 19, 2007
- Air Quality Modeling Capacity Building. **Chinese Research Academy of Environmental Sciences** Oct. 20-Nov.4, 2006
- Air Quality Management and Climate Change. **National Cheng Kung University, Taiwan** June 16, 2006
- Air Quality Modeling Capacity Building, Bangkok, Bangkok, Thailand. **Thailand Environmental Protection Department** March 28-29, 2005
- Air Quality Modeling and Energy Options Workshop in **Shanghai Academy of Environmental Sciences** Nov. 6, 2003
- Air Quality Modeling Workshop in Shanghai, **China (Shanghai Environmental Protection Bureau and Shanghai Academy of Environmental Sciences)** Sept. 16-18, 2002
- Air Quality Modeling Assessment in Taiwan (**Taiwan Environmental Protection Administration and National Taiwan University**) June 3-4, 2002

PUBLICITY - Interviewed by

Out of the Woods? Air Quality in the Smokies Has Improved—But Still Has a Long Way to Go (Metro Pulse)

Interviewed by WBIR for Climate Change, May 15, 2014
Metro Pulse

News Sentinel
Atlanticcitic.com
VOLUNTEER TV
WBIR TV
Wall Street Journal
New York Times
Berlingske, Danish newspaper
Metro Networks Indiana Correspondent

RESEARCH INTERESTS

Global and regional climate, energy and air quality
Peta-scale computing on coupled climate and air quality modeling
Climate downscaling toward impacts of air quality, water resources, human health
Assessment of hemispheric transport and climatic effects of air pollutants:
 Global and Regional Modeling of Ozone and Particular Matter
Agricultural Air Quality (ammonia, methane)
Transportation conformity and air quality
Air Toxics Modeling – link to homeland and international security
Develop environmental modeling and decision support tools for complex multi-discipline ecosystem
Genetic algorithm and stochastic based optimization applications in a high performance computing
Data management/data mining and information technology applications in environmental management systems
Reliability, uncertainty, and risk analysis in environmental systems
Large scale simulation and implementation in environmental systems
Human dimension in environmental systems

TEACHING INTERESTS

Air Pollution Climatology
Climate, Energy and Environment
Introduction to Environmental Engineering and Science
Optimization Theory in Environmental Systems and Energy Options
Advanced Air Quality Modeling
Air Quality Management/Pollution Control
Transportation Planning and Air Quality
Environmental and Economic Impacts
Information Technology Applications (High Performance Computing in Environmental System)
Air Dispersion Modeling
Air Waste Management

RESIDENT INSTRUCTION

University of Tennessee

CE 440 Civil Engineering System Design & Management

ENVE 562 Three Dimensional Climate Modeling
 ENVE 574 Air Quality Management/Pollution Control
 ENVE 577 Air Pollution Climatology
 ENVE 672 Air Pollution Dispersion Modeling for Engineers
 ENVE 691 Special Topics in Environmental Engineering: Advanced Air Quality
 Modeling Assessment
 ENVE 691 Special Topics in Environmental Engineering: Environmental Models
 Programming
 ENVE 691 Climate Effects in the Environment

National Taiwan University

Training and Technology Transfer Workshop on USEPA's Models-3/CMAQ and
 SMOKE System, Taipei, Taiwan, June 2002

Shanghai Academy of Environmental Sciences

Advanced Air Quality Modeling Workshop, Shanghai, China, September, 2002
 Attendees are professors, scientists, graduate students from Beijing University, Tsinghua
 University, Fudan University, Chinese Academy of Science, Chinese Academy of
 Environmental Sciences, etc.

Tsinghua University, China

Taught Advanced Air Quality Modeling, Institute of Environmental Science and
 Engineering, Tsinghua University, June, 2003

Fudan University, China

Taught Advanced Air Quality Modeling, Department of Environmental Science and
 Engineering, May, 2009

National Cheng Kung University

Taught junior and senior of undergraduate students in Department of Environmental
 Engineering:
 Engineering Economics computer class
 Environmental Chemistry Analysis Lab
 Water Quality Management Simulations
 Computer Applications on Environmental Engineering

ADVISING: COLLEGE ACADEMIC WORK

MEMBERSHIP ON GRADUATE DEGREE CANDIDATES' COMMITTEES

Graduate Student Chair and Committee, Civil and Environmental Engineering, the University of Tennessee (12 Ph.D. and 4 M.S. as major professor) 2000-present

Student Name	Degree	Chair	Member	Year (Graduated)	Employment
Anna Tang	MS		X	2001	Show Consulting

Gi-Dong Kim	Ph.D.		X	2002	N.M. State Government
Seungju Yoon	MS		X	2002	CARB
Ryan Malony	MS		X	2002	Consulting Company
Ramesh Gopal	MS	X		2004	URS
Prakash Doraiswamy	Ph.D.		X	2004	Research Scientist at RTI
Luis Diaz-Robles	Ph.D.	X		2005	VP & Professor in Chile
Suya Ramaswamy	MS		X	2005	Environplan Consulting
Pamuk Teparakul	MS		X	2006	
Boris Hromis	MS		X	2006	ExxonMobil
Wayne Brewer	MS		X	2007	Consultant
Yuan Du	MS	X		2009	Sonoma Tech
Chris Campbell	MS		X	2009	AMS Co.
Si Chen	MS		X	2009	Ph.D. student
Yunhee Kim	Ph.D.	X		2010	ERT/NOAA
Yun-Fat Lam	Ph.D.	X		2010	Assistant Professor in CUHK
Melissa Allen	MS	X		2011	Ph.D. student
Robert Hellman	MS		X	2011	
Zhenwei Zhu	Ph.D.		X	2011	Faculty in China
Brandon Thomas	MS		X	2011	TVA
Wes Kendall	Ph.D.		X	2011	Start-up company
Yanzhu Ye	Ph.D.		X	2011	GE
Lang Chen	Ph.D.		X	2011	ABB
Jeongran Yun	Ph.D.	X		2012	Post-Doc SUNY Albany
Yang Gao	Ph.D.	X		2012	Post-Doc PNNL
Kai Zhu	Ph.D.		X	2012	Texas Instruments
Scott DeNeale	MS	X		2012	Post Master ORNL
Suguang Ji	Ph.D.		X	2012	Post-Doc at UTK
Jordan Rudolph	MS		X	2012	
Penn Markham	Ph.D.		X	2012	Private sector
Saeed Zabet	MS		X	2012	Ph.D. student at NU
Jeffrey Marks	MS		X	2012	ENVIRON
Keith McKenzie	Ph.D.		X	2013	
Muzi Zheng	MS		X	2013	
Abby Gaddis	Ph.D.		X	2013	Post-Doc ORNL
Scott Curran	Ph.D.	X		2014	Research staff ORNL
Melissa Allen	Ph.D.	X		2014	Post-doc ORNL
Jingyuan Wang	Ph.D.		X	2014	Consultant
Terence Randall	Ph.D.		X	2014	IBM
Xinyi Dong	Ph.D.	X		2015	Post-Doc UTK
Stephen Wood	Ph.D.		X	2015	
Getao Liang	Ph.D.		X	2015	
Mark Christian	Ph.D.		X	2015	
Cheng-En Yang	Ph.D.	X		2016	
Jian Sun	Ph.D.	X		2017	

Jiani Tan	Ph.D.	X		2018
Xiufen Zhu	MS	X		2019
Huan Chen	Ph.D.		X	2019

Post-Doctoral Research Associate

Name	Year (Graduated)	Employment
Zuopan Li	2003- 2006	Bioinformatics Corp.
Jimmy Calcagno	2007~ present	
Jun Li	2009~ 2011	Engineer, Shanghai Environmental Monitoring Center
Yun Fat Lam	2010- 2011	Assistant Professor at HK City U.
Kan Huang	2010- 2014	Research Assistant Professor CEE, UTK
Yang Gao	2013	Post-doc PNNL
Xinyi Dong	2016- present	

Graduate Student Committee (External Examiner)

Student Name	Degree	University	Year	Employment
Qingyan Fu	Ph.D.	Fudan U.	2009	Chief Engineer General SEMC, China
Juan Li	Ph.D.	Fudan U.	2009	Engineer SEMC, China
Chan Xu	Ph.D.	Fudan U.	2009	Scientist, Hangzhou Monitoring Center, China
Kan Huang	Ph.D.	Fudan U.	2010	Post-Doc UTK

AIR QUALITY MODELING TRAINING PROGRAM AT UTK (under Dr. Fu direction)

Qiang Zhang	Ph.D. and now is Professor, Tsinghua University, China.	2004
Litao Wang	Ph.D. Tsinghua University, China, now Professor at Hebei University of Science and Technology, China	2004
Li Li	Ph.D. Shanghai University, Director of Atmospheric Science at the same institute, Shanghai Academy of Environmental Sciences, China, China	2005
Roger Kwok	Ph.D. Hong Kong University of Science and Technology, Staff at CARB	2006
Ming-Tung Chuang	Ph.D. National Central University, Taiwan, now Research Assistant Professor at NCU	2007
Ying Li	Ph.D., Hong Kong University of Science and Technology, Post-Doc at the same institute	2008
Jenny Yao	Ph.D, National Cheng Kung University, now at the	2009

Kan Huang	ITRI Environmental Scientist Ph.D., Fudan University, China, now Research Assistant Professor at UTK	2009-2010
Bin Zhao	Ph.D. student, Tsinghua University, China	2011-2012
Kun Luo	Professor, Zhejiang University, China	2011
Linghong Chen	Associate Professor, Zhejiang University, China	2011
Tingna Liu	Ph.D. student, Fudan University, China	2012

ACADEMIC SERVICES

Mentor , NSF REU for Computational Sciences. Students: Cynthia Chan, Samuel Loomis	Summer 2014
Graduate Council , College of Engineering/Graduate School, University of Tennessee	May, 2013-present
Mentor , Education Advanced Program Summer Program, The University of Tennessee	Summer 2013
Mentor , NSF REU for Computational Sciences. Students: Angela Pelle, James Herndon	Summer 2013
Executive Committee , Interdisciplinary Graduate Minor in Computational Science (IGMCS), University of Tennessee	2010-present
Strategic Planning Committee , Department of Civil and Environmental Engineering	2009-present
Computer and Technology Committee , Department of Civil and Environmental Engineering	2009-present
Mentor , Engineering Honor Program, Scott DeNeale	2010
Mentor , the Ronald McNair Post Baccalaureate Achievement program, Benjamin Harvey	2007

PROFESSIONAL SERVICES

Workshop and Conference Co-Organizer , 3 rd International Conference on Air Benefit and Cost and Attainment Assessment (ABaCAS), Guangzhou, China, June 23-25	2015
Session Vice-Chair , Climate Change Impacts, 107 th AWMA Annual Conference and Exhibition, Long Beach, California	2014
Session Chair , The 12 th Community Modeling and Analysis System Conference, Chapel Hill, North Carolina	2013

Education Counsel , Air and Waste Management Association	2013-present
Workshop and Conference Co-Organizer , 2 nd International Conference on Air Benefit and Cost and Attainment Assessment (ABaCAS), Beijing, China, May 28-30	2014
Reviewing Committee Member , The Status of Air Quality in the East Asia, East Asia Nations Task Force on Research Coordination of the Scientific Advisory Committee of the Acid Deposition Monitoring Network in East Asia (EANET).	2012-present
Advisory Board Member , Knox County Air Pollution Control Board.	2011-present
Member , UN ECE Task Force Hemispheric Transport of Air Pollution, Co-author of HTAP 2010 Report.	2007-present
International Adviser , Shanghai Municipal Environmental Monitoring Center of Shanghai Government, Air Quality and Regional Climate Forecast for 2010 World EXPO	2008-present
Convener , American Geophysical Union, Regional Climate Impact Studies from CMIP5 Ensemble Model Results, 2013 Fall Meeting	2013
Workshop and Conference Co-organizer , The International Conference on Air Pollution Control Benefit and Cost Assessment (ICAPC 2013). Hangzhou, China. June 6-7.	2013
Workshop and Conference Co-Organizer , International Conference on Air Benefit and Cost and Attainment Assessment (ABaCAS), Hangzhou, China, June 5-7	2012
Convener , American Geophysical Union, Trends and Diversity in Regional and Local Climate Records and Impacts From CMIP5 Results, 2012 Fall Meeting	2012
Convener , American Geophysical Union, Regional, local, and urban scale greenhouse gas emissions and air quality-climate interactions, 2011 Fall Meeting	2011
Expert Panel Member , EPA Air Quality Management Manual	2003-2010
Team Member , USEPA Intercontinental Transport and Climatic Effects of Pollutants Project-multiple years research	2001-present
Grant Review Panelist	
• Natural Environment Research Council, United Kingdom	2006-2007,

- **National Institutes of Health** 2014
- **National Science Foundation** 2009
- **Smithsonian Institution Washington D.C.** 2009-present
- **Environmental Protection Agency STAR Program** 2010
- **Environmental Protection Agency STAR Program** 2012

Journal Editorial Board

- **Editor**, Aerosol and Air Quality Research (SCI journal) 2013
- **Editor-in-Chief (Ac Hoc)**, Journal of Air and Waste Management Association (SCI journal) January 2013-June 2013
- Associate Editor, Journal of Air and Waste Management Association (SCI journal) 2011-present
- Editorial Board Member, Aerosol and Air Quality Research 2011-2013
- Low Carbon Economy (Editorial Board Member) 2010-present
- European Journal of Tourism Research (Environment session-Editorial Board) 2007-present

Journal Article Reviewer

- ASCE Journal of Transportation Engineering 2002-present
- Journal of Applied Meteorology 2002-present
- Atmospheric Environment 2004-present
- Journal of Air and Waste Management Association 2001-present
- Journal of Environmental Monitoring and Assessment 2006-present
- ASCE Journal - Practice Periodical of Hazardous, Toxic, and Radioactive Waste Management 2006-present
- Science of the Total Environment
- Journal of Environmental Management 2006-present
- Journal of Geophysical Research 2007-present
- Environmental Science and Technology 2006-present
- Desalination 2007-present
- Water, Air, Soil Sciences 2007-present
- Journal of Environmental Engineering 2008-present
- Environment Management 2008-present
- Environment International 2009-present
- Atmospheric Chemistry and Physics 2009-present
- Air Quality, Atmosphere & Health 2010-present
- Aerosol and Air Quality Research 2010-present
- Environmental Pollution 2014-present

Regular Chair, Emission Inventory Validation/Quality Assurance in the USEPA International Emission Inventory Conference 2001-2008

Invited Chair: Hemispheric Transport of Air Pollution and Regional Modeling, United Nation Economic Commission for Europe (UNECE) Transport of Air Pollution Workshop, Jülich, Germany, and continuing workshops October 17-19, 2007

- Workshop Chair**
International Workshop on Regional Air Quality Modeling, Nov.4-6, 2006
 Shanghai, China
- Air Quality Modeling and Emission Processing Workshop,** Beijing, Oct. 27-28,2005
 China
- Technical Reviewer,** USEPA Office of Transportation and Air Quality 1997
- Adviser,** Participated with Beijing, Shanghai, Pearl River Delta 2005-present
 Projects, which involved advising a group on air quality modeling and
 emission estimates in China. 2005-Present.
- Coordinator,** Dr. Mario Molina, Noble Laureate in Chemistry in 1995, 2005
 to have a speech at Tsinghua and Fudan University in China.

COMPUTER SKILLS

Systems: UNIX, LINUX, CRAY, Window NT, Windows XP, Vista, 7
 Peta-scale supercomputers Kraken, Jaguar

Languages: FORTRAN 77/90, JAVA, C++, C, VISUAL BASIC, XML, AWK,
 UIM/X (Motif), TCL-TK, EXPECT, UNIX script, JAVA script, KML

Packages: ColdFusion, SAS, ARC/GIS, ARC/INFO, MATLAB, ORACLE

PROFESSIONAL SOCIETY

Air and Waste Management Association
 American Geophysical Union
 Association of Environmental Engineering and Science Professors
 American Society for Engineering Education

PROFESSIONAL LICENSE

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