

Dr. Daan Liang

Texas Tech University
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Education and Post Graduate Training

Ph D, University at Buffalo, 2001.

Major: Civil Engineering

Dissertation Title: IMPROVED RELIABILITY AND ECONOMIC MODELING FOR NEW AND RETROFITTED LOW-RISE STRUCTURES SUBJECTED TO EXTREME WIND HAZARDS

MS, University at Buffalo, 1999.

Major: Civil Engineering

B.Eng., Tianjin University, 1997.

Major: Engineering Management

Academic and Professional Experience

Associate Professor, Texas Tech University, Department of Construction Engineering and Engineering Technology. (September 1, 2010 - Present).

Graduate Faculty of Civil Engineering, Texas Tech University. (January 1, 2005 - Present).

Faculty Associate of Center for Multidisciplinary Research in Transportation, Texas Tech University. (2004 - Present).

Faculty Associate of Wind Science and Engineering Research Center, Texas Tech University. (2004 - Present).

Assistant Professor, Texas Tech University, Department of Construction Engineering and Engineering Technology. (July 15, 2004 - August 31, 2010).

Project Manager / Estimator, AMCC CORP. (October 1, 2001 - July 14, 2004).

Research Assistant / Teaching Assistant, University at Buffalo, Department of Civil Engineering. (September 1, 1997 - September 30, 2001).

TEACHING

Courses Taught

Texas Tech University

CE 7000, Research, 4 courses.

CE 8000, Doctor's Dissertation, 4 courses.

CONE 4220, Construction Capstone, 4 courses.

CONE 4320, Construction Cost Estimating, 6 courses.

CONE 5331, Special Topics in Construction Engineering, 1 course.

CTEC 4270, Capstone Design Course, 8 courses.

CTEC 4341, Construction Management, 3 courses.

CTEC 4342, Cost Estimating, 3 courses.

GTEC 4300, Cooperative Education, 2 courses.

Non-Credit Instruction

Guest Lecture, CE4104 FE Review, 40 participants. (October 28, 2010).

Guest Lecture, CE4330 Design of Engineering Systems, 40 participants. (October 5, 2010).

Directed Student Learning

Yuepeng Cui, Dissertation Committee Chair, Other (Within Texas Tech University). (September 2011 - Present).

Jianjun Luo, Dissertation Committee Chair, "TBD," Other (Within Texas Tech University). (January 12, 2011 - Present).

Lin Cong, Dissertation Committee Chair, "TBD," Other (Within Texas Tech University). (September 1, 2010 - Present).

Lin Cong, Master's Thesis Committee Co-Chair, "Joint Solution of Urban Structure Detection from Hyperion Hyperspectral Images," Electrical & Computer Engineering. (May 8, 2009 - January 11, 2011).

Tanya Brown, Dissertation Committee Chair, "Development of a Statistical Relationship between Ground-Based and Remotely-Sensed Damage in Windstorms," Other (Within Texas Tech University). (March 19, 2008 - August 5, 2010).

RESEARCH

Published Intellectual Contributions

Abstract

Faust, D., Cong, L., Liang, D., Nutter, B., Cox, S., Smith, P. (2011). Applications of Using Hyperspectral Data for Oil Spill Monitoring and Assessment. *Proceedings of SETAC North America*.

Liang, D., Nutter, B., Cox, S., Smith, P. (2011). Evaluation of the utility of hyperspectral data for oil spill monitoring and assessment. *Proceedings of Gulf Oil Spill SETAC*.

Conference Proceeding

Liang, D., Nutter, B., Lin, C., Mehta, K. (2011). Detection of Residential Regions Using Hyperspectral Imagery. *Proceedings of 2011 NSF Engineering Research and Innovation Conference*.

Lin, C., Nutter, B., Liang, D. (2010). 'Grid Pattern Based Residential Area Detection from Hyperion Data. *Proceedings of IEEE Southwest Symposium on Image Analysis and Interpretation* (pp. 105 - 108). IEEE.

Luo, B., Liang, D., Mehta, K., Brown, T. *Evaluation of Synthetic Strategies for Windstorm Damage Assessment*. Amsterdam: Proceedings of 13th International Conference on Wind Engineering.

Liang, D., Luo, B., Mehta, K., Brown, T. *Assessment of Building Damages by Hurricane Katrina using Remote Sensing Imagery*. Tokyo: Proceedings of 5th International Symposium on Wind Effects on Buildings and Urban Environment.

Tate, D., Williamson, L., Lawson, W., Park, K., Flueckiger, U., Liang, D., Ertas, A., Maxwell, T., Hames, G. (2010). *Mainstreaming Earth-Based Building Envelopes in Developed Countries: The Impact of Large-Scale Compressed Earth Blocks*. Georgetown, TX: The ATLAS Transdisciplinary-Transnational-Transcultural Bi-Annual Meeting.

Womble, J., Smith, D., Schroeder, J., Liang, D., Brown, T. M., Mehta, K. (2009). *Image-Based Wind Damage Functions*. Austin, Texas: 7th International Workshop on Remote Sensing for Disaster Management Applications.

Brown, T. M., Liang, D., Womble, J. A. (2009). *Development of a Statistical Relationship between Ground-Based and Remotely-Sensed Damage in Windstorms*. Puerto Rico: 11th Americas Conference on Wind Engineering.

Reynolds, A. E., Krupar, R., Brown, T., McMillan, A., Adams, B. J., Liang, D., Womble, J. A. (2008). *February 2008 Super Tuesday Tornado Outbreak Damage Assessment*. Pavia: 6th International Workshop on Remote Sensing for Disaster Management Applications.

Journal Article, Academic Journal

Liang, D., Brown, T., Womble, J. A. Predicting Ground-Based Damage States from Remote-Sensing Imagery. *Wind and Structures*.

Liang, D., Song, L. (2011). Implementation Tools for Lean Construction: A Case Study. *Canadian Journal of Civil Engineering*, 38.

Liang, D., Song, L., Branham, T. (2011). A Task-based Safety Model for Construction Projects. *Management Procurement and Law*.

Mehta, K., Womble, J., Liang, D. (2008). Use of Satellite Images to Document Windstorm Damage: A Future Trend. *Journal of Wind and Engineering*, 5(1), 1-7.

Mehta, K., Womble, J., Liang, D. (2008). Use of Satellite Images to Document Windstorm Damage: A Future Trend?. *Journal of Wind & Engineering*, 5(1), 1-7.

Ewing, B., Liang, D., Thompson, M. (2006). Response of Building Costs to Unexpected Changes in Real Economic Activity and Risk. *Business Research Yearbook: Global Business Perspectives*, 251-255.

Presentations Given

Faust, D. R. (Presenter & Author), Cong, L. (Author Only), Smith, P. (Author Only), Cox, S. (Author Only), Nutter, B. (Author Only), Liang, D. (Author Only), 32nd Annual North America Society of Environmental Toxicology and Chemistry Meeting, "Applications of Using Hyperspectral Data for Oil Spill Monitoring and Assessment," SETAC, Boston, Massachusetts. (November 2011).

Smith, P. (Presenter & Author), Cox, S., Nutter, B., Liang, D., SETAC North America Focused Topic Meeting: Gulf Oil Spill, "Applications of Using Hyperspectral Data for Oil Spill Monitoring and Assessment," SETAC, Pensacola, Florida. (April 2011).

Womble, J. (Presenter & Author), Schroeder, J. (Author Only), Smith, D. (Author Only), Liang, D. (Author Only), Brown, T. M. (Author Only), Mehta, K. (Author Only), ASCE Structures Congress, "Imagery-Based Wind Damage Functions," ASCE, Orlando, Florida. (May 2010).

Liang, D., Chou, P. C., Hashemi, J., Seventh Biennial Conference of the American Physical Society Topical Group on Shock Compression of Condensed Matter, "Shock and Shear Effects in Explosives Due to Impact," Easton, Pennsylvania. (June 1991).

Contracts, Grants and Sponsored Research

Contract

Liang, Daan (Principal), "Characterization and Testing of CAPS Rim-drive Wind Turbine," Sponsored by Florida State University, Private, \$37,685.00. (October 15, 2010 - April 15, 2011).

Grant

Liang, Daan (Principal), "HI2: A New Measure of Hurricane Impact for Innovation in Enterprise Risk Management," Sponsored by Ntl Science Foundation, Federal, \$105,119.40. (September 1, 2011 - August 31, 2014).

Liang, Daan (Principal), "Growing Graduate Program," Sponsored by the Graduate School, Texas Tech University, \$20,000.00. (September 1, 2011 - August 31, 2012).

Liang, Daan (Principal), Ewing, Bradley (Co-Principal), Mehta, Kishor (Co-Principal), "Development of a Quantitative Model for Measuring Regional Economic Resilience to Hurricanes," Sponsored by National Science Foundation, Federal, \$278,726.00. (September 1, 2010 - August 31, 2012).

Nutter, Brian (Co-Principal), Liang, Daan (Principal), Mehta, Kishor (Co-Principal), "Hyperspectral Imagery: A New Frontier for Windstorm Damage Assessment," Sponsored by National Science Foundation, Federal, \$197,922.00. (September 1, 2008 - February 29, 2012).

Smith, Philip (Co-Principal), Liang, Daan (Principal), Nutter, Brian (Co-Principal), Cox, Stephen (Co-Principal), Mehta, Kishor (Co-Principal), "Acquisition of a Field Spectroscopy Environmental Analysis System for Gulf Oil Spill Research," Sponsored by National Science Foundation, Federal, \$102,909.00. (September 15, 2010 - February 28, 2012).

Liang, Daan (Principal), "GRS Hyperspectral Imagery: A New Frontier for Windstorm Damage Assessment," Sponsored by National Science Foundation, Federal, \$37,508.00. (September 1, 2008 - February 28, 2012).

Liang, Daan (Principal), Nutter, Brian (Co-Principal), Baker, Mary (Co-Principal), "RET SUPPLEMENT: Hyperspectral Imagery: A New Frontier for Windstorm Damage Assessment," Sponsored by National Science Foundation, Federal, \$10,000.00. (September 1, 2008 - February 28, 2012).

Liang, Daan (Principal), "New Doctoral Student Recruitment Funding," Sponsored by The Graduate School, Texas Tech University, \$20,000.00. (January 15, 2011 - August 31, 2011).

Liang, Daan (Principal), Nutter, Brian (Co-Principal), Smith, Philip W (Co-Principal), Cox, Stephen (Co-Principal), "MRI RAPID: Acquisition of a Field Spectroscopy Environmental Analysis System for Gulf Oil Spill Research," Sponsored by National Science Foundation, Federal, \$102,909.00. (September 15, 2010 - February 28, 2011).

Research in Progress

"Social Support and Psychological Well-Being after Tornados" (On-Going)

Research Interests

wind engineering, remote sensing, construction safety

SERVICE

College Service

Committee Member, College Teaching Award Committee. (September 1, 2005 - Present).

Committee Member, Search Committee for Associate Dean for Research. (April 2011 - May 2011).

Department Service

Committee Chair, Faculty Search Committee. (September 1, 2010 - Present).

Faculty Advisor, AGC Student Chapter. (January 1, 2011 - December 31, 2011).

Professional Service

Reviewer, Journal Article, Wind and Structures. (2011 - Present).

Reviewer, Journal Article, Journal of Construction Engineering and Management. (January 2007 - Present).

Session Chair, 5th International Symposium on Wind Effects on Buildings and Urban Environment, Tokyo. (March 7, 2011 - March 8, 2011).

Reviewer, Grant Proposal, National Science Foundation, Arlington, Virginia. (January 9, 2011).

GENERAL

Licensures and Certifications

Professional Engineer, Texas Board of Professional Engineers. (January 8, 2007 - Present).

Professional Memberships

American Association for Wind Engineering. (January 1, 1999 - Present).

Development Activities Attended

Conference Attendance, "9th International Workshop on Remote Sensing for Disaster Response," Stanford University. (September 15, 2011 - September 16, 2011).

Workshop, "Resiliency of the National Building Inventory Workshop," University of Southern California. (September 13, 2011 - September 14, 2011).

Conference Attendance, "13th International Conference on Wind Engineering (ICWE13)," International Association for Wind Engineering. (July 10, 2011 - July 15, 2011).

Conference Attendance, "5th International Symposium on Wind Effects on Buildings and Urban Environment," Tokyo Polytechnic University. (March 7, 2011 - March 8, 2011).

Conference Attendance, "2011 NSF CMMI Grantee Conference," National Science Foundation. (January 4, 2011 - January 6, 2011).

