

Dr. Tracy L. Kijewski-Correa

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Education

Ph.D. Civil Engineering, University of Notre Dame, May 2003

Dissertation Title: “Time-Frequency Perspectives in System Identification: From Theory to Full-Scale Measurements”

M.S. Civil Engineering, University of Notre Dame, August 2000

Thesis Title: “Dynamic Wind Effects on Structures: Response and Mitigation for Tall Buildings”

B.S. Civil Engineering, University of Notre Dame, Magna Cum Laude, May 1997

Relevant Experience

8/08 – present	Associate Professor, Department of Civil Engineering and Geological Sciences, University of Notre Dame
8/03 – 8/08	Phillip B. Rooney Chair, Assistant Professor of Civil Engineering and Geological Sciences, University of Notre Dame
6/03 – 8/03	Visiting Assistant Professor, Department of Civil Engineering and Geological Sciences, University of Notre Dame

Research Interests

- Structural dynamics & random vibrations
- Structural health monitoring & wireless sensor networks
- Full-scale validation of tall building design
- Time-frequency signal analysis, system identification and damage detection
- Engineering virtual organizations/e-design aids
- Quantification and modeling of structural damping

Distinctions, Honors, Awards

- ASCE State-of-the-Art in Civil Engineering Award (2008) for the paper “Validating the Wind-Induced Response of Tall Buildings: A Synopsis of the Chicago Full-Scale Monitoring Program,” *Journal of Structural Engineering*, ASCE, **132**(10): 1509-1523.

- Richard D. Marshall Student Award for best doctoral thesis in wind engineering related to experimental methods, American Association for Wind Engineering (2005)
- Oliver Torrey Fuller Award for technical excellence and innovation, Honorable Mention, Association for Preservation Technology (2005)
- Skidmore, Owings & Merrill Traveling Fellowship in Structural Engineering (2000)
- Fellowship, Center for Applied Mathematics, University of Notre Dame (1999-2000, 2000-2001)
- National Defense Science and Engineering Graduate Fellowship (1997-2000)
- National Science Foundation Graduate Research Trainee Fellowship (1998-2000)
- Scholarship, Danish Technical University International Graduate Research School (1999)
- Eli J. and Helen Shaheen Graduate School Award in Engineering, University of Notre Dame, for exemplary research and teaching (2003)
- Manchester Who's Who (2004)
- Member, Tau Beta Pi
- Member, Chi Epsilon
- Kaneb Center for Teaching and Learning: Outstanding Graduate Student Teacher Award for Excellence in Teaching (2000)
- Dondanville Family Graduate Award for Excellence in Teaching by a Graduate Student (1999)

Professional Memberships

- American Society of Civil Engineers, Associate Member
- Structural Engineering Institute, ASCE, Member
- Tall Buildings Committee, ASCE (2003-present)
 - Web developer & Secretary
 - Chair, Sub-Committee on Full-Scale Monitoring of Tall Buildings
- ASCE Task Group on State-of-The-Art in System Identification of Constructed Facilities
 - Chapter Coordinator: Building Applications
- Earthquake Engineering Research Institute, Member
- American Association for Wind Engineering, Member
- American Institute of Steel Construction, Educator Member
- Council on Tall Buildings and Urban Habitat, Member
- International Society for Structural Health Monitoring and Intelligent Infrastructure, Member
- Network for Earthquake Engineering Simulation (NEES) Consortium, Member
- Sessions Chaired:
 - Co-chair, Session WA319: Stochastic Systems 3, *8th Probabilistic Mechanics and Structural Reliability Conference*, July 2000
 - Co-chair, Session 4T1: Service Life Performance, *International Conference on Structural Safety and Reliability*, June 2001

- Co-chair, Session: Structural Response Measurements in Challenging Environments, *9th ASCE Aerospace Division International Conference, Earth & Space 2004*, March 2004
- Co-chair, Session: Stochastic Modeling in Aerodynamics and Aeroelastic/Hydroelastic Interaction, *9th Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability*, July 2004
- Sessions Organized:
 - Global Positioning Systems for Structural Health Monitoring, *Fourth World Conference on Structural Control and Monitoring (4WCSCM)*, July 2006.
- Reviewer Activities:
 - Journals: *ASCE Journal of Structural Engineering*, *Journal of Wind Engineering and Industrial Aerodynamics*, *Wind and Structures*, *ASCE Journal of Engineering Mechanics*, *Earthquake Engineering and Structural Dynamics*, *Journal of Sound and Vibration*, *Structural Safety*, *IEEE Transactions on Control Systems Technology*, *Computer-Aided Civil and Infrastructure Engineering*, *Measurement and Science Technology*, *Smart Materials and Structures*
 - Reviewer, NSF International Research Fellows Program
 - Panelist, NSF CMS Division, Structural Systems and Hazards Mitigation of Structures Program

Books and Monographs

Chapters:

1. **Kijewski, T.**, Haan, F. and Kareem, A. (2001). "Wind-Induced Vibrations," In: Braun, S.G., Ewins, D.J. and Rao, S.S., eds., *Encyclopedia of Vibration*, Academic Press: 1578-1587.
2. Kareem, A., Tognarelli, M.A., Gurley, K.R. and **Kijewski, T.L.** (1997). "Modeling of Nonlinear Ocean Systems," In: Shlesinger, M.F. and Swean, T., eds., *Stochastically Excited Nonlinear Ocean Structures*, World Scientific: 79-104.

Reviews:

1. **Kijewski-Correa, T.** (2005). "Advances in Smart Technologies in Structural Engineering (Holnicki-Szulc, C.A. Mota Soares, Eds.)," *IEEE Transactions on Automatic Control*, **50** (11): 1917-1918.

Technical Magazine Articles:

1. **Kijewski-Correa, T.** and Kareem, A. (2003), "The Height of Precision," *GPS World*, **14**(9): 20-34.

Refereed Publications (Advised Student Underlined)

Journal Articles in Preparation/Review:

1. **Kijewski-Correa, T.**, Erwin, S.E., Yoon, S.W. (2008), “Full-Scale Damping Evaluation of a Suite of Reinforced Concrete and Steel Buildings,” *Journal of Structural Engineering*, ASCE.
2. **Kijewski-Correa, T.** and Kochly, M. (2008), “A Dead Reckoning Approach to GPS Monitoring in Urban Canyons,” *Journal of Sound and Vibration*.

Journal Articles Published or in Press:

1. **Kijewski-Correa, T.** and Su, S. (2009) “BRAIN: A Bivariate Data-Driven Approach to Damage Detection in Multi-Scale Wireless Sensor Networks,” *Journal of Smart Structures and Systems* (in press).
2. Kwon, D.K., **Kijewski-Correa, T.** and Kareem, A. (2008), “e-Analysis of High-Rise Buildings Subjected to Wind Loads,” *Journal of Structural Engineering*, ASCE, **134**(7): 1139-1153.
3. **Kijewski-Correa, T.** and Pirnia, J.D. (2007), “Dynamic Behavior of Tall Buildings Under Wind: Insights from Full-Scale Monitoring,” *The Structural Design of Tall and Special Buildings*, **16**, 471-486.
4. **Kijewski-Correa, T.** and Kochly, M. (2007), “Monitoring the Wind-Induced Response of Tall Buildings: GPS Performance and the Issue of Multipath Effects,” *Journal of Wind Engineering and Industrial Aerodynamics*, **95**(9-11): 1176-1198.
5. **Kijewski-Correa, T.** and Kareem, A. (2007), “Performance of Wavelet Transform and Empirical Mode Decomposition in Extracting Signals Embedded in Noise,” *Journal of Engineering Mechanics*, ASCE, **133**(7): 849-852.
6. **Kijewski-Correa, T.** and Kareem, A. (2007), “Nonlinear Signal Analysis: Time-Frequency Perspectives,” *Journal of Engineering Mechanics*, ASCE, **133**(2): 238-245.
7. ***Kijewski-Correa, T.**, Kilpatrick, J., Kareem, A., Kwon, D.K., Bashor, R., Kochly, M., Young, B.S., Abdelrazaq, A., Galsworthy, J., Isyumov, N., Morrish, D., Sinn, R.C. and Baker, W.F. (2006), “Validating the Wind-Induced Response of Tall Buildings: A Synopsis of the Chicago Full-Scale Monitoring Program,” *Journal of Structural Engineering*, ASCE, **132**(10): 1509-1523.
8. **Kijewski-Correa, T.** and Kareem, A. (2006), “Efficacy of Hilbert and Wavelet Transforms for Time-Frequency Analysis,” *Journal of Engineering Mechanics*, ASCE, **132**(10): 1037-1049.
9. **Kijewski-Correa, T.**, Kareem, A. and Kochly, M. (2006) “Experimental Verification and Full-Scale Deployment of Global Positioning Systems to Monitor the Dynamic Response of Tall Buildings,” *Journal of Structural Engineering*, ASCE, **132**(8): 1242-1253.

* Winner of 2008 ASCE State-of-the-Art in Civil Engineering Award

10. **Kijewski-Correa, T.** (2005), "GPS: A New Tool for Structural Displacement Measurement," *APT Bulletin*, **36**(1): 13-18.
11. Gurley, K., **Kijewski, T.** and Kareem, A. (2003), "First- and Higher-Order Correlation Detection Using Wavelet Transforms," *Journal of Engineering Mechanics*, ASCE, **129**(2): 188-201.
12. **Kijewski, T.** and Kareem, A. (2003), "Wavelet Transforms for System Identification: Considerations for Civil Engineering Applications," *Computer-Aided Civil and Infrastructure Engineering*, **18**: 341-357.
13. Zhou, Y., **Kijewski, T.** and Kareem, A. (2003), "Aerodynamic Loads on Tall Buildings: An Interactive Database," *Journal of Structural Engineering*, ASCE, **129**(3): 394-404.
14. Kareem, A. and **Kijewski, T.** (2002), "Time-Frequency Analysis of Wind Effects on Structures," *Journal of Wind Engineering and Industrial Aerodynamics*, **90** (12-15): 1435-1452.
15. **Kijewski, T.** and Kareem, A. (2002), "On the Reliability of a Class of System Identification Techniques: Insights from Bootstrap Theory," *Structural Safety*, **24**(2-4): 261-280.
16. Zhou, Y., **Kijewski, T.** and Kareem, A. (2002), "Alongwind Load Effects on Tall Buildings: A Comparative Study of Major International Codes and Standards," *Journal of Structural Engineering*, ASCE, **128**(6): 788-796.
17. **Kijewski, T.** and Kareem, A. (2002), "On the Presence of End Effects and Associated Remedies for Wavelet-Based Analysis," *Journal of Sound and Vibration*, **256**(5): 980-988.
18. Kareem, A. and **Kijewski, T.** (2001), "Probabilistic and Statistical Approaches for Wind Effects: Time-Frequency Perspectives," *Journal of Wind Engineering (JAPAN)*, **89**: 25-30.
19. Kareem, A., **Kijewski, T.** and Smith, C.E. (1999), "Analysis and Performance of Offshore Platforms in Hurricanes," *Wind and Structures* **2**(1): 1-23.
20. Kareem, A., **Kijewski, T.** and Tamura, Y. (1999), "Mitigation of Motion of Tall Buildings with Recent Applications," *Wind and Structures* **2**(3): 201-251.
21. **Kijewski, T.** and Kareem, A. (1998), "Dynamic Wind Effects: A Comparative Study of Provisions in Codes and Standards with Wind Tunnel Data," *Wind and Structures* **1**(1): 77-109.
22. Kareem, A., **Kijewski, T.** and Lu, P.C. (1998), "Investigation of Interference Effects for a Group of Finite Cylinders," *Journal of Wind Engineering and Industrial Aerodynamics* **77-78**: 503-520.
23. Kareem, A. and **Kijewski, T.** (1996), "7th US National Conference on Wind Engineering: A Summary of Papers," *Journal of Wind Engineering and Industrial Aerodynamics* **62**: 81-129.

Peer Reviewed Conference Proceedings:

1. Bentz, A. and **Kijewski-Correa, T.** (2008) "Predictive Models for Damping in Buildings: The Role of Structural System Characteristics," *Proceedings of 2008*

Structures Congress, 18th Analysis and Computation Specialty Conference, Vancouver, Canada.

2. **Kijewski-Correa, T.**, Haenggi, M. and Antsaklis, P. (2006) “Wireless Sensor Networks for Structural Health Monitoring: A Multi-Scale Approach,” *Proceedings of 2006 ASCE Structures Congress, 17th Analysis and Computation Specialty Conference*, May 18-21, St. Louis. (Presenter)
3. **Kijewski-Correa, T.** and Kareem, A. (2005) “Efficacy of Hilbert and Wavelet Transforms for Time-Frequency Analysis,” *Proceedings of International Conference on Structural Safety and Reliability*, June 19-23. (Presenter)
4. Gurley, K., **Kijewski, T.** and Kareem, A. (2001), “Higher Order Correlation Detection in Nonlinear Aerodynamic Systems Using Wavelet Transforms,” *Proceedings of International Conference on Structural Safety and Reliability*, Newport Beach, CA, June.
5. **Kijewski, T.** and Kareem, A. (2001), “On the Reliability of System Identification: Applications of Bootstrap Theory,” *Proceedings of International Conference on Structural Safety and Reliability*, Newport Beach, CA, June. (Presenter)
6. **Kijewski, T.** and Kareem, A. (1999), “Analysis of Full-Scale Data from a Tall Building in Boston: Damping Estimates,” *Proceedings of 10th International Conference on Wind Engineering*, Copenhagen, June. (Presenter)

Unrefereed Publications (Advised Student Underlined)

Conference/Workshop Proceedings:

1. Bentz, A. and **Kijewski-Correa, T.** (2009) “Wind-Induced Vibrations of Tall Buildings: The Role of Full-Scale Observations in Better Quantifying Habitability,” *IMAC XXVII: A Conference and Exposition on Structural Dynamics*, Rosen Shingle Creek Resort and Golf Club, Orlando, Florida, February 9-12.
2. **Kijewski-Correa, T.**, Talley, J., Bauer, P., Haenggi, Antsaklis, P., Lemmon, M., Laneman, N.M., Montestruque, L., , Fulton, J., Patnaik, G. (2008), “Real-Time Plume Detection in Urban Zones Using Networked Sensing Data,” *Proceedings of Chem-Bio Defense Physical Science and Technology Conference*, New Orleans, LA, Nov. 17-21.
3. **Kijewski-Correa, T.**, Su, S. and Cycon, J. (2008) “System Identification in Wired, Wireless and Hybrid Architectures,” *Proceedings of 5th International Engineering and Construction Conference (IECC’5)*, UC Irvine, August 27-29.
4. Meyers, K., Ohland, M., Silliman, S., McWilliams, L. and **Kijewski-Correa, T.** (2008), “Comparison of Two Peer Evaluation Instruments,” *Proceedings of 2008 ASEE Conference*, AC 2008-674.
5. **Kijewski-Correa, T.**, Taciroglu, E. and Beck, J.L. (2008), “System Identification of Constructed Facilities: Challenges and Opportunities Across Hazards,” *Proceedings of Structures Congress*, Vancouver, Canada, CD-ROM. (Presenter)
6. Oshnack, M. and **Kijewski-Correa, T.** (2007), “A Cross-Hazard Approach to Structural Design: Lessons From Reconnaissance and Prescriptive Codes,”

- Proceedings of Challenges and Opportunities for Sustainability*, ECI, November 7-9, Naples, FL (REU Student Poster).
7. **Kijewski-Correa, T.** and Cycon, J. (2007) "System Identification of Constructed Buildings: Current State-of-the-Art and Future Directions," *Proceedings of SHM-II 2007*, November, Vancouver, Canada. (Presenter)
 8. Su, S. and **Kijewski-Correa, T.** (2007) "On the Use of a Bivariate Regressive Adaptive INdex for Structural Health Monitoring," *Proceedings of SHM-II 2007*, November, Vancouver, Canada. (Presenter)
 9. **Kijewski-Correa, T.** and Kareem, A. (2007), "Monitoring Serviceability Limit States in Civil Infrastructure: Lessons Learned from the Chicago Full-Scale Monitoring Experience," *Proceedings of 6th International Workshop on Structural Health Monitoring*, September 11-13, Stanford University.
 10. **Kijewski-Correa, T.,** Pirnia, J.D., Bashor, R., Kareem, A., Kilpatrick, J., Young, B., Galsworthy, J., Isyumov, N., Morrish, D. and Baker, W. (2007) "Full-Scale Performance Evaluation of Tall Buildings Under Winds," *Proceedings of 12th International Conference on Wind Engineering*, July 2-6, Cairns, Australia, vol. 1, pp. 351-358. (Presenter)
 11. Su, S. and **Kijewski-Correa, T.** (2007) "Performance Verification of Bivariate Regressive Adaptive Index for Structural Health Monitoring," *Proceedings of SPIE Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring*, March 18-22, San Diego, CA.
 12. Erwin, S., **Kijewski-Correa, T.** and Yoon, S.-Y., (2007) "Full-Scale Verification of Dynamic Properties from Short Duration Records," *Structures Congress 2007*, May 16-19, Long Beach, CA.
 13. Pirnia, J.D., **Kijewski-Correa, T.,** Abdelrazaq, A., Chung, J., and Kareem, A., (2007) "Full-Scale Validation of Wind-Induced Response of Tall Buildings: Investigation of Amplitude-Dependent Dynamic Properties," *Structures Congress 2007*, May 16-19, Long Beach, CA.
 14. Toguchi, S., and **Kijewski-Correa, T.,** (2006) "Improved Design of Residential Housing in Tsunami-Prone Regions: Quantification of Load Effects," *2006 Southern California Conference on Undergraduate Research (SCCUR)*, November 18, Occidental College, Los Angeles, CA.
 15. **Kijewski-Correa, T.,** Su, S., Abittan, E., and Antsaklis, P. (2006) "On the Use of Heterogeneous, Wireless Sensor Networks for Damage Assessment in Bridges Under Unknown Excitations," *Fourth World Conference on Structural Control and Monitoring (4WCSCM)*, July 11-13, San Diego, CA. (Presenter)
 16. **Kijewski-Correa, T.** and Kochly, M. (2006) "Practical Considerations for Global Positioning Systems in Urban Zones," *Fourth World Conference on Structural Control and Monitoring (4WCSCM)*, July 11-13, San Diego, CA. (Presenter)
 17. Bashor, R.E., **Kijewski-Correa, T.L.,** Kochly, M.C. and Kareem, A. (2006) "Full-Scale Monitoring of Wind-Induced Response of Tall Buildings," *Fourth World Conference on Structural Control and Monitoring (4WCSCM)*, July 11-13, San Diego, CA.
 18. Kochly, M. and **Kijewski-Correa, T.** (2006) "Experimental Verification of a GPS Network: Characterization and Removal of Multipath Effects," *Proceedings of SPIE*

- International Symposia on Smart Structures & Materials/NDE*, February 26-March 2, San Diego.
19. **Kijewski-Correa, T.**, Haenggi, M. and Antsaklis, P. (2005) "Multi-Scale Wireless Sensor Networks for Structural Health Monitoring," *Proceedings of SHM-II'05*, Nov. 16-18, Shenzhen, China.
 20. **Kijewski-Correa, T.**, Young, B., Baker, W.F., Sinn, R., Abdelrazaq, A., Isyumov, N. and Kareem, A. (2005) "Full-Scale Validation of Finite Element Models for Tall Buildings," *Proceedings of CTBUH 7th World Congress*, New York, Oct. 16-19.
 21. Abdelrazaq, A., **Kijewski-Correa, T.**, Song, Y.-H., Case, P., Isyumov, N. and Kareem, A. (2005) "Design and Full-Scale Monitoring of the Tallest Building in Korea: Tower Palace III," *Proceedings of 6th Asia-Pacific Conference on Wind Engineering*, Seoul, Korea, 12 - 14 September.
 22. Kwon, D.K., **Kijewski-Correa, T.** and Kareem, A. (2005) "e-Analysis/Design of Tall Buildings Subjected to Wind Loads," *Proceedings of Americas Conference on Wind Engineering*, Louisiana State University, May 31-June 4.
 23. Bashor, R., **Kijewski-Correa, T.** and Kareem, A. (2005) "On the Wind-Induced Response of Tall Buildings: The Effect of Uncertainties in Dynamic Properties and Human Comfort Thresholds," *Proceedings of Americas Conference on Wind Engineering*, Baton Rouge, LA, May 31-June 4.
 24. Kijewski-Correa, T., Kilpatrick, J., Kwon, D.K., Bashor, R., Young, B.S., Abdelrazaq, A., Galsworthy, J., Morrish, D., Sinn, R.C., Baker, W.F., Isyumov, N. and Kareem, A. (2005) "Full-Scale Validation of the Wind-Induced Response of Tall Buildings: Updated Findings from the Chicago Monitoring Project," *Proceedings of Americas Conference On Wind Engineering*, Baton Rouge, LA, May 31-June 4.
 25. Kochly, M. and **Kijewski-Correa, T.** (2005) "Monitoring Tall Buildings Under the Action of Wind: The Role of GPS in Urban Zones," *Proceedings of 4th European and African Conference on Wind Engineering*, Prague, July 11-15.
 26. **Kijewski-Correa, T.**, Kilpatrick, J., Bashor, R., Kwon, D.K., Young, B., Sinn, R., Galsworthy, J., Morrish, D., Isyumov, N. and Kareem, A. (2005) "Full-Scale Validation of the Wind-Induced Response of Tall Buildings: Updated Findings from the Chicago Monitoring Project," *Proceedings of ASCE Structures Congress*, New York, April 20-24.
 27. McNamara, R., Kareem, A. and **Kijewski-Correa, T.** (2005) "Redundancy and Robustness in the Design of Structural Systems for Tall Buildings: A Designers' Perspective," *Proceedings of ASCE Structures Congress*, New York, April 20-24.
 28. Kochly, M., **Kijewski-Correa, T.** and Stowell, J. (2005) "GPS for Monitoring in Urban Zones: Calibration and Quantification of Multipath Effects," *SPIE Conference on Smart Structures and Materials/NDE for Health Monitoring and Diagnostics*, 6-10 March, San Diego.
 29. **Kijewski-Correa, T.**, Kochly, M. and Stowell, J. (2004) "On the Emerging Role of GPS in Structural Health Monitoring," *Proceedings of CTBUH 2004*, Seoul, Korea, Oct 11-13. (Presenter)
 30. **Kijewski-Correa, T.** and Kareem, A. (2004) "Time-Frequency Perspectives in the Analysis and Interpretation of Ground Motions and Structural Response," *Proceedings of 13th World Conference on Earthquake Engineering*, 1-6 August, Vancouver, BC, Canada.

31. **Kijewski-Correa, T.** and Kareem, A. (2004) “Time-Frequency Characterization of Nonlinear Dynamical Systems,” *Proceedings of ASCE Conference on Probabilistic Mechanics and Structural Reliability*, Albuquerque, NM, July 26-28. (Presenter)
32. **Kijewski-Correa, T.** (2004) “GPS: A New Tool for Structural Health Monitoring,” *Proceedings of Fourth International Workshop on Structural Control, International Association for Structural Control*, Columbia University, New York, 10-11 June, 2004. (Presenter)
33. **Kijewski-Correa, T.** and Kareem, A. (2004) “The Height of Precision: New Perspectives in Structural Monitoring,” *Proceedings of Earth & Space: 9th Aerospace Division International Conference on Engineering, Construction and Operations Challenging Environments*, 7-10 March, Houston. (Presenter)
34. **Kijewski-Correa, T.** and Kareem, A. (2003) “The Chicago Monitoring Project: A Fusion of Information Technologies and Advanced Sensing in Civil Engineering,” *Proceedings of First International Conference on Structural Health Monitoring and Intelligent Infrastructure*, 13-15 November, Tokyo.(Presenter)
35. **Kijewski, T.**, Kwon, D.K. and Kareem, A. (2003) “E-Technologies for Wind Effects on Structures,” *Proceedings of 11th International Conference on Wind Engineering*, 2-5 June, Lubbock, TX. (Presenter)
36. Kilpatrick, J., **Kijewski, T.**, Williams, T., Kwon, D.K., Young, B., Abdelrazaq, A., Galsworthy, J., Morrish, D., Isyumov, N. and Kareem, A. (2003), “Full Scale Validation of the Predicted Response of Tall Buildings: Preliminary Results of the Chicago Monitoring Project,” *Proceedings of 11th International Conference on Wind Engineering*, Lubbock, TX, 2-5 June. (Co-presenter)
37. **Kijewski, T.**, Brown, D., and Kareem, A. (2003), “Identification of Dynamic Properties of a Tall Building from Full-Scale Response Measurements,” *Proceedings of 11th International Conference on Wind Engineering*, Lubbock, TX, 2-5 June. (Co-presenter)
38. **Kijewski, T.**, Kilpatrick, J., Williams, T., Kwon, D.K., Young, B., Abdelrazaq, A., Galsworthy, J., Morrish, D., Isyumov, N. and Kareem, A. (2003), “Full-Scale Validation of the Wind-Induced Response of Tall Buildings: Preliminary Results of the Chicago Monitoring Project,” *Proceedings of 2003 Structures Congress, ASCE*, Seattle, 29 May - 1 June. (Presenter)
39. **Kijewski, T.** and Kareem, A. (2003), “GPS for Monitoring the Dynamic Response of Tall Buildings: Experimental Verification and Full-Scale Application,” *Proceedings of 2003 Structures Congress, ASCE*, Seattle, 29 May - 1 June. (Presenter)
40. Kareem, A., **Kijewski, T.**, Chen, X. and Zhou, Y. (2002), “Dynamic Response of Long Period Structures: Computational Methods to Laboratory Experiments and Full-Scale Monitoring,” *Proceedings of UJNR Workshop on Wind Engineering*, Seattle, October 2-5.
41. **Kijewski, T.** and Kareem, A. (2002), “Wavelet Transforms for System Identification and Associated Processing Concerns,” *Proceedings of the 15th ASCE Engineering Mechanics Conference*, Columbia University, New York, June 2-5.

42. **Kijewski, T.** and Kareem, A. (2002), "GPS for Monitoring the Dynamic Response of Tall Buildings," *Proceedings of Structures Congress 2002*, ASCE, Denver, April 4-6. (Presenter)
43. McNamara, R., Kareem, A. and **Kijewski, T.** (2002), "Ask the Experts...Perception of Motion Criteria for Tall Buildings Subjected to Wind," *Proceedings of Structures Congress 2002*, ASCE, Denver, April 4-6.
(rapporteur, see www.nd.edu/~nathaz/perception/perception.html)
44. **Kijewski, T.** and Kareem, A. (2001), "Full-Scale Study of the Behavior of Tall Buildings Under Winds," *Proceedings of SPIE Symposium on NDE for Health Monitoring and Diagnostics*, Newport Beach, CA, March. (Presenter)
45. **Kijewski, T.** and Kareem, A. (2000), "Reliability of Random Decrement Technique for Estimates of Structural Damping," *Proceedings of ASCE Conference on Probabilistic Mechanics and Structural Reliability*, Notre Dame, IN, July 24-26. (Presenter)
46. Vandermeulen, R., **Kijewski, T.** and Kareem, A. (2000), "Bootstrap Method for Estimation of Spectral Bandwidth with Limited Observations," *Proceedings of ASCE Conference on Probabilistic Mechanics and Structural Reliability*, Notre Dame, IN, July 24-26. (Presenter)
47. Abdelrazaq, A., Baker, W., Isyumov, N., Kareem, A., **Kijewski, T.** and Sinn, R. (2000), "Study to Correlate Actual Expected Behavior of Tall Buildings Under Wind," *Proceedings of 2000 Structures Congress*, ASCE, Philadelphia, April.
48. **Kijewski, T.**, Kareem, A. and Tamura, Y. (1998), "Overview of Methods to Mitigate the Response of Wind-Sensitive Structures," *Proceedings of Structural Engineering World Congress*, CD-ROM, San Francisco, July. (Presenter)
49. Kareem, A. and **Kijewski, T.** (1997), "Wind Engineering Research and Development in the USA," *Proceedings of UJNR Workshop on Wind Engineering*.
50. Kareem, A., **Kijewski, T.** and Lu, P.C. (1997), "Investigation of Interference Effects for a Group of Finite Cylinders," *Proceedings of 8th US Conference on Wind Engineering*, CD-ROM, John Hopkins University, Baltimore, June. (Presenter)
51. **Kijewski, T.** and Kareem, A. (1997), "Dynamic Wind Effects Provisions in Codes and Standards and Wind Tunnel Data: A Comparative Study," *Proceedings of 8th US Conference Wind Engineering*, CD-ROM, John Hopkins University, Baltimore, June. (Presenter)

Other Publications

Technical Reports:

1. Erwin, S., **Kijewski-Correa, T.** and Yoon, S.W. (2006) *Analysis of Korean Reinforced Concrete Building Data*. DYNAMO Report 061130, Department of Civil Engineering and Geological Sciences, University of Notre Dame, Notre Dame, IN.
2. **Kijewski-Correa, T.**, Pirnia, D., Su, S., Kochly, M. and Descary, A. (2005) *Vibration Characteristics of the University of Notre Dame Science Learning Center Rooftop Observatory Area*. DYNAMO Report 050728, Department of Civil Engineering and Geological Sciences, University of Notre Dame, Notre Dame, IN.

3. **Kijewski, T.** and Kareem, A. (2000), “Estimation and Modeling of Damping and Engineering Auxiliary Damping Systems in Civil Engineering Structures: An Overview,” NatHaz Modeling Laboratory Report to ASCE Committee on Wind Effects.

Invited Lectures and Workshops

1. NCSEA Winter Institute, Invited Speaker, Miami, January 23-24, 2008.
2. Building Effective Virtual Organizations, National Science Foundation Workshop, Washington, DC, January 14-16, 2007
3. “Performance Evaluation of Tall Buildings Under Winds,” Structural Engineers Foundation, Structural Engineers Association of Illinois, Union League Club, Chicago, IL, November 7, 2006 (Co-Presenter: Ahsan Kareem).
4. “Impact of Disasters on Society,” University Club, University of Notre Dame, October 10, 2006.
5. “An Overview of the Chicago Full-Scale Monitoring Program,” Skidmore Owings & Merrill LLP, Chicago, October 20, 2004.
6. “Chicago Monitoring Project on Wind Effects,” Illinois Institute of Technology, Department of Architecture, Chicago, May 1, 2004.
7. “Full-Scale Validation of the Wind-Induced Response of Tall Buildings: Updated Findings from the Chicago Monitoring Project,” Chicago Committee on High Rise Buildings, Chicago, April 8, 2004.
8. “GPS: A New Tool for Structural Displacement Measurements,” State of the Art Techniques for Monitoring and Protecting Historic Structures Symposium, Association for Preservation and Technology International, Columbia University, New York, March 27, 2004 (Co-Presenter: Ahsan Kareem).
9. “Time-Frequency Perspectives in Civil Engineering,” Department of Structural Engineering, University of California San Diego, February 9, 2004.

Grants and Sponsored Programs

1. “Dynamic Properties of Apartment Building Based on Monitoring for the Justification of Structural Renovation,” PI: T. Kijewski-Correa, Dankook University, Korea, January 2008, \$30,000 for 36 months
2. “Networked Sensing in Built and Natural Environments,” Acting-PI, Congressional Directed Funding Initiative in collaboration with Crane Naval Surface Warfare Center, August 2007, \$2,200,537 for 12 months
3. “VORTEX-Winds: A Virtual Organization for Reducing the Toll of EXtreme Winds,” Co-PI, NSF, CBET Division, October 2007, \$190,000 for 24 months
4. “Structural Health Assessment of Tower During Construction,” Co-PI, Private Corporation, \$199,172 for 24 months
5. “Networked Sensing in Built and Natural Environments,” Co-PI, Congressional Directed Funding Initiative in collaboration with Crane Naval Surface Warfare Center, August 2006, \$1,751,000 for 12 months

6. "Performance Evaluation of Tall Buildings Under Winds: From Predictive Methods to Laboratory and Full-Scale Measurements," Co-PI, NSF, CMMI Division, September 2006, \$420,571 for 36 months
7. "REU Site: Interdisciplinary Studies in Tsunami Impacts & Mitigation," PI: T. Kijewski-Correa, NSF, EEC Division, June 2006, \$329,418 for 36 months
8. "Dynamic Properties of Building Based on Monitoring for Diagnosis: Notre Dame Collaborative Phase," PI: T. Kijewski-Correa, Dankook University, Korea, January 2006, \$20,000 for 24 months
9. "Restoration of Medium Scale Earthquake Simulator for Study of Structural and Soil Dynamics, Health Monitoring and Structural Control," PI: T. Kijewski-Correa, Equipment Restoration and Renewal Program, Graduate School, University of Notre Dame, January 2005, Amount: \$67,894 for 12 months

Master's Theses Directed

1. Michael Kochly (2006): *Validation of Global Positioning Systems for Monitoring Civil Infrastructure Systems: Performance Assessment and Removal of Multipath Effects* [Current employer: DLZ Indiana LLC, South Bend]
2. Jennifer Cycon (2008): *Design and Validation of a Real-Time Structural Health Monitoring System Interfacing Through a Local Area Network* [Current Employer: Thornton-Tomasetti, Chicago]
3. J. David Pirnia (Projected 2008): *Full-Scale Validation of Wind-Induced Response of Tall Buildings: The Role of Amplitude-Dependent Dynamic Properties and Transient Wind Events* [Current employer: Skidmore Owings & Merrill, LLP, Chicago]
4. Stephen Erwin (Projected 2008): *Full-scale Evaluation of Dynamic Properties of a Suite of Buildings in South Korea* [Current employer: Kramer Gehlen and Associates, Portland]
5. Jonathan Rager (Projected 2008): Real-Time Detection of Plume Boundaries in a C/B/N Event

Doctoral Dissertations Directed

1. Su Su (Projected 2009): *Novel Damage Detection in Civil Structures*
2. Audrey Bentz (Projected May 2012): *Predictive Models for Damping: Insights from Full-Scale Data and Structural System Characteristics*

Undergraduate Researchers Supervised

Director of Interdisciplinary Studies in Tsunami Impacts and Mitigation (ISTIM), REU Program, University of Notre Dame (2006-2008) [<http://istim.ce.nd.edu>]

1. Kevin Bott, University of Notre Dame, *Full-Scale Data Analysis for Chicago Full-Scale Monitoring Project*, 2004-2005.
2. Joseph Pomerence, University of Notre Dame, *Full-Scale Data Analysis for Boston Hancock*, 2004-2005.

3. Kevin Haas, University of Notre Dame, *Next Generation GPS for Monitoring Civil Structures in Urban Zones*, 2005.
4. Andrew Descary, California Polytechnic State University, *Next Generation GPS for Monitoring Civil Structures in Urban Zones*, 2005.
5. Jim Hagemann, University of Notre Dame, *Full-Scale Data Analysis for Boston Hancock*, 2005-2006.
6. Peter Sweeney, University of Notre Dame, *Full-Scale Data Analysis for Chicago Full-Scale Monitoring Project*, 2005.
7. Bria Whitmire, University of Texas, San Antonio, *Improved Residential Construction in a Tsunami Zone: Quantification of Design Capacity*, ISTIM Program, Summer 2006.
8. Stacey Toguchi, Loyola Marymount University, *Improved Design of Residential Housing in Tsunami-Prone Regions: Quantification of Load Effects*, ISTIM Program, Summer 2006.
9. Manuel Nuno, University of Notre Dame, *Effect of Baseline Positioning on GPS Displacements*, 2006-2008.
10. Anna Lacey, University of Notre Dame, *Documentation and Databasing of Tsunami Damage and Reconnaissance Studies in Thailand*, 2006-2007.
11. Mary Beth Oshnack, University of Pittsburgh, *A Multi-Hazard Approach to Structural Design: Lessons from Reconnaissance and Prescriptive Codes*, Summer 2007.
12. Ellen Heintzman, University of Notre Dame, *Full-Scale Evaluation of a Tall Building in Korea*, Spring 2008.
13. Elaine Huffman, Virginia Tech University, *Performance of Schools and Other Essential Facilities in Natural Disasters*, Summer 2008.
14. Bethany Noble, University of Notre Dame, *Use of Cyberinfrastructure to Aid in the Mitigation of Natural Disasters*, Summer 2008.

Post-Docs and Visiting Researchers Supervised

1. Nelson Duran, University of Notre Dame (2003-2005)
2. Dr. Sung Won Yoon, Seoul National University of Technology (2006-2007)

Teaching Accomplishments

Courses Taught/Developed

- EG 10111: Introduction to Engineering Systems I – Module 1: The Tower Builder
- CE 40240/60240: Structural Systems
- CE CE 40280: Structural Steel Design
- CE 70250: Experimental Structural Dynamics
- CE 331: Probabilistic and Statistical Methods in Engineering
- Course Proposal: Two Courses in Theory and Application of Real-Time Systems, College of Engineering (X. Hu, M. Lemmon, C. Poellabauer, A. Striegel, S. Chandra, J.W. Goodwine, A.P. Bowling, T.L. Kijewski-Correa)

Student Course Evaluation: (Q17) Overall Perception of Teaching Mean Score (Out of 4.0)

<i>Course</i>	<i>F03</i>	<i>S04</i>	<i>F04</i>	<i>S05</i>	<i>F05</i>	<i>S06</i>	<i>F06</i>	<i>S07</i>	<i>F07</i>	<i>S08</i>
EG 10111							3.4		3.2	
CE 331	3.8									
CE 40280			3.2		3.3			3.6	3.6	
CE 40240/ 60240				3.9			3.7			
CE 70250		3.6				3.8				3.6

Service

Outreach Service Programs:

- Expanding Your Horizons Program, Breakout Session Leader (2002), Presenter (2003-2004), Steering Committee (2004-2008), Presenter Coordinator (2008)
- Notre Dame Introduction to Engineering Program, Presenter (2005, 2008)
- Upward Bound, Presenter (2004)
- Instructor, Ameritech Pre-college Minority Engineering Program (2000-2004)
- Lab Organizer, Ms. Wizard Day (2000-2003)
- Co-Organizer, Quakes and Shakes Outreach Program (2001-2002)

University Service – Academic:

- Ad-Hoc Committee on Statistics (2006-2008)
- Graduate Fellowship Proposal Reviewer, Center for Applied Mathematics (2005)
- Valedictorian Selection Committee (2005-2008)

College Service – Academic:

- Engineering Honors Program, Committee (2007-2008)
- Chi Epsilon Honor Society, Faculty Advisor (2007-2008)
- College Council, College of Engineering (2006-2008)
- Engineering Honors Program, Mentor (2005-present)

Department Service:

- Graduate Studies Committee (2004-2005, 2005-2006)
- Undergraduate Academic Advisor: Class of 2008
- Advisor to Kiewit Construction Expedition to Tacoma Narrows and Bay Bridges (Fall 2003)
- ABET Committee on Structural Engineering Curriculum: member (2003-present), Chair (2008-present)
- Hydraulics/Water Resources Search Committee (2008-present)
- Linbeck Chair Search Committee (2003-present)
- Structures Search Committee (2006-present, Chair 2008-present)
- MSCE Committees: D. Brown (2003), T. Williams (2003), A. Vorwerk (2004), B. Morgen (2004), M. May (2006), E. Kerr (2006)

- MSEE Committees: E. Abittan (2006)
- PhD Committees: H. Jiang (2008), L. Wang (2007), L. Kerr (2007), R. Bashor, Q. Shen (2006), K. Butler