Dae Kun Kwon, Ph.D.

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Personal Information

Nationality : South Korea
Current US Immigration Status: Permanent resident
Language: English, Korean

Education

Ph.D., Civil Engineering, Korea Advanced Institution of Science and Technology (KAIST), South Korea, 2001
M.S., Civil Engineering, Korea Advanced Institution of Science and Technology (KAIST), South Korea, 1995
B.S., Civil Engineering, Yonsei University, South Korea, 1993

Professional Experience

June 2011 – Current	Research Assistant Professor NatHaz Modeling Laboratory Department of Civil Engineering and Geological Sciences University of Notre Dame, USA
June 2005 – June 2011	Postdoctoral Research Associate NatHaz Modeling Laboratory Department of Civil Engineering and Geological Sciences University of Notre Dame, USA
October 2001 – March 2005	Postdoctoral Research Associate NatHaz Modeling Laboratory Department of Civil Engineering and Geological Sciences University of Notre Dame, USA
March 2001 – September 2001	Postdoctoral Research Associate, Department of Civil Engineering, KAIST
March 1993 – February 2001	Graduate Research Assistant, Department of Civil Engineering, KAIST

Research Interest

–   Structural engineering/Wind engineering

–   Structural dynamics & Random vibrations

–   Wind effects on structures and their application to codes and standards

–   Extreme winds and their modeling/simulation : Hurricane, thunderstorm/downburst, tornado

–   Full-Scale measurement and health monitoring of structures

–   Wind tunnel experiments : bridge and building aerodynamics & wind-resistant design of structures

–   e-Technologies : web-based on-line processing in modeling/analysis/design of structures

–   Assessment/mitigation of wind-induced motion of structures

–   Uncertainty/Reliability/Risk assessment

–   Finite element analysis of structures

License, Professional Membership and Journal Reviewer Activities

First class certificate of Civil Engineer in South Korea

Member, American Society of Civil Engineer/Structural Engineering Institute (ASCE/SEI)

Member, American Association for Wind Engineering (AAWE)

Member, Korean Society of Civil Engineer (KSCE)

Member, The wind engineering institute of Korea (WEIK)

Journal Reviewer, Journal of Structural Engineering, ASCE

Journal Reviewer, Engineering Structures

Journal Reviewer, Journal of Wind Engineering and Industrial Aerodynamics

Journal Reviewer, Sensors, MPDI

Journal Reviewer, Journal of Zhejiang University-SCIENCE A

Session Chair, 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012), Notre Dame, IN, June 2012.

Honors, Scholarship and Fellowship

The *ASCE 2008 State-of-the-Art of Civil Engineering Award* 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, 2006

Korea Science and Engineering Foundation (KOSEF) Fellowship for oversea postdoctoral researcher, October 2002 – September 2003

National Merit Scholarship for Ph.D. studies, KAIST, 1995 – 2001

National Merit Scholarship for M.S. studies, KAIST, 1993 – 1995

Yonsei University Full scholarship for B.S. studies, Yonsei University, 1989 – 1993

First position in the order of Merit in Civil Engineering, Yonsei University, spring semester, 1991

Second position in the order of Merit in Civil Engineering, Yonsei University, 1990 – 1992

Research Experience/Technical Expertise

Characterization and formulation of wind load effects on civil infrastructures such as long-span cable-stayed/suspension bridges, building structures through not only experimental approaches in laboratory and full-scale measurements/structural health monitoring but also analytical/numerical/probabilistic approaches. Wind hazard mitigation/wind-resistant design and applications of cyberinfrastructure for pooling and coordination of computational resources, data management and archiving, and visualization tools into a web accessible framework.

▣ *October 2001 − Current*   *Postdoctoral Research Associate/Research Assistant Professor*
Department of Civil & Environmental Engineering & Earth Sciences, University of Notre Dame
Advisor : Professor Ahsan Kareem

Full-scale monitoring and structural health monitoring of tall buildings

- Chicago Full-scale monitoring of tall buildings:
  - System development and management
  - Development of web-based on-line data analysis and establishment of database for long-term data management and on-line post-processing (http://windycity.ce.nd.edu)
- Structural health monitoring of the world tallest building, Burj Khalifa:
  - Development of a new network-based structural health monitoring system, SmartSync, for real-time, multi-hazard (winds and earthquakes) full-scale measurements
  - Development of web-based portals for full-scale data monitoring, transfer, processing, mining and on-the-fly processing (secured website)
  - Real-time hybrid system identification and its application to structural health monitoring system

Nonstationary wind load effects on structures

- Research on gust-front winds originated from thunderstorm/downburst
  - Design/development of physical bench top facility involving a multi-fan wind tunnel for the generation of gust front winds.
  - Development of a new gust-front factor framework to encapsulate both the kinematic and dynamic features of gust-front induced wind effects on structures
  - Gust-front loading effects on wind turbine tower systems
- Efficacy of averaging interval for nonstationary winds such as hurricane and thunderstorm/downburst

Cyberbased modeling, simulation, and analysis and design technologies

This aims at web-based wind-related frameworks to assist engineers and researchers in performing on-line on-the-fly modeling, simulation, and analysis/design analysis/design of structures under wind loads without in-depth knowledge of the background theories, which are accessible and done via a general web browser using user-friendly interfaces. A wide range of design/construction firms and individual engineers/researchers/students have been utilizing these e-modules in their design practices/researches.

Example:
- Database-enabled design framework: a fusion of analytical/numerical and experimental approaches for more accurate assessment of wind load effects on structures
  - Development of NatHaz aerodynamic load database currently introduced in the commentary of

ASCE 7-05 and 7-10 as an alternative means to assess the dynamic wind-induced loads on typical isolated buildings in the preliminary design stages (http://aerodata.ce.nd.edu)
- Development of database-enabled design module for high-rise buildings: hosting multiple high-frequency force balance databases and embedding international codes and standards (e-module at https://vortex-windswinds.org)
- Development of database-enabled design module for high-rise buildings using synchronous pressure measurement database (e-module at https://vortex-windswinds.org)
- Development of database-enabled design module for flat, gable and hip roofed low-rise buildings using synchronous pressure measurement database (e-module at https://vortex-windswinds.org)
- Development of database-enabled design module for flat, gable and hip roofed low-rise buildings using synchronous pressure measurement database

- Engineering virtual organization for Cyberinfrastructure, VORTEX-Winds (A Virtual Organization for Reducing the Toll of EXtreme Winds) (https://vortex-windswinds.org)
- Development of web-based simulation of two dimensional Gaussian wind fields for dynamic analysis on civil infrastructures (http://windsim.ce.nd.edu)
- Development of cyberbased three dimensional wind simulation (e-module at https://vortex-windswinds.org)
- Development of web-based on-line on-the-fly gust-front factor framework for immediate design application on gust-front winds originated from thunderstorm/downburst (http://gff.ce.nd.edu)
- Development of damping database to provide users with damping information for various building structures in terms of database query-based approaches (e-module at https://vortex-windswinds.org)

Mitigation of wind-induced vibrations on tall buildings

- Validating performance of tuned sloshing dampers through hybrid experiments on tall buildings, "Hardware-in-the-loop" and full-scale monitoring
- Semi-active or adaptive tuned liquid column damper systems

Uncertainty/reliability analysis and assessment

- Non-Gaussian peak factor framework for stationary non-Gaussian processes
- Wind Load Factor for dynamically sensitive structures with uncertainties
- Performance-based assessment of occupant comfort in tall buildings

Wind codes and standards

- Revisiting gust averaging time and gust effect factor in ASCE 7
- Comparative study of major international wind codes and standards for wind effects on tall buildings
- Performance evaluation of database-enabled design frameworks for the preliminary design of tall buildings
- Performance of building envelopes in extreme winds

Teaching/Service
- Mentoring/supervising undergraduate/graduate students
- Mentoring/supervising ESTEEM (Engineering, Science, and Technology Entrepreneurship Excellence Masters Program) students

▣ *March 1993 − September 2001   M.S. & Ph.D. Candidate and Postdoctoral Research Associate*
　Department of Civil Engineering, Korea Advanced Institute of Science and Technology (KAIST), Korea
　Advisor : Professor C. K. Choi

Major research topic: Bridge and Building Aerodynamics through Wind Tunnel Experiments

Conducting projects and researches for investigations of bluff body aerodynamics on large structures such as cable-stayed/suspension bridges, bridge towers and building structures including wind-resistant designs

Examples:
- Experimental study on the wind-resistance of bridge section with two I-type girders
- Effects on aerodynamic responses due to bridge-deck shapes for vortex-induced vibration and flutter
- Experimental study on aerodynamic improvements for bridge towers using corner modifications
- Aerodynamic characteristics of square/rectangular cylinders with corner modifications
- Wind-resistant designs for cable-stayed/suspension long-span bridges using sectional and 3-D models through wind tunnel experiments
- Aeroelastic tests on bridge towers and 3-D bridges including construction stages
- Wind tunnel blockage effects on aerodynamic behavior of bluff body

Other researches
- Mitigation of wind-induced vibrations by active/passive control
- Development of FEM element and educational FEM software, FESA, in part.

Teaching/Service
- Teaching assistant/lecturer of the undergraduate/graduate courses such as Structural Engineering, Wind engineering, Advanced mathematics on engineering, Finite element method
- Mentoring/supervising undergraduate/graduate students
- Assistant and chief assistant of international conferences held in Korea
- Chief editorial assistant for a textbook publication, Finite Element Method (in Korean)

Publications

Dissertation/Thesis

"An Experimental Study on the Aerodynamic Characteristics of Rectangular Cylinders with Various Corner Cuts", Ph.D. Dissertation, Department of Civil Engineering, KAIST, Korea, February 2001.

"An Experimental Study on the Aerodynamic Control of Bridge Tower", M.S. Dissertation, Department of Civil Engineering, KAIST, Korea, February 1995.

Manuscripts in finalization for possible journal publication

Dae Kun Kwon, Deepak Kumar and Ahsan Kareem, "Hardware-In-the-Loop Simulation of a Building with a Tuned Sloshing Damper." *Journal of Structural Engineering, ASCE,* 2014.

Dae Kun Kwon, Ahsan Kareem, Rachel Bashor, and Bruce R. Ellingwood, "Wind Load Factor for Dynamically Sensitive Structures with Uncertainties." *Journal of Structural Engineering, ASCE,* 2014.

Enrica Bernardini, Seymour M. J. Spence, <u>Dae Kun Kwon</u>, and Ahsan Kareem, "A Data-driven Web Portal for the Performance-based Assessment of Occupant Comfort in Tall Buildings." *Structural Safety,* 2014.

Yanlin Guo, <u>Dae Kun Kwon</u>, and Ahsan Kareem, "Real-time Hybrid System Identification and Its Application." *Engineering Structures*, 2014.

Ahsan Kareem, <u>Dae Kun Kwon</u>, and Rachel Bashor, "Performance of Building Envelopes in Extreme Winds." *Journal of Structural Engineering, ASCE,* 2014.

Journal Articles

<u>Dae Kun Kwon</u> and Ahsan Kareem, "An On-line Database-Enabled Design Module for Wind Analysis/Design of Low-Rise Buildings." *Journal of Structural Engineering*, *ASCE, Under Review*, 2014.

<u>Dae Kun Kwon</u> and Ahsan Kareem, "Revisiting Gust Averaging Time and Gust Effect Factor in ASCE 7." *Journal of Structural Engineering*, *ASCE, Under Review*, 2014.

<u>Dae Kun Kwon</u>, Seymour M. J. Spence, Ahsan Kareem, "Performance Evaluation of Database-Enabled Design Frameworks for the Preliminary Design of Tall Buildings." *Journal of Structural Engineering*, *ASCE, Under Review*, 2014.

<u>Dae Kun Kwon</u>, Seymour M. J. Spence, Ahsan Kareem, "A Cyberbased Data-Enabled Design Framework for High-Rise Buildings Driven by Synchronously Measured Surface Pressures." *Advances in Engineering Software*, *Under Review*, 2014.

Xinzhong Chen, <u>Dae-Kun Kwon</u>, and Ahsan Kareem, "High Frequency Force Balance Technique for Tall Buildings: A Critical Review and Some New Insights." **invited paper** for a special issue of *Wind and Structures*, *In press*, 2014.

McCullough, M., <u>Kwon, D. K.</u>, Kareem, A., Wang, L. "Efficacy of Averaging Interval for Non-Stationary Winds." *Journal of Engineering Mechanics, ASCE,* 140(1), 1-19, 2014.

Tracy Kijewski-Correa, <u>Dae Kun Kwon,</u> Ahsan Kareem, Audrey Bentz, Yanlin Guo, Sarah Bobby, and Ahmad Abdelrazaq. "SmartSync: An Integrated Real-Time Structural Health Monitoring and Structural Identification System for Tall Buildings.", **invited paper** for a special issue of *Journal of Structural Engineering*, ASCE, Real-World Applications for Structural Identification and Health Monitoring Methodologies, 139(10), 1675-1687, 2013.

<u>Kwon, D. K.</u>, and Kareem, A. "A multiple database-enabled design module with embedded features of international codes and standards." International Journal of High-Rise Buildings, CTBUH, 2(3), 257-269, 2013.

<u>Kwon, D. K.</u>, Kareem, A. "Comparative study of major international wind codes and standards for wind effects on tall buildings." *Engineering Structures*, 51, 23-35, 2013.

<u>Kwon, D. K.</u>, Kareem, A. "Generalized gust-front factor: A computational framework for wind load effects." *Engineering Structures*, 48, 635-644, 2013.

<u>Dae Kun Kwon</u>, Ahsan Kareem, and Kyle Butler. "Gust-Front Loading Effects on Wind Turbine Tower Systems", **invited paper** for *Journal of Wind Engineering and Industrial Aerodynamics*, 104-106, 109-115, 2012.

<u>Kwon, D.</u>, and Kareem, A., "Peak Factor for Non-Gaussian Load Effects Revisited." *Journal of Structural Engineering*, ASCE, 137(12), 1611-1619, 2011.

Kwon, D., and Kareem, A., "Gust-front factor: New Framework for Wind Load Effects on Structures." *Journal of Structural Engineering, ASCE*, 135(6), 717-732, 2009.

Kwon, D., Kijewski-Correa, T. and Kareem, A., "e-Analysis of High-Rise Buildings Subjected to Wind Loads." *Journal of Structural Engineering, ASCE*, 134(7), 1139-1153, 2008.

Tracy Kijewski-Correa, John Kilpatrick, Ahsan Kareem, Dae-Kun Kwon, Rachel Bashor, Michael Kochly, Bradley S. Young, Ahmad Abdelrazaq, Jon Galsworthy, Nick Isyumov, Dave Morrish, Robert C. Sinn, William F. Baker, "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, 2006. **[The ASCE 2008 State-of-the-Art of Civil Engineering Award]**

C. K. Choi and D. K. Kwon, "Effects of Corner Cuts and Angles of Attack on the Strouhal Number of Rectangular Cylinders.", *Wind and Structures*, 6(2), 127-140, 2003.

C. K. Choi and D. K. Kwon, "Determination of the Strouhal Number Based on the Aerodynamic Behavior of Rectangular Cylinders.", *Wind and Structures*, 3(3), 209-220, 2000.

C. K. Choi and D. K. Kwon, "Aerodynamic Stability for Square Cylinder with Various Corner Cuts.", *Wind and Structures*, 2(3), 173-187, 1999.

C. K. Choi and D. K. Kwon, "Wind Tunnel Blockage Effects on Aerodynamic Behavior of Bluff Body.", *Wind and Structures*, 1(4), 351-364, 1998.

D. K. Kwon, C. K. Choi and H. S. Kim, "An Experimental Study on the Strouhal Number of Rectangular Cylinder with Corner Cuts and Attach Angles (I) : Determination of Strouhal Number.", *Journal of Wind Engineering Institute of Korea*, 5(2), 165-172, 2001. (In Korean)

D. K. Kwon, C. K. Choi and H. S. Kim, "An Experimental Study on the Strouhal Number of Rectangular Cylinder with Corner Cuts and Attach Angles (II) : Characteristics of Strouhal Number.", *Journal of Wind Engineering Institute of Korea*, 5(2), 173-179, 2001. (In Korean)

C. K. Choi and D. K. Kwon, "An Experimental Study on the Aerodynamic Characteristics of Rectangular Cylinder with Various Corner Cuts.", *Journal of Wind Engineering Institute of Korea*, 4(2), 199-218, 2000. (In Korean)

C. K. Choi and D. K. Kwon, "Wind Tunnel Blockage Effects on Aerodynamic Behaviors of Square Section.", *Journal of the Wind Engineering Institute of Korea*, 3(1), 89-98, 1999. (In Korean)

C. K. Choi and D. K. Kwon, "An Experimental Study on the Aerodynamic Improvement of Box-Shaped Bridge.", *Journal of the Wind Engineering Institute of Korea*, 1(1), 135-143, 1997. (In Korean)

Peer Reviewed Conference Proceedings:

Kareem, A., Kwon, D. K., Tamura, Y., "Cyberbased Analysis, Modeling and Simulation of Wind Load Effects in VORTEX-Winds," *3rd American Association for Wind Engineering Workshop*, Hyannis, Massachusetts, USA, August 12 - 14, 2012.

Robert McNamara, Ahsan Kareem, Deepak Kumar, and Dae Kun Kwon. "Sloshing Dampers for Slender Concrete Towers." *The Council on Tall Buildings and Urban Habitat (CTBUH 2012)*, Shanghai, China, September 2012.

Dae Kun Kwon, Deepak Kumar, and Ahsan Kareem. "Hardware-in-the-loop simulations for building-tuned sloshing damper system." *2012 Joint Conference of the Engineering Mechanics Institute and 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012)*, Notre

Dame, IN, June 2012.

Deepak Kumar, <u>Dae Kun Kwon</u>, and Ahsan Kareem. "Web-based database-enable design module for wind analysis/design of low-rise buildings." *2012 Joint Conference of the Engineering Mechanics Institute and 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012)*, Notre Dame, IN, June 2012.

Megan McCullough, <u>Dae Kun Kwon</u>, Ahsan Kareem, and Lijuan Wang. "Efficacy of averaging interval for non-stationary winds." *2012 Joint Conference of the Engineering Mechanics Institute and 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012)*, Notre Dame, IN, June 2012.

Ahsan Kareem, and <u>Dae Kun Kwon.</u> "Cyberbased analysis, modeling and simulation of wind load effects." *7th International Conference of the Croatian Society of Mechanics (7ICCSM2012)*, Zadar, Croatia, May 2012.

<u>Dae Kun Kwon</u>, Tracy Kijewski-Correa, Ahsan Kareem, "SmartSync framework in structural health monitoring.", *2011 International Association for Bridge and Structural Engineering (IABSE)*, London, United Kingdom, September 2011.

M. McCullough, A. Kareem, <u>D. K. Kwon</u>, L. Wang, "Advanced modeling and simulation tools: From surrogates to copulas", *11th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP11)*, ETH Zurich, Switzerland, August, 2011.

<u>Dae Kun Kwon</u>, Ahsan Kareem, Kyle Butler, "Gust-Front Loading Effects on Wind Turbine Tower Systems.", *13th International Conference on Wind Engineering (ICWE 13)*, Amsterdam, Netherlands, July 2011.

Megan McCullough, Ahsan Kareem, <u>Dae-Kun Kwon</u>, "Advanced analysis, modeling, and simulation tools for wind effects: From surrogates to copulas.", *13th International Conference on Wind Engineering (ICWE 13)*, Amsterdam, Netherlands, July 2011.

<u>D. Kwon</u>, T. Kijewski-Correa, A. Kareem, "Event-Driven SmartSync System for Structural Health Monitoring of Tall Buildings.", *13th International Conference on Wind Engineering (ICWE 13)*, Amsterdam, Netherlands, July 2011.

McCullough, M., <u>Kwon, D.K.</u>, Wang, L., and Kareem, A., "Data driven models for non-stationary winds and their load effects," *2nd American Association for Wind Engineering Workshop*, Marco Island, FL, August 2010.

<u>Dae Kun Kwon</u>, Tracy Kijewski-Correa, Ahsan Kareem, "SmartSync: An Integrated Real-Time Monitoring and System Identification Platform for Tall Buildings." *5th World Conference on Structural Control and Monitoring*, Tokyo, Japan, July 2010.

<u>D. Kwon</u>, T. Kijewski-Correa and A. Kareem, "SmartSync: An Integrated Real-Time Monitoring and SI System for Tall Buildings." *2010 Structures Congress, ASCE*, Orlando, Florida, May 2010.

<u>D. Kwon</u>, A. Kareem, "Peak Factor for Non-Gaussian Processes Revisited." *7th Asia-Pacific Conference on Wind Engineering (APCWE-VII)*, Taipei, Taiwan, November 2009.

<u>D. Kwon</u>, A. Kareem, "A Framework for Generalized Gust-front Factor." *5th European and African Conference on Wind Engineering (EACWE 5)*, Florence, Italy, July 2009.

<u>D. Kwon</u>, A. Kareem, "A Framework for Gust-Front Factor." *11th Americas Conference on Wind Engineering (ACWE 11)*, Puerto Rico, June 2009.

<u>Dae Kun Kwon</u> and Ahsan Kareem, "Gust-front Factor: A New Framework for the Analysis of Wind Load

Effects in Gust-fronts.", *12*th *International Conference on Wind Engineering (ICWE 12)*, Cairns, Australia, July 2007.

Kareem, A., Butler, K. and Kwon, D., "Modeling and Simulation of Transient Wind Load Effects." *Proceedings of the 4th UJNR Panel on Wind and Seismic Effects Workshop on Wind Engineering*, July 20-21, Tsukuba, Tokyo, 2006.

Daekun Kwon, Tracy Kijewski-Correa, Ahsan Kareem, "e-Analysis/Design of Tall Buildings Subjected to Wind loads." *The tenth Americas Conference on Wind Engineering (10th ACWE)*, Baton Rouge, Louisiana, USA, 2005.

Tracy Kijewski-Correa, John Kilpatrick, Dae-Kun Kwon, Rachel Bashor, Bradley S. Young, Ahmad Abdelrazaq, Jon Galsworthy, Dave Morrish, Robert C. Sinn, William F. Baker, Nick Isyumov, Ahsan Kareem, "Full -Scale Validation of the Wind-Induced Response of Tall Buildings: Updated Findings from the Chicago Monitoring Project." *The tenth Americas Conference on Wind Engineering (10th ACWE)*, Baton Rouge, Louisiana, USA, 2005.

Tracy Kijewski-Correa, Rachel Bashor, Dae-Kun Kwon, Ahsan Kareem, John Kilpatrick, Jon Galsworthy, Dave Morrish, Nicholas Isyumov, Bradley S. Young, Robert C. Sinn, "Full-Scale Validation of the Wind-Induced Response of Tall Buildings." *2005 ASCE Structures Congress, ASCE*, New York, New York, USA, April 2005.

Tracy Kijewski, Dae Kun Kwon, Ahsan Kareem, "E-Technologies for Wind Effects on Structures." *The eleventh International Conference on Wind Engineering (11*th *ICWE)*, Lubbock, Texas, USA, June 2003.

J. Kilpatrick, T. Kijewski, T. Williams, D. K. Kwon, B. Young, A. Abdelrazaq, J. K. Galsworthy, D. Morrish, N. Isyumov, A. Kareem, "Full Scale Validation of the Predicted Response of Tall Buildings: Preliminary Results of Chicago Monitoring Project." *The eleventh International Conference on Wind Engineering (11*th *ICWE)*, Lubbock, Texas, USA, June 2003.

C. K. Choi and D. K. Kwon, "The Characteristics of Strouhal Number of Rectangular Cylinders with Various Corner Cuts." *The Fifth Asia-Pacific Conference on Wind Engineering (APCWE V)*, Kyoto, Japan, October 2001; published in the *Journal of Wind Engineering*, 89, 153-156, 2001.

C. K. Choi and D. K. Kwon, "Aerodynamic Stability for Rectangular Cylinders with Various Corner Cuts." *The Fourth International Colloquium on Bluff Body Aerodynamics and its Applications (BBAA IV)*, Bochum, Germany, September 11-14 2000.

C. K. Choi and D. K. Kwon, "Aerodynamic Characteristics of Rectangular Cylinders with Corner Cuts." *The First Symposium on Wind and Structure for the 21st Century*, Korea, January 2000.

C. K. Choi, W. J. Yu and D. K. Kwon, "Comparison Between the CFD and Wind Tunnel Experiment for Tall Building with Various Corner Shapes." *International Conference on Tall Building (ICTB)*, Hong Kong, December 1998.

C. K. Choi and D. K. Kwon, "Wind Tunnel Experiments for Long Span Bridges : The Case of Young-Heung Bridge." *International Symposium on Public Infrastructure Systems Research*, Seoul, Korea, September 25-27 1995.

C. K. Choi, D. K. Kwon and W. J. Ryu, "Wind Tunnel Experiment and CFD on the Aerodynamic Stabilization methods for the Main Girder of Long-Span Bridge." *Proceedings of the Wind Engineering Institute of Korea Conference*, June 2001. (In Korean)

C. K. Choi, D. K. Kwon and S. H. Kim, "An Experimental Study on the Aerodynamic Characteristics of Rectangular Cylinder with Various Corner Cuts." *Proceedings of the Wind Engineering Institute of Korea*

Conference, June 2000. (In Korean)

C. K. Choi and <u>D. K. Kwon</u>, "An Aerodynamic Characteristics Study on Various Section Shapes of Rectangular Cylinder." *Proceedings of the Wind Engineering Institute of Korea Conference*, May 1999. (In Korean)

C. K. Choi and <u>D. K. Kwon,</u> "Active Structural Vibration Control Excited by Wind." *Proceedings of the Wind Engineering Institute of Korea Conference*, 1998. (In Korean)

C. K. Choi and <u>D. K. Kwon</u>, "Structural Vibration Control using Instantaneous Optimal Control Algorithm." *Proceedings of Computational Structural Engineering Institute of Korea Conference*, 11(1), 1998. (In Korean)

C. K. Choi, <u>D. K. Kwon</u> and E. J. Lee, "Predictive Control of Structural Vibration Subject to Wind Loads." *Proceedings of Computational Structural Engineering Institute of Korea Conference*, 9(2), 1996. (In Korean)

<u>D. K. Kwon</u> and Y. S. Kim, "Experimental Study on Aerodynamic Improvements for Bridge Tower." *Proceedings of Korean Society of Civil Engineers Conference, KSCE*, October 1994. (In Korean)

Y. S. Kim, J. I. Park and <u>D. K. Kwon</u>, "Effects on Aerodynamic Responses Due to Bridge-Deck Shapes." *Proceedings of Korean Society of Civil Engineers Conference, KSCE*, October 1994. (In Korean)

Y. S. Kim, J. I. Park, C. W. Kim and <u>D. K. Kwon</u>, "An Experimental Study on the Wind-Resistance of Bridge Section with Two I-Type Girders." *Proceedings of Korean Society of Civil Engineers Conference, KSCE*, October 1993. (In Korean)

Projects

Selected Projects As Major Researcher

"Structural Monitoring for a Super Tall Building in Burj Khalifa", Samsung Corporation, Samsung Design and Construction Group, South Korea, 2009 –.

"Global Center of Excellence: New Frontier of Education and Research in Wind Engineering", Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, 2008 – 2013.

"Structural Health Assessment During Construction in Burj Dubai", Samsung Corporation, Samsung Design and Construction Group, South Korea, 2006 – 2008.

"VORTEX-Winds: A Virtual Organization for Reducing the Toll of EXtreme Winds", National Science Foundation, CMMI 07-42191.

"Study of Load Effects on Structures Induced by Gust-Fronts", National Science Foundation, CMS 03-24331.

"Full-Scale Study of the Behavior of Tall Buildings Under Winds", National Science Foundation CMS 00-85109.

"Wind-Resistant Design of Geo-Geum Great Bridge", Kum-Ho Engineering, 2000–2001. (In Korean)

"Wind-Resistant Design of Young-Heung Great Bridge", Yooshin Corporation, 1995. (In Korean)

"Wind-Resistant Design of Bridge Section with Two I-Type Girders", Hyundai Institute of Construction and Technology, 1994. (In Korean)

"Aerodynamic Stability of Seo-Hae Great Bridge", Hyundai Institute of Construction and Technology, 1993. (In Korean)