

**EDUCATION**

- Ph.D.**, Civil Engineering 2010 – 2016  
Department of Civil and Environmental Engineering  
University of Illinois, Urbana – Champaign, IL, USA  
**Advisors:** Prof. Junho Song, Prof. Glaucio H. Paulino
- M.S.**, Structural Engineering, Mechanics and Materials 2006 – 2007  
Department of Civil and Environmental Engineering  
University of California, Berkeley, CA, USA
- B.S.**, Architectural Engineering 2000 – 2006  
Department of Architectural Engineering  
Hanyang University, Seoul, Korea

**PUBLICATIONS**

- Chun, J.**, Song, J., Paulino, G.H. (2015). Parameter sensitivity of system reliability using sequential compounding method. *Structural safety*, 55, 26–36.
- Chun, J.**, Song, J., Paulino, G.H. (2016). Structural topology optimization under constraints on instantaneous failure probability. *Structural and Multidisciplinary Optimization*, 53(4): 773-799.
- Filipov\*, E.T., **Chun\***, J, Paulino, G.H., Song, J. (2016). Polygonal multiresolution topology optimization (PolyMTOP) for structural dynamics. *Structural and Multidisciplinary Optimization*, 53(4): 673-694. (\*equal contribution from both authors)
- Chun, J.**, Song, J., Paulino, G.H. System reliability-based design/topology optimization of structures constrained by first passage probability. Under review.
- Chun, J.**, Paulino, G.H, Song, J. Reliability-based topology optimization of truss structures using a discrete filtering technique. Under review.
- Chun, J.** (2006). A Study on bond characteristics of untensioned strands. *Hanyang University Press*.

**CONFERENCE PUBLICATIONS**

- Chun, J.**, Song, J., Paulino, G.H. (2015). Topology optimization of structures under constraints on first passage probability. *12th International Conference on Applications of Statistics and Probability in Civil Engineering*. Vancouver, Canada.
- Chun, J.**, Song, J., Paulino, G. H. (2013). System reliability-based topology optimization for structures under stochastic excitations. *11th International Conference on Structural Safety & Reliability*. New York, NY.
- Chun, J.**, Song, J., Paulino, G. H. (2012). Topology optimization of structures under stochastic excitations. *Joint Conference of the Engineering Mechanics Institute and the 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability*. Notre Dame, IN.

## TEACHING EXPERIENCE

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING, University of Illinois,  
Urbana-Champaign

*Teaching Assistant*

CEE570 Finite Element Methods 2012, 2013, 2014

CEE598 Structural Design Optimization 2012, 2013, 2014

DASOL CULTURAL COMMUNITY, Seoul, Korea 2005 – 2006

*Volunteer Teacher*

Tutored and mentored underprivileged and disabled students with mental disorders.

## PRESENTATIONS

**Chun, J.**, G.H. Paulino, J. Song (2016). Reliability-based topology optimization of truss structures employing discrete filtering technique. *Engineering Mechanics Institute / Probabilistic Mechanics & Reliability Conference*, Vanderbilt, Tennessee – Oral Presentation.

**Chun, J.**, J. Song, G.H. Paulino (2015). Topology optimization of structures under constraints on first passage probability. *12th International Conference on Applications of Statistics and Probability in Civil Engineering*, Vancouver, Canada – Oral Presentation.

**Chun, J.**, J. Song, G.H. Paulino (2015). System reliability-based design optimization of structures constrained by first passage probability. *Engineering Mechanics Institute Conference*, Stanford University, Stanford, CA – Oral Presentation.

**Chun, J.**, J. Song, G.H. Paulino (2013). Topology optimization of structures under stochastic excitations. *10th World Congress on Structural and Multidisciplinary Optimization*, Orlando, FL – Oral Presentation.

**Chun, J.**, J. Song, G.H. Paulino (2013). System reliability based topology optimization of structures under stochastic excitations. *11th International Conference on Structural Safety & Reliability*, New York, NY – Oral Presentation.

**Chun, J.**, J. Song, G.H. Paulino (2013). System reliability based topology optimization of structures under stochastic excitations. *12th U.S. National Congress on Computational Mechanics*, Raleigh, North Carolina – Oral Presentation.

**Chun, J.**, J. Song, G.H. Paulino (2013). System reliability based topology optimization of structures under stochastic excitations. *Engineering Mechanics Institute Conference*, Evanston, IL – Poster Presentation (poster award recipient, 3rd prize).

**Chun, J.**, Song, J. and Paulino, G. H. (2012). Topology optimization of structures under stochastic excitations. *Joint Conference of the Engineering Mechanics Institute and the 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability*, South Bend, IN – Oral Presentation.

**Chun, J.**, Song, J. and Paulino, G. H. (2011). Topology optimization of structures under random vibrations. *11th US National Congress on Computational Mechanics*, Minneapolis, MN – Oral Presentation.

**Chun, J.**, Song, J. and Paulino, G. H. (2011). Topology optimization of structures under random Vibrations. *Advanced summer school on Topology Optimization – Theory, Methods and Applications*, Technical University of Denmark, Lyngby, Denmark – Poster Presentation.

## HONORS AND AWARDS

CEE Structures Group Travel Fellowship <i>Civil and Environmental Engineering, University of Illinois, Urbana – Champaign</i>	2016
CERRA Student Recognition Award <i>12th International Conference on Applications of Statistics and Probability in Civil Engineering</i>	2015
Student Paper Competition, Finalist, <i>Engineering Mechanics Institute Conference</i>	2015
US National Science Foundation Travel Award, <i>Engineering Mechanics Institute Conference</i>	2015
ICMAE Travel Award, <i>University of Illinois, Urbana – Champaign</i>	2014
Poster Presentation Award, 3 <sup>rd</sup> place, <i>Engineering Mechanics Institute Conference</i>	2013
Student Paper Competition, Finalist, <i>Engineering Mechanics Institute Conference</i>	2013
Karol Fellowship, <i>University of Illinois, Urbana – Champaign</i>	2010 – 2011
Distinguished Overseas Fellowship, <i>Hanyang University</i>	2006 – 2007
<i>Cum Laude, Hanyang University</i>	2006
Merit-based Scholarships, <i>Hanyang University</i>	2000 – 2005
Army Commendation Medal for Outstanding Leadership and Dedication <i>The First Military Engineer Brigade</i>	2002

## PROFESSIONAL EXPERIENCE AND ACTIVITY

JOURNAL OF ENGINEERING MECHANICS <i>Ad hoc reviewer</i>	2016
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING <i>Ad hoc reviewer</i>	2016
MECHANICS RESEARCH COMMUNICATIONS <i>Ad hoc reviewer</i>	2015
SKIDMORE, OWINGS & MERRILL LLP, Chicago, USA <i>Structural engineer</i>	2007 – 2010
Selected Projects Seoul Light Digital Media City Tower, Seoul, Korea Ninth Avenue, New York, USA Burj Aloula, Saudi Arabia China Merchants Tower, Shenzhen, China Jiangxi Nanchang Greenland Central Plaza, Jiangxi, China Tanggu Convention, Tianjin, China Busan Lotte Town Tower, Busan, Korea Tianjin Modern City, Tianjin, China BBVA Bancomer Operations Center, Mexico City, Mexico	
HYUNDAI ENGINEERING & CONSTRUCTION Co., Ltd, Seoul, Korea <i>Intern</i>	2003 – 2004
THE FIRST MILITARY ENGINEER BRIGADE, Kyonggido, Korea <i>Military Service</i>	2001 – 2003

## **INDUSTRY RESEARCH EXPERIENCE**

FORCE DENSITY APPLICATION ON STRUCTURE OPTIMIZATION <i>Research Engineer, Skidmore, Owings &amp; Merrill LLP</i> Structural optimization study on long span roof structure based on force density theory	2009
RESEARCH FOR BOND CHARACTERISTICS OF UNTENSIONED STRANDS <i>Undergraduate Research Assistant, Hanyang University</i>	2005

## **OTHER EXPERIENCES**

ADVANCED SUMMER SCHOOL ON TOPOLOGY OPTIMIZATION Theory, methods and applications, Denmark Technical University, lyngby, Denmark	2011
CTBUH (COUNCIL ON TALL BUILDINGS AND URBAN HABITAT) <i>Volunteer, Assistant to organizers</i>	2009
KOREAN STUDENT ASSOCIATION IN CIVIL AND ENVIRONMENTAL ENGINEERING <i>President</i>	2014

## **PROFESSIONAL MEMBERSHIPS**

AMERICAN INSTITUTE OF STEEL CONSTRUCTION	2007 – 2010
STRUCTURAL ENGINEERS ASSOCIATION OF ILLINOIS	2007 – 2010

## **TECHNICAL SKILLS**

COMPUTER LANGUAGES: C/C++, Python, MATLAB  
SOFTWARE: ETABS, STRAND7, PERFORM 3D, SAFE, S-CONCRETE, S-FRAME, REVIT Structure, REVIT Architecture, MIDAS, SAP2000, FEAP, ILLUSTRATOR, AUTOCAD, 3DMAX, FLASHMX, TEDDS, ABAQUS