

Kyung-In Kang

Robot Convergence Building 706, 145 Anam-ro, Seongbuk-Gu, Seoul 02841, Korea
+82-2-3290-4956, kikang@korea.ac.kr

EDUCATION

Tokyo Institute of Technology, Tokyo, Japan

PhD of Engineering, School of Building Construction, September 1992.

- Thesis: "Research on Technology Involved in the Production of Architectural

Tokyo Institute of Technology, Tokyo, Japan

Master of Engineering, School of Building Construction, March, 1988

- Thesis: A study on the change factors of the construction method of middle and high rise industrialized apartment complex (中高層工業化集合住宅の工法の變化要因に關する研究)

Korea University, Seoul, Korea (South)

Bachelor of Engineering in Architectural Engineering, February 1983

RESEARCH AND TEACHING INTERESTS

- High-rise construction technology
- High-rise construction management technology
- Disaster prevention and evacuation engineering
- Concrete Form work technology

PUBLICATION

1. "Simulation-based Planning Model for Table Formwork Operation in Tall Building Construction", JOURNAL OF ASIAN ARCHITECTURE AND BUILDING ENGINEERING, 2017
2. "Inclined construction hoist for efficient resource transportation in irregularly shaped tall", Automation in Construction, 2016
3. "Advanced power supply of construction hoists for supertall buildings", Automation in Construction, 2015
4. "Green construction hoist with customized energy regeneration system", Automation in Construction, 2014
5. "A formwork method selection model based on boosted decision trees in tall building construction", Automation in Construction, 2012
6. "Simulation model incorporating genetic algorithms for optimal temporary hoist planning in high rise building construction", Automation in construction, 2011

PRESENTATIONS

- "Automated Layout Planning of Climbing Formwork System Using Genetic Algorithm", ISARC, 2016
- "Preliminary study for the estimation of urban embodied emissions using case-based reasoning", Sustainable Development and Planning, 2015
- "A Formwork Layout Model based on Genetic Algorithm", ISARC, 2014
- "Formwork productivity analysis model for cost-efficient equipment", ICCEPM, 2013
- "Application of regenerative lift for energy saving in the construction stage", ISARC, 2012
- "Critical engineering characteristics of an automated pulling machine for improving safety in constructing steel beam and girder having improved shape", International association for automation and robotics in construction, 2011

TEACHING AND ADVISING EXPERIENCE

- **Stanford University**
Exchange professor 2000-2001
- **Korea University**
- **Korea University**
Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Methodology of Research for Construction Management assisting in one course 2018~
- **Korea University**
Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Comprehensive Construction Design II, assisting in one course 2016~
- **Korea University**
Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Quality Control, assisting in one course 2015
- **Korea University**
Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Seminar for The Junior Class , assisting in one course 2014~
- **Korea University**
Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Seminar of Construction Work, assisting in one course 2011~2014
- **Korea University**
Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Comprehensive Construction Design I , assisting in one course 2010~
- **Korea University**
Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Construction Safety Management, assisting in one course 2010~
- **Korea University**
Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Engineering of Disaster Prevention and Evacuation , assisting in one course 2010~
- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Comprehension of Construction System, *assisting* in one course 2010~

- **Korea University**

Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Comprehension of Global Construction Market I, *assisting* in one course 2008~2009

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Creative Design, *assisting* in one course 2006

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Measurement, *assisting* in one course 2005

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Maintenance for Construction, *assisting* in one course 2005

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Theory of Decision Making for Construction, *assisting* in one course 2004

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Theory of Construction Management, *assisting* in one course 2003~2009

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Architectural design VI, *assisting* in one course 2003~2004

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Architectural design V, *assisting* in one course 2003~2006

- **Korea University**

Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Theory of Engineering, *assisting* in one course 2002~2003

- **Korea University**

Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Theory of Plan for Managing Construction Cost *assisting* in one course 2002

- **Korea University**

Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Robotics for Construction, *assisting* in one course 2001

- **Korea University**

Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Special Theory of Building Construction, *assisting* in one course 2001~2005

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Materials for Construction, *assisting* in one course 2001~2009

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about General Building Structure, *assisting* in one course 1996~2006

- **Korea University**

Teaching Bachelor for practical and tutorial at the School of Architecture & Civil Engineering about Execution of Building Work, *assisting* in one course 1994~2007

- **Korea University**

Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Seminar for Thesis, *assisting* in one course 1993~

- **Korea University**

Teaching Masters for practical and tutorial at the School of Architecture & Civil Engineering about Supervising Thesis, *assisting* in one course 1993~

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PROFESSIONAL EXPERIENCE

Mar. 2014 ~ Mar. 2016	Consultant, Incheon International Airport Corporation
Mar. 2014 ~ Feb. 2017	Named endowed chair professor, POSCO
May. 2015 ~ May. 2017	Consultant, Incheon International Airport Corporation
Jan. 2015 ~ Dec. 2016	Chairman, The Korea Institute of Building Construction
Mar. 2016 ~ Mar. 2018	Consultant, Incheon International Airport Corporation
Jan. 2017 ~ Present	Member, National Academy Engineering of Korea
Apr. 2017 ~ Apr. 2018	Examiner of National Technical Qualification Certificate, Human Resources Development Service of Korea

RESEARCH EXPERIENCE

Korea University, Seoul, Korea, (South), Research Manager, September 2017-August 2018 - “Development of a group type support system capable of high-speed installation and disassembly”

Korea University, Seoul, Korea, (South), Research Manager, June 2017-September 2017 - “Development of evaluation method of environmental load of steel building using 1G and low yield point steel”

Korea University, Seoul, Korea, (South), Research Manager, June 2016-November 2016 - “Assessment and Reduction of Environmental Load at Construction Stage of Steel Structure”

Korea University, Seoul, Korea, (South), Research Manager, June 2016-May 2019 - “Developing a model to predict carbon emissions at the construction stage considering the variable factors of the construction site”

Korea University, Seoul, Korea, (South), Research Manager, December 2015-December 2020 - “Developed high-rise building design and construction technology to lead the world market”

Korea University, Seoul, Korea, (South), Research Manager, March 2015-February 2016 - “BIM-based safety facilities for real-time safety management Checklist Development Study”

SKILLS

- First-class architect in Japan (1991)

HONORS AND AWARDS

The grand prize of symposium, Korea Institute of Building Construction, 2017

Excellence award of symposium, Korea Institute of Building Construction, 2016

Recent 5 patents

1. 10-1631807-0000, DEVICE FOR MEASURING RELATIVE HEIGHT BETWEEN LARGE SLAB FORMS, 2016.06.13
2. 10-1662952-0000, SELF-LEVELING DEVICE FOR MOLD AND CLIMBING FORMWORK APPARATUS HAVING THE SAME, 2016.09.28.
3. 10-1725899-0000, SEPARATED CLIMBING FORMWORK APPARATUS, 2017.04.05.
4. 10-1744345-0000, CLIMBING FORMWORK APPARATUS FOR CAST-IN-PLACE CONCRETE WITH EXTERIOR INSULATION, 2017.05.31
5. 10-1424111-0000, AUTOMATIC LIFTING SYSTEM OF TABLE FORM, 2015.10.01