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Profile

- 2016 ~ present Director of The Korean Society for Life cycle Assessment
- 2016 ~ present Associate Editor of International Journal of Sustainable Building Technology & Urban Development
- 2015 ~ present Director of Sustainable Building Research Center
- 2013 ~ present Expert member of Carbon Labeling Certification, Korea Environmental Industry and Technology Institute
- 2012 ~ present Director of International Sustainable Council
- 2010 ~ present Expert Member of ISO/Fairness Committee
- 2009 ~ present Expert Member of Industrial Standards Council (ISO TC 184/SC 5)
- 2008 ~ present Professor at Hanyang University Department of Architecture
- 2005 ~ 2008 Research Assistant Professor of Hanyang University Sustainable Building Research Center(ERC)
- 2002 ~ 2005 Doctor of Engineering / Tokyo University Graduate School College of Engineering Sciences (Japan) / Architectural Engineering
- 2000 ~ 2002 Master of Engineering / Tokyo University Graduate School College of Engineering Sciences (Japan) / Architectural Engineering
- 1992 ~1999 Bachelor of Engineering / Hanyang University College of Engineering Sciences (Korea) / Architectural Engineering

Research Topics

- Life Cycle Assessment(LCA) program for buildings: LCA program for buildings is a program that evaluates the impact on the environment during the life cycle stages of the building, which is applicable for quantitatively assessing the sustainable performance in the

construction design stage, with the development of interconnected programs with domestic and international Green Building Rating Systems(G-SEED, LEED)

- LCA program and Life Cycle Inventory Database(LCI DB) for construction materials : LCA program for construction materials is a program that evaluates the environmental impacts occurred in the production life cycle level of construction materials, which allows drawing the environmental impact of the overall process of collecting raw materials to product manufacturing, and forming database of LCI DB of the evaluation information of building materials, thus providing the base data for architect LCA.
- BIM based optimum design system for eco-friendly building design : Optimum design system is an automated design technique that derives the construction objective of an architecture's design specification using the mathematical model of optimization algorithm, such as Objective Function, Constraint Function, Decision Variable, and Side Constraint. It draws the most ideal combination of green building technologies that satisfies the architecture's overall objective of environmental quality level, schedule, economic feasibility that has its base on BIM.
- Eco-friendly high-tech construction materials : The main purpose is to develop recyclable building materials that can replace various types of construction materials(cement, tile, block ect.) by analysis and utilization of base materials of wastes as a result of construction industry. The main field of study is DB establishment of construction raw materials waste through the through the classification and chemical analysis of construction waste, research of establishing sustainable construction material development process using waste construction materials and utilizing these for the research on establishing the guideline of complete sustainable circulation of construction materials.

Papers

- "Assessment of the CO₂ emission and cost reduction performance of a low-carbon-emission concrete mix design using an optimal mix design system", Renewable and Sustainable Energy Reviews, 2013 <https://www.sciencedirect.com/science/article/pii/S136403211300316X>
- "Development of an optimum design program (SUSB-OPTIMUM) for the life cycle CO₂ assessment of an apartment house in Korea", Building and Environment, 2014 <https://www.sciencedirect.com/science/article/pii/S0360132313003351>
- "Development of building materials embodied greenhouse gases assessment criteria and system (BEGAS) in the newly revised Korea Green Building Certification System (G-SEED)", Renewable and Sustainable Energy Reviews, 2014 <https://www.sciencedirect.com/science/article/pii/S1364032114002615>
- "Development of a Building Life Cycle Carbon Emissions Assessment Program (BEGAS 2.0) for Korea's Green Building Index Certification System", Renewable and Sustainable Energy Reviews, 2016 <https://www.sciencedirect.com/science/article/pii/S1364032115010187>
- "Proposal of Environmental Impact Assessment Method for Concrete in South Korea: An Application in LCA (Life Cycle Assessment)", International Journal of Environmental Research and Public Health, 2016 <https://www.mdpi.com/1660-4601/13/11/1074>
- "Mixture Proportioning Approach for Low-CO₂ Concrete Using Supplementary Cementitious Materials", ACI Materials Journal, 2016 <https://search.proquest.com/docview/1809938086?pq-origsite=gscholar>

- "Evaluating the embodied environmental impacts of major building tasks and materials of apartment buildings in Korea", Renewable and Sustainable Energy Reviews, 2017
<https://www.sciencedirect.com/science/article/pii/S1364032117300916>
- "Energy Demand Forecast Models for Commercial Buildings in South Korea", Energies, 2019
<https://www.mdpi.com/1996-1073/12/12/2313>

Writings

- Handbook of Low Carbon Concrete, 1st Edition (2016, Butterworth Heinemann)
<https://www.elsevier.com/books/handbook-of-low-carbon-concrete/nazari/978-0-12-804524-4>

Patents

- System for Assessing an Environmental Load of Building during Life Cycle
<https://patents.google.com/patent/US8645183B2/en?q=8%2c645%2c183>

Contact Information

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