

GLOBAL SMART INFRASTRUCTURE ENGINEERING

ACADEMIC PLANNING AND FACULTY



UNDERGRADUATE - ENGLISH TRACK

COLLEGE OF SMART SYSTEMS ENGINEERING

CAMPUS LOCATION : YONGIN, KOREA

OFFICE OF INTERNATIONAL AFFAIRS
MYONGJI UNIVERSITY

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WHO WE ARE

“GLOBAL ENGINEERS LEADING INDUSTRIAL AND TECHNOLOGICAL ADVANCEMENTS IN SMART INFRASTRUCTURE AND SMART CITIES”

Our program encompasses three major disciplines: Civil Engineering, Environmental Engineering, and Transportation Engineering. This interdisciplinary approach ensures that our educational offerings meet the modern demands of smart cities and smart infrastructure. The program integrates various elements essential for developing futuristic smart cities, including smart construction, digitalization of infrastructure, 3D spatial information systems, carbon neutrality, smart water management, renewable energy, autonomous driving, mobility services, and smart logistics.

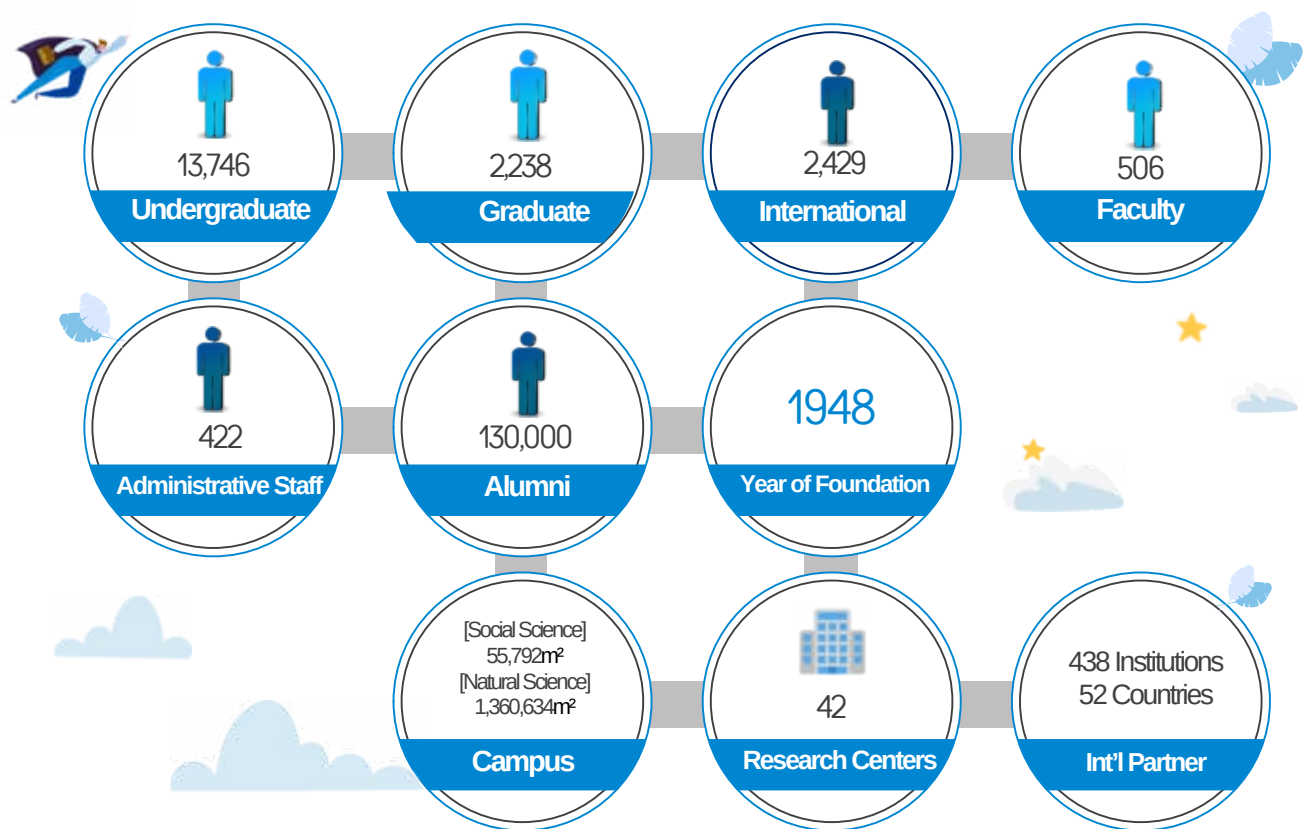
Our objective is to cultivate professionals who are pivotal in the construction and maintenance of infrastructure, environmental management, transportation, and logistics. These fields are crucial for building and sustaining safe, convenient, and pleasant cities. Our program focuses on nurturing engineers with a balanced and holistic approach, both academically and practically. We aim to foster well-rounded individuals who possess specialized knowledge in their respective fields and can apply creative thinking and interdisciplinary approaches to solve urban societal problems while fulfilling their social responsibilities.

In addition to the core disciplines within the department, we offer courses that incorporate cutting-edge, data-driven technologies such as AI and digital twins, fostering the development of multidisciplinary talents.

- Students will develop a strong foundation in the principles and practices of civil, environmental, and transportation engineering.
- The program also aims to develop global leaders capable of integrating new technologies such as IoT, AI, and big data to support the development of smart cities.
- By bridging civil, environmental, and transportation engineering, the program fosters a holistic perspective, enabling students to design and implement solutions that consider both technical and societal impacts.
- Graduates of this program will be well-prepared for diverse career paths in government agencies and industries focused on infrastructure development and management, environmental sustainability, and transportation planning and management, among others.
- This program is ideal for students who are passionate about building and maintaining well-balanced, well-planned urban systems—encompassing infrastructure, environmental, and transportation systems—to support a high quality of human life.



MYONGJI AT A GLANCE



*As of 2023.10.01.

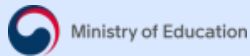
DEPARTMENT	FACULTY NUMBERS	RESEARCH PROJECTS	RESEARCH GRANT (USD)	EMPLOYMENT RATE (Feb. 2021~2022)
CIVIL ENGINEERING	10	22	1.87 Million	58.8
ENVIRONMENTAL ENGINEERING	9	12	740,000	63.8
MOBILITY ENGINEERING	6	24	1.45 Million	83.3

Myongji University to merge with Myongji College in 2025
6th in size in Seoul Metropolitan



MYONGJI AT A GLANCE

Support from the Korean Government



- 500,000 USD/yr from '24 to '25
- Project for nurturing talent (B.A. in chemical engineering) in the field of hydrogen industry



- 460,000 USD/yr from '24 to '29
- Project for nurturing professionals (Master's and Ph.D. in semiconductor engineering) in the field of semiconductor engineering

Leading & Growing University in Research & Innovation



Sports:
Platinum Award by FISU
(Int'l Univ Sports Federation)



Alternative Education Space:
Metaverse Studio



Merging with Myongji College(2025):
6th largest in Seoul, with 3,800 freshmen intake

International Education Quality Assurance System

Designated by the Korean Ministry of Education as an institution accredited to receive and manage international students for its excellence in teaching and administration since 2014.



Accreditation



- 2007: 1st in Korea for the accreditation of 5-year BA architecture program by International Union of Architects(UIA)
- 2007: First in Korea for the accreditation by Korea Architectural Accrediting Board (KAAB)
- 2017: KAAB Accreditation for Traditional Korean Architecture Major

Accreditation



- 2009: Korean Association of Business Education Accreditation (KABEA)
- 2014: 5-year renewal for both undergraduate and graduate schools
- 2019: Renewal of KABEA

Accreditation



- Accreditation by Accreditation Board for Engineering Education of Korea (ABEEK)
- 2020: 3- or 6-year ABEEK Accreditation

MYONGJI AT A GLANCE

CONVENIENT LOCATION, EASILY ACCESSIBLE FROM CITY CENTER



Seoul
Social Science Campus



> School shuttles & Public buses

From major Subway stations:
Hongik University · Hapjeong · DMC ·
Jeungsan · Hongjae



Yongin
Natural Science Campus



> Public buses

From major subway stations:
Hapjeong · Yeongdeungpo · Beomgye · Seoul Nat'l Univ. of
Education · Gangbyeon · Nowon · Guri · Incheon · Songnae ·
Ansan · Geumjeong · Jeongja

NGJI
RSITY

NGJI
RSITY



Hongik Univ

Hapjeong

DMC

Jeungsan

Hongje

7021

272

7019

7611



Gilheung

Myongji Univ

5600

5700

5000

5001-1

5001

5002

5003

5005

ACCOMODATIONS (ON-CAMPUS)

HIGH-QUALITY ACCOMMODATIONS AT AFFORDABLE PRICES

SEOUL

860 persons



Price *Exchange rate : 1USD=1.350 KRW

Double	Quadruple
About \$1.100	About \$800

Facilities

- > Laundry
- > Common Kitchen
- > Study Room
- > Convenience Store
- > Full fire protection systems
- > 24-hour security



YONGIN

2,029 persons



Price *Exchange rate : 1USD=1.350 KRW

Double	Quadruple
About \$890	About \$600



ELIGIBILITY

01

CAMPUS LOCATION	COLLEGE	MAJOR	NATIONALITY
YONGIN, KOREA	COLLEGE OF SMART SYSTEMS ENGINEERING	GLOBAL SMART INFRASTRUCTURE ENGINEERING	INTERNATIONAL STUDENTS ONLY

02

ELIGIBILITY	
NATIONALITY	Applicant and both parents : non-Korean (If an applicant and his/her parent(s) have obtained a foreign citizenship before an applicant starts a level of education equivalent to high school in Korea, he/she is considered as an international applicant.)
LANGUAGE	Applicants must meet one of the following conditions: 1. Minimum TOEFL iBT 71 or IELTS 5.5 2.If your country of citizenship is one of the countries in which English is an official language, please submit the official certificate of graduation issued by the latest institution you attended. 3.Applicant who does not meet the above requirement may be referred to the Admissions Committee for special consideration and may be required to be present for an interview.
ACADEMICS	Either graduated or expected to graduate from high school

SCHOLARSHIP

FIRST SEMESTER FOR 1ST YEAR STUDENTS

IELTS Level	Scholarships
Students who do not meet one of the following IELTS or TOEFL requirements will be granted 20% of the tuition reduction (as supplementary living allowance)	
IELTS 5.5 / TOEFL iBT 71	Provides 40% of the tuition (as scholarship)
IELTS 6 / TOEFL iBT 79	Provides 60% of the tuition (40% as scholarship, 20% as supplementary living allowance)
IELTS 6.5 / TOEFL iBT 87	Provides 70% of the tuition (40% as scholarship, 30% as supplementary living allowance)
IELTS 7 / TOEFL iBT 95	Provides 80% of the tuition (40% as scholarship, 40% as supplementary living allowance)

CURRENT(ENROLLED) STUDENTS

GPA	Detail
Minimum 2.5[C+]	Provides 20% of the tuition (as supplementary living allowance)
Minimum 3.0[B]	Provides 40% of the tuition (as scholarship)
Minimum 3.5[B+] AND IELTS 6.0 / TOEFL iBT 79	Provides 50% of the tuition (as scholarship)
Minimum 4.0[A] AND IELTS 6.0 / TOEFL iBT 79	100% waiver of tuition fees

※ From the second semester, scholarship and supplementary living allowance will be determined based on the student's GPA from a previous semester.

※ Student must obtain more than 12 credit each semester

ACADEMIC PLANNING

TO BE ELIGIBLE FOR GRADUATION, STUDENTS MUST SUCCESSFULLY COMPLETE THE COURSES THAT COMPRISE THE CURRICULUM, INCLUDING THE REQUIRED UNIVERSITY CORE COURSES AND ELECTIVES. STUDENTS ARE REQUIRED TO EARN A MINIMUM OF 139 CREDITS FOR GRADUATION.

Year	Major	Electives
Freshmen	<ul style="list-style-type: none"> • Introduction to Smart Infrastructure Engineering • Introduction to Engineering Design 	[Korean Language] <ul style="list-style-type: none"> • Korean Language (Level1 & 2) • Korean Language Practice (Level1 & 2) • Korean Writing [Core Electives] <ul style="list-style-type: none"> • Physics 1 or Chemistry 1 • Physics 2 or Chemistry 2 • Calculus 1 • Calculus 2 • Understanding of Korea Society for Foreign Students • Contemporary History of Korea for Foreign Students • Understanding International Politics
Sophomore	<ul style="list-style-type: none"> • Statistics • Environmental Analytical Chemistry • Structural Mechanics • Transportation Planning • Wastewater Treatment Engineering • Soil Mechanics • Fluid Mechanics • Transportation Operation 	[Core Electives] <ul style="list-style-type: none"> • Engineering Mathematics • Understanding Human and the Bible • Fundamental Computer Application for Foreign Students OR Data Analysis and Artificial Intelligence Using Python • Modern Society and Christian Ethics • Korean Culture for Foreign Students • Globalization and Social Change • Business and management
Junior	<ul style="list-style-type: none"> • Water Purification Engineering • Mechanics of Materials • Traffic Safety • Building Information Modeling • Waste Treatment Engineering • Hydraulics • Foundation Engineering • Highway Engineering 	[Core Electives] <ul style="list-style-type: none"> • Christianity and Culture • Integrative Approach to Global Diversity: Society and Culture
Senior	<ul style="list-style-type: none"> • Atmospheric Environmental Engineering • Water Quality Modeling & Management • Digital Photogrammetry • Smart Transportation Technology and Applications • Environmental Capstone Design • Civil Engineering Capstone Design • Transportation Capstone Design 	[Core Electives] <ul style="list-style-type: none"> • Introduction to digital literacy • Korean History and Culture • How to Debate in the Digital Era • Introduction to Global Corporate Strategy • Economy and Business of Korea

COURSES

Introduction to Smart Infrastructure Engineering

This course aims to provide first-year students with a comprehensive overview of Smart Infrastructure Engineering. The course is structured as a series of weekly seminars, with each session dedicated to a specific topic within Smart Infrastructure Engineering. Professors from different disciplines will present on their areas of expertise, providing students with a well-rounded understanding of the field.

Statistics

This course introduces students to the principles and methods of statistics, with a focus on applications in engineering. Students will gain essential skills for data-driven decision-making. Topics include probability, descriptive statistics, inferential statistics, and hypothesis testing. By the end of the course, students will be equipped to apply statistical techniques to solve real-world engineering challenges.

Mechanics of Materials

Mechanics of materials is a fundamental course crucial to a wide range of engineering fields and a highly applicable discipline in practice due to the direct connection to design. This course covers the fundamental concepts and applications of stress and strain in materials. Topics include the behavior of axially loaded members, torsional behavior of circular shafts and indeterminate members, strain energy, vertical and shear stress in beams, and the analysis of stress and strain. The course emphasizes both basic concepts and their practical applications in engineering.

Soil Mechanics

Soil Mechanics is a fundamental course in the field of Geotechnical Engineering, primarily dealing with the physical and mechanical properties of soils. The main topics covered include understanding the characteristics of various soil types, soil classification and compaction, permeability and seepage, stress distribution and consolidation, shear strength and slope stability. Through this course, students gain an understanding of the interaction between structures and soil, and acquire the main knowledge of soil mechanics necessary for safe and efficient construction practices.

Structural Mechanics

Structural mechanics is a branch of applied mechanics that evaluates the structural behavior. It simplifies real structures and the loads acting on them to idealized models and accurately analyzes the internal forces generated by these loads. This course covers methods to determine the reactions and member forces in statically determinate structures such as trusses, arches, cables, beams, and frames using Newton's laws of equilibrium. Students will learn how to draw shear force and bending moment diagrams, which are necessary for member design. The course also covers the methods for constructing and utilizing influence lines for moving loads.

Foundation Engineering

Foundation Engineering is a course that deals with the design and analysis of foundations that support structures. Based on the principles of soil mechanics, it covers the fundamentals and practical aspects of structural foundations. This course includes field investigation methods, soil testing, design and bearing capacity analysis of shallow and deep foundations, settlement analysis, retaining wall design and stability evaluation, and ground improvement techniques. Through this course, students develop the ability to design safe foundations for various structures, prevent foundation failures, and solve related problems.

Hydraulics

This course covers the principles of fluid mechanics as applied to civil engineering, focusing on the analysis and design of water flow systems. Key topics include open channel flow, hydraulic structures, flood control, and hydropower. Students will learn to design and analyze hydraulic systems and structures in rivers.

Fluid Mechanics

This course covers the principles of fluid mechanics as applied to civil engineering, focusing on the analysis and design of water flow systems. Key topics include open channel flow, hydraulic structures, flood control, and hydropower. Students will learn to design and analyze hydraulic systems and structures in rivers.

COURSES

Digital Photogrammetry

This course aims to understand basic principles of photogrammetry and laser scanning for 3D reconstruction of real world. More specifically, this course deals with photogrammetric principles, photogrammetric triangulations, direct vs. indirect orientations, image matching, laser scanning geometry, 3D point generation, and information extraction.

BIM (Building Information Modeling)

This course introduces students to Building Information Modeling (BIM), a digital representation process that facilitates the planning, design, construction, and management of building projects. This course covers the concepts, principles, and software usage of BIM through both theoretical and practical approaches. Students will learn to create and manipulate 3D models of buildings as well as civil infrastructures using REVIT, and utilize DYNAMO for additional functionality. Practical assignments and case studies will provide hands-on experience in applying BIM technology to real-world scenarios.

Civil Engineering Capstone Design

The Capstone Design course is a senior-level, project-based course in the undergraduate Civil Engineering program. This course is conducted through team projects, where students collaborate to address real-world problems within various civil engineering domains. Under the guidance of faculty advisors who specialize in the respective project areas, students engage in the process of problem-solving by applying the latest technologies and research trends. Through this hands-on experience, students are prepared to transition from academic learning to professional practice in the field of civil engineering.

Environmental Analytical Chemistry

This course covers various quantitative analysis methods and the theories of instrumental analysis for the quantitative measurement and analysis of pollutants and pollution levels in water, soil, and air.

Water Purification Engineering

This course covers the treatment processes that use the principles of oxidation, adsorption, and membrane to remove dissolved pollutants that are difficult to eliminate with standard water purification processes in order to supply high-quality tap water.

Waste Treatment Engineering

This course covers the estimation of waste generation, understanding its composition and properties, and the technologies for separating, transporting, and disposing of wastes, in order to convert various types of wastes into resources and to ensure safe treatment.

Atmospheric Environmental Engineering

This course covers the atmospheric structure and motions, energy and mass balances, dispersion and transport processes of air pollutants in the atmosphere, and its impact on the global and regional climate change. Additionally, it covers monitoring techniques and data analysis of atmosphere and air pollutants.

Transportation Capstone Design

This course involves hands-on practice in planning and designing various transportation systems (such as roads, railways, and intelligent transportation systems). Students will work in teams to propose projects for practical exercises and develop various solutions for improving transportation systems.

Water Quality Modeling & Management

This course covers methods for water quality assessment, the basic principles, typical approaches and techniques of water quality modeling, and its applications for the management of water quality of rivers, canals, reservoirs, lakes, and coastal waters.

COURSES

Environmental Capstone Design

This course aims to cultivate practical skills as environmental engineering professionals by comprehensively applying all the knowledge, techniques, and methods acquired through various lectures to the design of specific products, devices, processes, or programs for solving real environmental problems.

Transportation Planning

The course covers the theoretical background and methods for investigating and analyzing the socio-economic factors of transportation planning, as well as demand forecast. It discusses key models and examines the relationship between transportation systems and land use changes. Furthermore, it delves into alternative evaluations and policies for transportation investments, encompassing various modes of transportation and transportation infrastructure.

Transportation Operation

The course covers traffic signs, signal operation, and traffic management strategies to systematically manage traffic flow. Based on this knowledge, students can adopt efficient transportation operation methods tailored to the characteristics of a given area to ensure smooth traffic flow.

Traffic Safety

The course covers the causes and characteristics of traffic accidents, understanding of traffic safety facilities, the derivation of engineering improvement solutions to reduce accidents, and also advanced cases of traffic safety and learns from their implications.

Smart Transportation Technology and Applications

The course lectures on the basic concepts of a wide range of technologies and applications in smart transportation, such as autonomous driving, mobility as a service (MaaS), drones, urban air transportation (UAM), and platform-based transportation services.

Highway Engineering

The course examines the role and meaning of roads and covers the physical characteristics and design process of the elements that make up roads. This is, lectures are given on methods and principles related to the design of the horizontal and vertical alignments of roads, the design of at-grade intersections and grade-separated intersections, and the design of road facilities.

[Elective] Contemporary History of Korea for Foreign Students

This course is aimed at examining the key historical events that have shaped contemporary South Korea from the perspective of international students. By highlighting the characteristics of modern history, distinct from the medieval and early modern periods, the course will study the efforts to build the nation from the time of liberation, the Korean War, the establishment of democracy, economic development, and cultural advancement.

[Elective] Understanding of Korean Society for Foreign Students

This Course focuses on the coexistence of tradition and modernity in contemporary Korean society and culture, with an aim to engage International students in discussions about issues such as values, family, politics, society, economy, population, education, employment, social conflicts, and contemporary Korean popular culture as well as the Korean Wave (Hallyu). This will help international students understand the overall aspects of Korean society, including politics, economy, culture, and society.

[Elective] Understanding Human and the Bible

This course aims to provide an introductory overview of the Bible, focusing on the Christian teachings about God and humanity. The course is designed to lay a foundational understanding of Scripture via a historical survey of the Old and New Testaments.

COURSES

[Elective]

Christianity and Culture

This course will provide students with a comprehensive coverage of the analysis of various life-related opportunity to comprehensively engage a wide range of issues related to everyday life from a Christian perspective. This course is designed to serve as a valuable introduction for believers and non-believers alike as this course is designed to extend your education beyond the focused studies of your major, preparing you for your future life as a thoughtful individual and active member of the modern society.

[Elective]

Korean Culture for Foreign Students

This course explores various topics to help international students understand and adapt to Korean society by considering a wide range of issues related to Korea, including culture, geography and climate, Hangul, Hanbok, housing, economy, education, sports, holidays, Korean popular culture, and Korean cuisine.

[Elective]

Fundamental Computer Application for Foreign Students

This course is for international students who are not familiar with the Korean keyboard layout. The course introduces students to the workings of the Windows Operating System as well as Microsoft Office software such as Word, Excel, and PowerPoint so that students will be able to utilize those gained knowledge as tools to improve their Korean language skills.

[Elective]

Data Analysis and Artificial Intelligence Using Python

This course teaches basics of Python and how students can use the program for tasks like data analysis, web crawling, web scrapping, deep learning, and etc. Students will also practice using prompts (tools: ChatGPT, Bard) to learn programming or coding concepts with Python. This course is for both major and non-major students.

[Elective]

Modern Society and Christian Ethics

This course "Christian Ethics in Modern Society" involves a detailed examination of the life and teachings of Jesus, a central figure in Christianity. It aims to understand the interaction between modern society and Christianity and to reflect on how these teachings can be newly applied to our lives today.

[Elective]

Introduction to digital literacy

This course introduces digital information literacy or the ability to effectively access, analyze, evaluate and create digital media. The course will teach students how to critically and effectively access, analyze, evaluate and create various digital media messages.

OUR FACULTY



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EDUCATION

B.S. Seoul National University
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Ph.D. Georgia Institute of Technology

DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

- Kim, J.-Y., M.-W. Park, N. T. C. Shim, & J.-W. Park. (2023). "Detection and Length Measurement of Cracks Captured in Low Definitions Using Convolutional Neural Networks", *Sensors*, 23(8), 3990.
- Khan, N., M. R. Saleem, D. Lee, M.-W. Park & C. Park. (2021). "Utilizing safety rule correlation for mobile scaffolds monitoring leveraging deep convolution neural networks", *Computers in Industry*, 129, 103448.
- Won, J., J.-W. Park, C. Shim & M.-W. Park. (2021). "Bridge-surface panoramic-image generation for automated bridge-inspection using deepmatching", *Structural Health Monitoring*, DOI: 10.1177/1475921720930380.
- Won, D., S. Chi, & M.-W. Park, (2020). "UAV-RFID Integration for Construction Resource Localization", *KSCE Journal of Civil Engineering*, 2020(24), pp. 1683-1695.
- Kang, S., S. Kim, B. Choi, M.-W. Park & W. Suh. (2019). "Development of Smart Helmet for Monitoring Construction Resources Based on Image Matching Method", *Journal of Imaging Science and Technology*, 63(3), 30403-1-30403-10.



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EDUCATION

B.S. Seoul National University
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DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

- Park, J., M. Park, Y. Chae, & C.-Y. Kim. (2024). "Dynamic cyclic loading tests for investigating the influence of loading rate and axial force on the lateral response of RC columns", *Earthquake Engineering & Structural Dynamics*, 53(4), pp. 1537-1551.
- Park, J., M. Park, Y. Chae, & C.-Y. Kim. (2023). "Real-time hybrid simulation for investigating the influence of vertical ground motions on the lateral response of RC piers", *Earthquake Engineering & Structural Dynamics*, 52(10), pp. 2928-2944.
- Jung, D.-S., S.-H. Park, T.-H. Kim, & C.-Y. Kim. (2023). "Structural Behavior of Steel-Concrete Composite Girders Composed of Demountable Shear Connectors", *KSCE Journal of Civil Engineering*, 28(2), pp. 744-759.
- Jung, D.-S., S.-H. Park, T.-H. Kim, J.-W. Han, & C.-Y. Kim. (2022). "Demountable Bolted Shear Connector for Easy Deconstruction and Reconstruction of Concrete Slabs in Steel-Concrete Bridges", *Applied Sciences* 12(3), 1508.
- Kim, H.-J., Y.-H. Seong, J.-W. Han, S.-H. Kwon, & C.-Y. Kim. (2023). "Demonstrating the Test Procedure for Preventive Maintenance of Aging Concrete Bridges", *Infrastructures*, 8(3), 54.



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EDUCATION

B.S. Seoul National University
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Ph.D. Virginia Tech, USA

DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

- Shin, D. K. and K. Kim. (2019). "Flexural Strength of Composite HSB690 I-Girders in Negative Moment", *International Journal of Steel Structures*, 19(6), pp. 1875-1894.
- Ahn, J. T. and D. K. Shin. (2018). "Strength characteristics of ring-stiffened cylindrical steel shell under external pressure", *Journal of KSSC*, 30(1), pp.25-35.
- Ahn, J. T. and D. K. Shin. (2017). "Ultimate compressive strength of longitudinally stiffened cylindrical steel shell for wind turbine tower", *Journal of KSSC*, 29(2), pp. 123-134.

OUR FACULTY



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EDUCATION

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DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

- Lee, S.-H., B.-I. Kim, & M.-S. Lee. (2022). "An Analytical Study on Trustability of Prescribed Slope Inclination in Design Criteria", *Journal of Coastal Disaster*, 9(4), pp. 231-235.
- Lee, S.-H., & B.-I. Kim. (2021). "Development of Technique for Predicting Horizontal Displacement of Retaining Wall Induced by Earthquake", *Journal of the Korea Academia-Industrial cooperation Society*, 22(5), pp. 143-150.
- Jang, W.-C., B.-I. Kim, & Y.-U. Kim. (2021). "A Method of Obtaining Correction Factor for Settlement Prediction of Soft Ground Using Correlation of Theoretical and Measured Settlement of Gimhae-Jinyoung through SPSS Analysis", *Journal of the Korea Academia-Industrial cooperation Society*, 22(5), pp. 502-508.
- Bong, T., Armin W. Stuedlein, B.-I. Kim, & J. Martin. (2020). "Bearing capacity of spread footings on aggregate pier-reinforced clay: updates and stress concentration", *Canadian Geotechnical Journal*, 57(5), pp. 717~727.
- Bong, T., S.-R. Kim, & B.-I. Kim. (2020). "Prediction of Ultimate Bearing Capacity of Aggregate Pier Reinforced Clay Using Multiple Regression Analysis and Deep Learning", *Applied Science*, 10(13), pp. 1~17.



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EDUCATION

B.S. Korea University
M.S. Korea University
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DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

- Kwon, Y.-M., J.-H. Moon, G.-C. Cho, Y.-U. Kim. (2023). "Xanthan gum biopolymer-based soil treatment as a construction material to mitigate internal erosion of earthen embankment: A field-scale", *Construction and Building Materials*, 389, 131716.
- Moon, J., I. Yoon, M. Kim, J. Lee, & Y. Kim. (2023). "Ultrasonically enhancing flowability of cement grout for reinforcing rock joint in deep underground", *Geomechanics and Engineering*, 33(2), pp. 211-219
- Xin, Z.-H., J.-H. Moon, K.-B. Kim, C.-H. Kim, & Y.-U. Kim. (2021). "Effect of underground stress transfer through artificial manipulation of particle size distribution", *Geomechanics and Engineering*, 26(2), pp. 205-214.
- Choo, H., Y. Choi, Y.-U. Kim, W. Lee, & C. Lee. (2020). "Compressibility and hydraulic conductivity of calcium bentonite treated with pH-responsive polymer", *Geomechanics and Engineering*, 22(4), pp. 329-337.
- Moon, J.-H., Z.-H. Xin, Y.-B. Park, & Y.-U. Kim. (2019). "Ultrasonically Enhanced Physical Properties of Milky Cement for Ground Improvement", *KSCE Journal of Civil Engineering*, 23(10), pp. 4525-4528.



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EDUCATION

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DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

- Nam, S. H., S. Kwon, & Y. D. Kim. (2024). "Development of a basin-scale total nitrogen prediction model by integrating clustering and regression methods.", *Science of The Total Environment*, 920, 170765.
- Kim, G. S., Y. Gwon, E. J. Oh, D. Kim, J. H. Kwon, & Y. D. Kim. (2023). "Classification Technique of Algae Using Hyperspectral Images of Algae Culture Media.", *Applied Sciences*, 13(7), 4631.
- Jung, W. S., & Y. D. Kim. (2023). "Evaluation of Watershed Water Quality Management According to Flow Conditions through Factor Analysis and Naïve Bayes Classifier", *Sustainability*, 15(13), 10038.
- Shin, J. H., T. G. Ku, I. W. Seo, & Y. D. Kim. (2023). "River Recreational Activity Vulnerability Assessment and the Hydraulic Index Proposal", *Water*, 15(20), 3587.
- Jo, B. G., W. S. Jung, S. H. Nam, Y. D. Kim. (2023), "Prediction of Cyanobacteria Using Decision Tree Algorithm and Sensor Monitoring Data.", *Applied Sciences*, 13(22), 12266.

OUR FACULTY



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EDUCATION

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DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

- Kwon, S.-H., J.-S. Lee, K.-T. Koh, & H.-K. Kim. (2024). "Strain Softening of High-Performance Fiber-Reinforced Cementitious Composites in Uniaxial Compression", *International Journal of Concrete Structures and Materials*, 18(17).
- Kwon, S.-H., J.-S. Lee, & H.-K. Kim. (2024). "On determination protocols of characteristic in-situ compressive strength of concrete for existing structure: Case study with core samples from actual bridges", *Case Studies in Construction Materials*, 20(2), e03031.
- Lee, J.-S., K.-P. Jang, C.-K. Park, & S.-H. Kwon. (2023). "Experimental study on variation in rheological properties of concrete subjected to pressure and shearing by pumping", *Advances in Concrete Construction*, 15(1), pp. 59-68.
- Lee, J.-S., E.-S. Kim, K.-P. Jang, C.-K. Park, & S.-H. Kwon. (2022). "Prediction of Concrete Pumping Based on Correlation between Slump and Rheological Properties", *Advances in Concrete Construction*, 13(5), pp. 395-410.
- Kwon, S.-H., K.-P. Jang, and J.-S. Lee. (2021). "External Injection Method for Improvement of Concrete Pumpability", *ACI Materials Journal*, 118(5), pp. 17-28.



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DEPARTMENT OF GLOBAL CIVIL ENGINEERING

PUBLICATIONS

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