

TAEKSANG KIM

Phone: +1-734-210-4622

E-mail: stozy@umich.edu

Web Page: <https://sites.google.com/view/taksang>

Mailing Address: Munger Residences 540 Thompson St.
Ann Arbor, MI 48104



Introduction:

I am a *Pre-Candidate* for Ph.D. degree at University of Michigan. My research focuses on design optimization and hydraulic experimentation to determine the reliability and safety of structures.

My research methods include mathematical methods, computational modeling, and experimentation.

EDUCATION

Ph.D.	University of Michigan, Civil and Environmental Engineering Thesis: Advisor: Jeremy Bricker	Current
MS	Seoul National University, Civil and Environmental Engineering Thesis: "Determination of the Optimal Width of a Breakwater Caisson by Reliability-Based Design Optimization" Advisor: Kyung-Duck Suh GPA: 4.13 / 4.30	Feb 2017
BS	Seoul National University, Civil and Environmental Engineering Graduated Cum Laude GPA: 3.72 / 4.30	Feb 2015

SCHOLARSHIPS

Ph.D. Scholarship	
Fellowship (Awarded by University of Michigan)	Winter 2021
Master's Scholarship	
Research Assistant Scholarship (Awarded by BrainKorea21 PLUS)	2016
National Need-Based Scholarship (Awarded by Seoul National University)	Fall 2015
Research Assistant Scholarship (Awarded by Seoul National University)	Spring 2015
Undergraduate Scholarships	
National Scholarship for Science and Engineering Awarded by Korea Student Aid Foundation	2013 to 2014
National Need-Based Scholarship (Awarded by Seoul National University)	Fall 2012
Samwhajibong Scholarship Foundation (Awarded by Samwhajibong Foundation)	Spring 2010
Superior Academic Performance Award (Awarded by Seoul National University)	2009

RESEARCH EXPERIENCE

Institute of Engineering Research, Seoul National University Sep 2019 to Dec 2020

Researcher

Advisor: Jin Hwan Hwang

- Development of a System to Predict Flood Damage (Software programs: Python and Excel)
- Preparation for the initial evaluation process of BrainKorea21, Phase IV

Daewoo E&C (Construction Company in Rep. of Korea)

Western 4th double-track railroad site in Asan, Rep. of Korea Aug 2017 to Jan 2019

Construction Team Member

- Major roles: Build RCD foundation and build & launch IPC girders
- Examination of previous drawings and revisions of detailed drawings (Software program: AutoCAD)
- Triangular survey and leveling (Equipment: Total station, GPS)

Western Breakwater for Al-Faw Grand Port in Basra, Iraq Mar 2017 to May 2017

Construction Team Member

- Major roles: Build core and filter layer of a rubble-mound breakwater
- Aerial filming by drone

Coastal Engineering, Seoul National University

Mar 2015 to Feb 2017

Master's Student

Advisor: Kyung-Duck Suh

- Determination of the Optimal Width of a Breakwater Caisson by Reliability-based Design Optimization (Software Program: MATLAB)
- Development of Technology for Armor Blocks and a Crown Structure against High Waves (Experiment to Determine the Stability Coefficient of a Chi-Block)
- Experimental Study for the Determination of the Stability Coefficients of Rakuna-IV, Grasp-P and Grasp-R Armoring Rubble-Mound Breakwaters

TEACHING EXPERIENCE

Seoul National University, Civil and Environmental Engineering

Teaching Assistant in Coastal and Harbor Engineering Mar 2016 to Jun 2016

- Conducted two experiments involving eight students (Dispersion Relationship, Wave Reflection)

Teaching Assistant in Hydraulics

Mar 2014 to Jun 2014

- Conducted four experiments involving five students (Energy Losses in Pipes, Hydraulic Jumps, Pipe and Open-Channel Flow Modeling)

PUBLICATIONS

Journal Papers in Preparation

Kim, T., Jang, D., Park, S.W., and Hwang, J.H., 2021, Flood Depth-Damage Curves in Incheon, Republic of Korea

PRESENTATIONS

Paper Presentations

Kim, T., Jang, D., Park, S.W., and Hwang, J.H. (2020, Nov 05-06). Flood Depth-Damage Curves for a Residential Area in Incheon, Republic of Korea [Paper presentation]. 2020 Smart Water Grid International Conference (2020 SWGIC), Incheon, Republic of Korea.

Kim, T., and Suh, K.D. (2017, Jan 04-06). Determination of the Optimal Width of a Breakwater Caisson by Reliability-based Design Optimization [Paper presentation]. International Conference on Engineering and Information Technology (ICEIT), Cebu, Philippines.

Kim, T., and Suh, K.D. (2016, Nov 03-04). Determination of the Optimal Width of a Breakwater Caisson by Reliability-based Design Optimization [Paper presentation], Korean Society of Coastal and Ocean Engineers (KSCOE), Jeju, Republic of Korea.

Kim, T., and Suh, K.D. (2016, May 19-20). Evaluation of Stability of Grasp-P Depending on Placement Methods [Paper presentation], Korean Society of Coastal and Ocean Engineers (KSCOE), Busan, Republic of Korea.

Kim, T., Park, Y.H., and Suh, K.D. (2016, May 10-13). Hydraulic Experiment for the Stability of Chi Blocks [Paper presentation], Proceedings of the 6th International Conference on the Application of Physical Modelling in Coastal and Port Engineering and Science (Coastlab16), Ottawa, Canada.

Kim, T., and Lee, S. (2015, Nov 12-13). Hydraulic Experiment for the Evaluation of the Stability of Grasp-P [Paper presentation], Korean Society of Coastal and Ocean Engineers (KSCOE), Mokpo, Republic of Korea.

Kim, T., Lee, S., and Park, Y.H. (2015, Oct 28-30). Hydraulic Experiment for a Comparison of the Stability of Chi-Blocks [Paper presentation], KSCE 2015 CONVENTION 2015 CIVIL EXPO & CONFERENCE, Gunsan, Republic of Korea.

Cheon, S.H., Kim, T.S., and Min, E.J. (2014, Oct 22-24). Study of Sand Characteristics using a Commercial Flat-bed Scanner [Paper presentation], Korean Society of Civil Engineers (KSCE), Daegu, Republic of Korea.

PATENTS

T. Kim., J.H. Hwang., D. Jang., and S.W. Park. (Application Submitted). K.R. Patent No. SYSTEM FOR PREDICTING FLOOD DAMAGE AND METHOD FOR PREDICTING FLOOD DAMAGE.

PROFESSIONAL TRAINING

The 2nd Korea-Japan-Taiwan Joint Seminar on Climate Change Impacts on Coastal Engineering Problems, Uji Campus, Kyoto University, Aug 2015

Sponsor: Japan Society for the Promotion of Science (JSPS), National Research Foundation of Korea (NRF), SOUSEI-D by MEXT of Japan

Program: Sea-level rise and wave projection, storm surge, beach morphology, coastal structures and run up and statistics and environment

The 9th Trilateral (Korea-Japan-Taiwan) Student Activity, Seoul National University, Aug 2014

Sponsor: Seoul National University, Kyoto University, National Taiwan University

Program: Discussion of the stability of hydraulic structures

LANGUAGES

Korean: Native Language

English: Superior Writing, Reading and Listening, Advanced Speaking

- GRE

Scores (Verbal: 151, Quant: 169, Analytical Writing: 3.0)

- TOEFL

Score 95 (Reading: 25, Listening: 26, Speaking: 20, Writing: 24)

My best score 97 (Reading: 27, Listening: 26, Speaking: 20, Writing: 24)

COMPUTER SKILLS

Programming Software: MATLAB, Python, C++

Hydraulic Software: OpenFOAM, HEC-RAS, HDM-2D, CTM-2D

Design Software: AutoCAD, Adobe Photoshop

Document Editing Software: Microsoft Office, Acrobat DC

OTHERS

Certificate for Civil Engineering in Rep. of Korea

May 2016 to Now

Internship at Coastal Engineering Laboratory

Sep 2014 to Feb 2015

Undergraduate Researcher in Seoul National Univ., Rep. of Korea

Internship at SAMSUNG C&T

Aug 2013

World Cup Bridge Construction in Seoul, South Korea

Military Service, Rep. of Korea Army

Aug 2010 to May 2012