SANGJOON LEE

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https://sangjoonlee.tk/

RESEARCH INTERESTS

Fluid mechanics (CFD & experiment), heat transfer, energy and environment

- Analyzing motion of turbulent flows and concurrent scalar transport to comprehend underlying mechanisms
- Improving mechanical energy conversion processes from renewable energy sources with consideration of environmental sustainability issues such as fine dust pollution

EDUCATION

Seoul National University, Gwanak, Seoul, South Korea
Bachelor of Science in Mechanical & Aerospace Engineering Mar. 2012 - Aug. 2018
Bachelor of Business Administration (DUAL MAJOR) *(included 21-month military duty)*

- Representative of SNU Engineering Class of 2018 (*Summa cum laude*)

Seoul Science High School, Jongno, Seoul, South Korea
High School Diploma for Gifted Students Mar. 2009 - Feb. 2012

KEY PUBLICATIONS

1. LEE, S., & HWANG, W. (2019). **Development of an Efficient Immersed-Boundary Method with Subgrid-Scale Models for Conjugate Heat Transfer Analysis using Large Eddy Simulation.** *International Journal of Heat and Mass Transfer, 134*, 198-208. doi:10.1016/j.ijheatmasstransfer.2019.01.019.
2. BAEK, S., LEE, S., HWANG, W., & PARK, J. S. (2018). **Experimental and Numerical Investigation of the Flow in a Trailing Edge Ribbed Internal Cooling Passage.** *Journal of Turbomachinery, 141* (1), 011012. doi:10.1115/1.4041868.

RESEARCH EXPERIENCE

Energy & Environmental Flow Lab, Seoul National University Jul. 2017 - Aug. 2018
Researcher *(Supervisor: Dr. Wontae Hwang)*

- Development of conjugate heat transfer codes combining heat conduction and convection
- Flow visualization using magnetic resonance velocimetry and large eddy simulation

Turbulence, Flow Control & CFD Lab, Seoul National University Sep. 2016 - Dec. 2017
Research Intern for Thesis *(Supervisor: Dr. Haecheon Choi)*

- Simulation of flow around rotating small vertical axis wind turbine
- Source code study on CFD based on immersed boundary method

TEACHING EXPERIENCE

Basic Calculus 1, 2 & Basic Physics 1, Seoul National University Mar. 2013 - Dec. 2013
Teaching Assistant

- Planned lessons for 2 hours every week and made original teaching materials
- Instructed freshmen to help them keep up with university mathematics or physics courses

AFFILIATIONS

SNU Tomorrow's Engineers Membership, Seoul National University Mar. 2016 -
Excellent Honorary Member

- Collegiate honor society of superior engineering students, 20 - 25 members in each year
- Served as the 7th vice president & head manager during Sep 2016 - Aug 2017

SCHOLARSHIPS

Korean-American Educational Commission (Fulbright Korea), Aug. 2019 - May 2021 *(expected)*
Fulbright Graduate Study Award, *Principal Candidate*

Korea Student Aid Foundation (KOSAF), Mar. 2012 - Dec. 2017
National Scholarship for Science and Engineering, *Full-Tuition*