SANGJOON LEE

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https://sangjoonlee.tk/

RESEARCH INTERESTS

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

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

EDUCATION

University of California, Berkeley – Berkeley, California, USA — Aug. 2019 -
Ph.D. Student, Mechanical Engineering

Seoul National University – Gwanak, Seoul, South Korea — Mar. 2012 - Aug. 2018
(included 21-month military duty)
B.Sc., Mechanical & Aerospace Engineering
B.B.A., Business Administration (DUAL MAJOR)

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

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

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)*

- Large eddy simulation of flow around a rotating small vertical axis wind turbine
- Source code study on CFD based on an immersed boundary method

TEACHING EXPERIENCE

Experimentation & Measurements, University of California, Berkeley — Aug. 2019 - Dec. 2019
Graduate Student Instructor

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

AFFILIATIONS

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

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

HONORS & AWARDS

Ilju Academy & Culture Foundation, — Aug. 2019 - Jul. 2023
Overseas Ph.D. Scholarship

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