

# SANGJOON LEE

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<https://sangjoonlee.tk/>

## RESEARCH INTERESTS

Fluid mechanics (CFD & experiment), heat transfer and turbomachinery

- Analyzing motion of turbulent flow and concurrent scalar transport to comprehend underlying mechanisms
- Improving energy conversion processes in turbines or compressors by examining their mechanical configuration

## EDUCATION

**Seoul National University**, Seoul, Republic of Korea

Mar 2012 - Aug 2018

*Bachelor of Science in Mechanical & Aerospace Engineering*

(including 21 months of military service)

*Bachelor of Business Administration*

- Total GPA of 4.15 / 4.3 (97.5 / 100)
- *Summa cum laude* (3rd place among 139 mechanical engineering majors)

## PUBLICATIONS

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](https://doi.org/10.1016/j.ijheatmasstransfer.2019.01.019).

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](https://doi.org/10.1115/1.4041868).

## RESEARCH EXPERIENCE

Energy & Environmental Flow Lab, Seoul National University

Jul 2017 - Aug 2018

**Researcher** (Advisor: Professor 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** (Advisor: Professor 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 & Basic Physics, Seoul National University

Mar 2013 - Dec 2013

**Teaching Assistant**

- Planned lessons every week for two hours and made original teaching materials
- Instructed first-year students to keep up with university mathematics or physics courses

## EXTRA-CURRICULAR ACTIVITIES

SNU Tomorrow's Engineers Membership, Seoul National University

Mar 2016 - Mar 2018

**Vice President & Head Manager**

- Collegiate honor society of superior engineering majors, 20 - 25 members in each year
- Held advisory sessions for potential engineering students and hosted intercollegiate and international academic gatherings

## SCHOLARSHIPS

Korean-American Educational Commission (Fulbright Korea),

Sep 2018

**Fulbright Graduate Study Award**, Principal candidate (PY2019)

Korea Student Aid Foundation (KOSAF),

Mar 2012 - Dec 2017

**National Scholarship for Science and Engineering**, Full-ride scholarship