

Taegyu Kang

US Permanent Resident

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QUALIFICATIONS PROFILE

Versatile, driven mechanical engineer with expertise in thermal, heat transfer, and fluids dynamic phenomena.

- Excels in conducting in-depth test condition research and building complex test loops.
 - Demonstrated aptitude for developing efficient cooling systems in data centers.
 - Repeated success designing robust, cost-effective laboratory equipment.
 - Proven ability to conduct groundbreaking research and publish results in leading scientific journals.
 - Personable and determined with the communication skills needed to coordinate on complex initiatives.
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EDUCATIONAL BACKGROUND

Georgia Institute of Technology

Master of Science, Mechanical Engineering (GPA: 3.9/4.0)

Atlanta, GA

May 2019

Georgia Institute of Technology

Bachelor of Science, Mechanical Engineering (GPA: 3.9/4.0)

Atlanta, GA

May 2015

EXPERIENCE HIGHLIGHTS

Graduate Researcher

August 2015 – Present

Shock Tube and Advanced Mixing Laboratory (Georgia Institute of Technology, Atlanta, GA)

Design, fabricate, and test robust heat exchangers for 800° C Operations with Supercritical CO₂. Identify geometric factors that impact pressure drops. Assess and evaluate heat exchanges and gas property exchanges through the heat exchanger.

- Awarded Best Poster in Fifth Supercritical-CO₂ Power Cycles Symposium in San Antonio, TX.

Undergraduate Researcher

January 2013 – December 2014

Consortium for Energy Efficient Thermal Management Laboratory (Georgia Institute of Technology, Atlanta, GA)

Leveraged advanced understanding of fluid dynamics to improve data center cooling efficiency. Enhanced airflow through both floor and ceiling. Collaborated with external agencies and organizations to improve research programs.

- Won Multidisciplinary Design Award at International Field-Reversible Thermal Connector Challenge.
- Proposed new Anemometric flow tool that decreased uncertainty from 4% to 1.4%.
- Reduced cost by introducing Calorimetric flow tool that uses 10% of the energy of Anemometric tool.

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SKILLS

- Heat Transfer, Fluid Mechanics, Thermodynamics
 - Computational Fluid Dynamics (CFD), Computer-Aided Design (CAD), Finite Element Analysis (FEA)
 - Research and Development (R&D), Project Planning, Project Management, Testing, Data Analysis, Machining, Facility Management (FM), Equipment Design, Experimental Design, Electro-Mechanical Engineering
 - Software: LabVIEW, MATLAB, SolidWorks, ANSYS, Fluent, CFX, Steady-State Thermal Simulation, Transient Thermal Simulation, Static Structural Simulation, AutoCAD, Python, OpenFOAM, Microsoft Office, EES
 - Certification: OpenFOAM, ANSYS
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PUBLICATIONS

- Caccia, M., Tabandeh-Khorshid, M., Itskos, G., Strayer, A., Caldwell, A., Pidaparti, S., Singnisai, S., Rohskopf, A., Schroeder, A., Jarrahbashi, D., **Kang, T.**, Sahoo, S., Kadasala, N., Marquez-Rossy, A., Anderson, M., Lara-Curzio, E., Ranjan, D., Henry, A. and Sandhage, K. (2018). **Ceramic-metal composites for heat exchangers in concentrated solar power plants.** *Nature*, 562(7727), pp.406-409.
- Arghode, V., **Kang, T.**, Joshi, Y., Phelps, W. and Michaels, M. (2017). **Measurement of Air Flow Rate Through Perforated Floor Tiles in a Raised Floor Data Center.** *Journal of Electronic Packaging*, 139(1), p.011007.
- Arghode, V., **Kang, T.**, Joshi, Y., Phelps, W. and Michaels, M. (2015). **Anemometric tool for air flow rate measurement through perforated tiles in a raised floor data center.** *2015 31st Thermal Measurement, Modeling & Management Symposium (SEMI-THERM)*, San Jose, CA, pp. 163-171.