LIKHITH MANJUNATHA

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RESEARCH INTERESTS

Hydrogen energy systems, polymer electrolyte fuel cells

EDUCATION

Kyushu University, Japan	**Ph.D**	**Hydrogen Energy Systems**		*Expected:* Fall 2023
Kyushu University, Japan	**M.E**	**Mechanical Engineering**	GPA: 3.9 / 4.0	Oct 2018 – Sept 2020
Kyushu University, Japan	**B.E**	**Mechanical Engineering**	GPA: 3.3 / 4.0	Oct 2014 – Sept 2018

RESEARCH EXPERIENCE

Advanced Hydrogen Energy System Lab, Kyushu University	**Graduate Researcher**	Oct 2020 – Present
	Supervisor: Prof. Akari Hayashi	
	. Investigating cell reversal and degradation mechanisms in polymer electrolyte fuel cells	

Energy Transport Research, University of Illinois (U-C)	**Research Scholar**	Aug 2019 – Nov 2019
	Supervisor: Prof. Nenad Miljkovic, Dr. Soumyadip Sett	
	. Investigated defrosting mechanisms on lubricant infused surfaces	

Heat and Mass Transfer, Kyushu University	**Undergraduate / Graduate Researcher**	Apr 2017 – Nov 2019
	Supervisor: Prof. James J. Cannon	
	. Developed a molecular-scale technique to gain an enhanced understanding of atomic interaction mechanisms that contribute to thermal conductivity and viscosity of liquids	

INTERNSHIP EXPERIENCE

Q&A Works Fukuoka, Japan	**Data Science Intern**	Feb 2019 – May 2019
	. Designed a novel image-processing method to detect molten nickel level in a container using computer vision and regression techniques	
Takaishi Foods, Kitakyushu, Japan	**Data Science Intern**	Feb 2019 – Apr 2019
	. Built inventory demand and sales forecast model using SARIMAX time series analysis and also identify factors that contribute to increased sales of mochi rice cakes	
Airtec Inc. Fukuoka, Japan	**Engineering Intern**	Nov 2016 – Dec 2016
	. Explored markets for drain timer valves in Taiwan; visited steel plants, air compressor manufacturers, a calcium carbonate factory and attended various business proceedings	
Toyota Kirloskar Motor Bangalore, India	**Engineering Intern**	Feb 2016 - Mar 2016
	Performed analysis on cycle-time and accuracy, of newly installed welding equipment during installation and process change in a manufacturing line	

TEACHING EXPERIENCE

1) *TA* for **Python Programing for Analysis** course for 2nd year undergrad students	Oct 2020 – Feb 2021
2) *TA* for **Advanced Engineering** course for 2nd year undergrad students	Oct 2020 – Feb 2021
3) *TA* for **Complex Function Theory** course for 3rd year undergrad students	Apr 2019 – Aug 2019
4) *Student mentor* for **Linear Algebra II** for 2nd year undergrad students	Oct 2017 – Feb 2018
5) *Student mentor* for **Linear Algebra I** for 1st year undergrad students	Apr 2017 – Aug 2017

HONOURS AND AWARDS

1) **Research Assistant** Support   Apr 2021 – Sept 2023
2) **Kobayashi Scholarship,** 1 of 50 recipients from top 25 universities in Japan;   Apr 2019 – Apr 2021
   Chosen and awarded by the President as a representative of the new scholars
3) **HP Ideathon,** Best concept award by *Hewlett-Packard* for business applications of Immersive technology, 2017
4) **International Business trip (Taiwan),** Explored markets for drain timer valves with CEO of *Airtec Inc.*, 2017
5) **JASSO Scholarship,** Awarded on recommendation based on academic performance   Apr 2016 – Mar 2019
6) **Ranked top** 2% (145000+ students statewide) in Common Entrance Exam, India   May 2013

TECHNICAL SKILLS

Languages: Python (numpy, pandas, seaborn, scikit-learn), Java, Scilab
Software: LAMMPS, Linux, TeX, Git
Others: web scraping, data analysis

JOURNAL PUBLICATIONS

L. Manjunatha, H. Takamatsu, J. J. Cannon, *"Atomic-level breakdown of Green–Kubo relations provides new insight into the mechanisms of thermal conduction."* Scientific Reports 11.1 (2021): 1-11.

CONFERENCE

L. Manjunatha, H. Takamatsu, J. J. Cannon, *"An investigation into the role of hydroxyl groups on the thermal conductivity of small alcohols using molecular simulation with atomic-level Green-Kubo analysis,"* 31st International Symposium on Transport Phenomena (13-16 October 2020, Honolulu, Hawaii) **(Online)**

L. Manjunatha, H. Takamatsu, J. J. Cannon, *"Ethylene glycol and Propanol: Understanding the influence of an extra hydroxyl group on the mechanisms of thermal conductivity,"* UK Heat Transfer Conference (8-10 September 2019, Nottingham, UK)

L. Manjunatha, H. Takamatsu, J. J. Cannon, *"An investigation into application of the Green-Kubo method in molecular simulation to help understand the mechanisms of thermal conductivity of alcohols,"* JSME Thermal Engineering conference (20-21 October 2018, Toyama, Japan)

L. Manjunatha, H. Takamatsu, J. J. Cannon, *"Investigation into influence of hydroxyl group placement on the thermal conductivity of propane-base alcohols using molecular dynamics simulation,"* The 8th Symposium on Micro-Nano Science and Technology (31 Oct- 2 Nov 2017, Hiroshima, Japan) (**Poster**)

PRESENTATIONS

1) Falling Walls, *Breaking the wall of experimental search time*, (13 June 2019, Tokyo, Japan)
2) Kyushu University Future Creators in Science Project (December 2018, Fukuoka, Japan) **(Invited talk)**
3) International Conference for Undergraduate Research (25 September 2018, Fukuoka, Japan)

MEMBERSHIP

The Japan Society of Mechanical Engineers (JSME)