

LIKHITH MANJUNATHA

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EDUCATION

Kyushu University, Japan	M.E Mechanical Engineering	GPA: 4.0	Oct 2018 – Present
Kyushu University, Japan	B.E Mechanical Engineering	GPA: 3.34 (3.63 last 2Y)	Oct 2014 – Sept 2018

RESEARCH EXPERIENCE

Heat and Mass Transfer, Kyushu University	Full-time Research Student Supervisor: Prof. Kosaku Kurata , Prof. James Cannon . Investigating estimate of cell viability based on electric pulse parameters such as pulse repetition, length, interval and also varying voltage using Bayesian analysis	Feb 2019 – Present
Energy Transport Research, University of Illinois at Urbana-Champaign	Research Scholar Supervisor: Prof. Nenad Miljkovic , Dr. Soumyadip Sett . Investigated defrosting mechanisms on lubricant infused surfaces . Developed image analysis method for easy and accurate frost thickness measurement . Automated chiller and camera operation using serial communication . Fabricated superhydrophobic CuO and lubricant infused surfaces	Aug 2019 – Nov 2019
Heat and Mass Transfer, Kyushu University	Full-time Research Student 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 . Developed a method to prevent inconsistent readings commonly encountered in equilibrium molecular dynamics calculations of transport properties . Implemented a software stack to automate post-processing and analysis of data	Apr 2017 – Nov 2019

INTERNSHIP EXPERIENCE

Q&A Works Fukuoka, Japan	Data Science Intern . Designed and implemented novel image-processing method to detect molten nickel level in a container using computer vision and regression techniques . Implemented machine learning based Random Forest method to identify important performance indicators affecting component lifetime of a phys. vapor deposition plant . Prepared complete learning material for a 3-day paid intensive training course to learn data analysis using Python; and training material for basic machine learning workflow	Feb 2019 – May 2019
Takaishi Foods, Kitakyushu, Japan	Data Science Intern . Performed data analysis to help identify factors that contribute to increased sales of mochi rice cakes, including season, weather, impact of televised/newspaper advertisement and pension pay-days from inferred results . Built inventory demand and sales forecast model using SARIMAX time series analysis	Feb 2019 – Apr 2019
Airtec Inc. Fukuoka, Japan	Engineering Intern . Explored different business models to sell drain-timer valves in steel plants . Initiated and established potential business connection with valve makers in India . Explore markets for drain timer valves in Taiwan; visited steel plants, air compressor manufacturers, a calcium carbonate factory and attended various business proceedings	Nov 2016 – Dec 2016
Toyota Kirloskar Motor Bangalore, India	Engineering Intern Performed analysis on cycle-time and accuracy, of newly installed welding equipment during installation and process change in a manufacturing line	Feb 2016 - Mar 2016

Indian Institute of Science, **Laboratory Assistant**
Bangalore, India *Supervisor: M.K Raghavendra*
Worked on Nd:YAG Lasers

Dec 2013 - May 2014

PROJECTS

- 1) Molecular dynamics simulation of toy Argon system depicting Leap-frog integration method using Scilab
- 2) Analyze progression of a simple wave using shallow water equations
- 3) Cost-quality optimization for design of truss structures
- 4) Explicate relationship between number of H-bonds and thermal conductivity of SPC/E water

TEACHING EXPERIENCE

- 1) *Teaching assistant* for **Complex Function Theory** course for 3rd year undergrad students Apr 2019 – Aug 2019
- 2) *Student mentor* for **Linear Algebra II** for 2nd year undergrad students Sep 2017 – Feb 2018
- 3) *Student mentor* for **Linear Algebra I** for 1st year undergrad students Apr 2017 – Aug 2017

HONOURS AND AWARDS

- 1) **Kobayashi Scholarship**, 1 of 50 recipients from top 25 universities in Japan; Apr 2019 – Sep 2020
Chosen and [awarded](#) by the President as a representative of the new scholars
- 2) **HP Ideathon**, Best concept award by **Hewlett-Packard** for business applications of Immersive technology, 2017
- 3) **International Business trip (Taiwan)**, Explored markets for drain timer valves with CEO of **Airtec Inc.**, 2017
- 4) **JASSO Scholarship**, Awarded on recommendation based on academic performance Apr 2016 – Mar 2019
- 5) **Ranked top 2%** (145000+ students statewide) in Common Entrance Exam, India May 2013

TECHNICAL SKILLS

Languages: Python, Java, Scilab
Libraries: numpy, pandas, seaborn, scikit-learn, OpenCV, tensorflow
Software: LAMMPS, Linux, TeX, Git
Experimental: Condensation heat transfer, frosting/defrosting, fabrication of superhydrophobic surfaces and LIS
Others: Statistical Mechanics, ML techniques (Bayesian, Time series, Decision Tree, Random Forest, Neural networks), web scraping, data analysis

CONFERENCE / PRESENTATIONS

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

MEMBERSHIP

The Japan Society of Mechanical Engineers (JSME)