SAHIL KOMMALAPATI

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EDUCATION

Master of Science in Mechanical Engineering Sep 2019-Jun 2021
University of Washington, Seattle, WA, USA. CGPA: 3.81/4
Bachelor of Technology in Mechanical Engineering Jul 2015- May 2019
Mahindra Ecole Centrale, Hyderabad, Telangana, India. CGPA: 9.4/10

RELEVANT COURSES

Linear Algebra, Deep Learning, Artificial Intelligence, Algorithms, Databases using SQL, Data Structures, OOP, Robotics, Design Thinking, Arduino Interface, Electronincs, CAD, Control Systems, Dynamic and Vibration.

WORK EXPERIENCE

Graduate Research Assistant at Williams Laboratory UW-AA. Dec'19-
Graduate Teaching Assistant for CSE 180: Introduction to Data Science, UW-CSE. Mar'20-Jun'20.
Summer Research Intern at *Indian Institute of Technology, Bombay, India.* (Publication #5) May-Jul'18.
Summer Research Intern at *Mahindra Ecole Centrale, Hyderabad.* (Publication #3) May-Aug'17.

PUBLICATIONS

1. Accurate replication of governing equations of physical systems with Machine Learning – for Industry 4.0 and Digital Twin applications, **NCDMAO, Vikram Sarabhai Space Center, Mar'2020.**
2. Transpose Convolutional Networks for real-time simulation of governing physics of complex processes in Industry 4.0 and Digital Twins. Status: Under Review.Third Author.
3. An optimal positioning algorithm for cumulative drag reduction in heterogeneous platoons. **5^{th} Indian Control Conference (ICC)**, India Institute of Technology, Delhi, Jan'19. **First Author.**
4. Accurate replication with Artificial Neural Networks of simulations of governing equations of processes in Industry 4.0 environments for enhanced monitoring and control. **IEEE Symposium Series on Computational Intelligence, Xiamen, China.** Dec'19. **First Author.**
5. Enhancing Miscible Fluid Mixing by Introducing Pseudo Turbulent Flow in Golden Ratio Spiral Microchannel. **Industrial & Engineering Chemistry Research Journal.** Sep 2019. **First Author.**
6. Simulation of **Heavy Duty Vehicle Control Architecture using SIMULINK**, *URSMEC, Aug'18*

ACHIEVEMENTS AND EXTRACURRICULAR ACTIVITIES

- **Best Project Award**, Undergraduate Research Symposium (URS), MEC, 2018.
- **Best Oral presentation Award**, Undergraduate Research Symposium, MEC, 2018.
- **Merit Scholarship recipient** for excellence in academic performance, MEC, 2015, 2016, 2017, 2018.
- Achieved 84 percentile contest rating on the competitive programming website HackerRank, 2018.
- Winner of Reflechir-Entrepreneurship Talent Event at Aether technological Festival, MEC, 2017.
- Head of Film Making Club, MEC, 2018.

NOTABLE PROJECTS

- Using Markov Chain Monte Carlo Analysis to automate hair-pin vortex identification in turbulent flows.Dec'19-
- Simulation and Analysis of Autopilot control for Missiles with Six DOF using SIMULINK. Frequency analysis on Rate Gyro Flight Control System, integrating Radome slope and heading errors in MATLAB. Aug'18-May'19.
- Rubicks cube solving Robot by integrating 3D printed arms, an Android Application for Image processing, Bluetooth communication interface and stepper motor control using ATmega2560 microcontroller. Jan-May'17.
- Bandwidth enhancement in Micro-gyroscopes using Adaptive input estimation methods. Aug-Dec'17.
- Modelling the human lung-ventilation equipment dyssynchrony using adaptive control in MATLAB.Jan-May'18