SAHIL KUDROLI

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PROFILE

Graduate Masters Student in Mechanical Engineering specializing in Modelling and Simulation of Physical Processes and Systems with added emphasis on Engineering Leadership.

EDUCATION

University of California, Berkeley **Expected May 2016**
Master of Engineering, Mechanical Engineering, CGPA 4/4
Relevant Coursework: Precision Manufacturing, Mechanical Behavior of Engineering Materials, Modelling and Simulation of Advanced Manufacturing Processes, Sustainable Manufacturing, Manufacturing Systems Analysis, Engineering Leadership.

Manipal Institute of Technology, Karnataka, India **May 2014**
Bachelor of Engineering, Mechanical Engineering, CGPA 3.96/4 (9.73/10)
Relevant Coursework: Manufacturing Process Engineering, Computer Aided Design, Strength of Materials, Mechanical Design, Thermodynamics, Power Plant Engineering, Renewable Energy Systems.

TECHNICAL SKILLS

Design software – AutoCAD, Solid Edge, PTC Creo, CATIA v5
Analysis software – ANSYS
Programming software – MATLAB
Other software – Microsoft Office Suite

ACADEMIC PROJECT

CalWave Wave carpet WEC – Capstone Project,
University of California, Berkeley **September 2015 – Ongoing**

- Designing and fabricating a wavecarpet so as to utilize and capture maximum motion energy of the waves with reduced drag and better damping parameters.
- Testing the fabricated wave energy converter in the wavetank for desired wave conditions by changing the wave parameters and evaluating its performance with respect to the standard model using MATLAB and LabVIEW software.
- Making modifications in the design as per the evaluated performance in order to achieve better power output and higher efficiency.

Evaluation of Consumer-graded 3D Printed Molds for Injection Molding,
University of California, Berkeley **September - December 2015**

- Designed the 3D printed Lego block molds to fit in the tool used in injection molding machine using Onshape software.
- Selected the materials for 3D printing and injection molding based on the challenges they imposed with the available 3D printers and also able to bear the injection molding temperatures.
- Optimized the 3D printing parameters to get better print quality and also optimized the injection molding parameters using moldflow analysis software.
- Tested the precision of dimensions, planarity, form and surface roughness of the 3D printed molds.
- Evaluated the injected molded parts for precision parameters by comparing it with the standard existing Lego block.

Artificial Neural Networks with Performance and Emission Analysis of Biodiesel with Antioxidant,
Manipal Institute of Technology, India **January-May 2014**

- Produced biodiesel with minimum expenses, improved its properties, conducted the performance and emission parameter tests on the engine and later compared the results with the ANN model generated on MATLAB software.
- Conducted in-depth study and then produced the biodiesel using Waste Cooking Oil (WCO) to reduce the expenses, added Pyrogallol antioxidant in order to improve the oxidation stability of biodiesel.
- Carried out performance and emission tests of the biodiesel with antioxidant on a single cylinder, 4-stroke Diesel Engine and thereby achieved reduced NOx emissions when compared with standard biodiesel.
- Developed an ANN model on MATLAB software and found similar performance and emission characteristics.

EXPERIENCE

Abdul Aziz Al-Badi Trading Est., Jeddah, Saudi Arabia
Graduate Trainee **June 2014-February 2015**

- Selected the appropriate belts to meet the customers' requirements, prepared the worksheet.
- Heated and spliced the belts according to the specifications under the guidance of Senior Engineer.

National Food Industries Company (NFIC), Jeddah, Saudi Arabia
Graduate Trainee **June-July 2013**

- Performed detailed analysis on the production of cans, the processing of different types of food products, the working procedure of different machines involved and finally the functioning of the TetraPak plant.
- Checked the faults in the pumps, compressors, sterilizers in the Mechanical Maintenance department to ensure high quality production/performance.
- Performed quality checks in the QC department and maintained 94% quality rate on the products produced.

AWARDS

- "*UC Berkeley College of Engineering Fung Fellowship Award*" – Awarded on the acknowledgement of my exceptional promise as a scholar in the Master of Engineering program.
- "*Award of Excellence Certificate*" for securing the second position in B.E. (Mechanical Engineering)
- "*Award for securing the highest CGPA (10/10)*" during the third year of B.E. (Mechanical Engineering)

LEADERSHIP EXPERIENCE

Final Year Project Leader, *Manipal Institute of Technology, India* **January-May 2014**

- Led the group consisting of 3 members by organizing meetings, scheduling the tasks and handling team dynamics.