

Jimil M. Shah

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VALUE PROPOSITION

Product/Application Developer whose visionary, result-driven leadership in product development and project completion delivers the potential to help a company significantly increase research to revenue. The projects led at UTA include the study of challenges in Air-side economization (Thermal guidelines for data centers) and oil immersion cooling funded by NSF and mentored by IBM, Facebook, CommScope, Panduit and Mestek Inc. etc. Results of projects included increasing operational efficiency and life cycles of cooling systems. Additionally, published several research papers on topics such as immersion oil cooling and was granted three Patents. The active involvement in well-known technical organizations such as ASHRAE and ASME keeps updated about recent trends in key technical areas. The experience at FIAT-Chrysler also demonstrates process, production and quality engineering capabilities.

HIGHLIGHTED ACCOMPLISHMENTS

- *"Best Student Abstract Award"*, IMAPS 2015 Advanced Technology Workshop and Tabletop Exhibits on Thermal Management, Toll House, September 22-24, 2015, Los Gatos, California
- *The Electronic, MEMS and Nanoelectronics Systems Packaging Center Scholarship Award 2015-2016, UTA*
- Represented *Graduate Student Senate* in *2015 Engineer's Week Energy Challenge*, UTA and secured the Third Place among 15 student organizations.
- *'Innovative Project Award'* on a Pneumatic Engine project during the Intercollege Innovative Project Competition organized by *GTU Innovation Council* and received a recognition by Gujarat Technological University as *"1st Student of GTU who had filled patent on his name thro' GIC"*.
- Won several national level technical symposiums and organized many workshops in robotics and aero-modelling.

PATENTS

- [1.] Shah, Jimil. 2012 | Single Cylinder Pneumatic Engine | Indian Patent Pending Application 1890/MUM/2012.
- [2.] Shah, Jimil. 2014 | Parallel Light Beam Generator | Indian Patent Pending Application 1799/MUM/2014.
- [3.] Shah, Jimil. 2014 | Development of Insulation Board Using Pulverized Plant Leaves | Indian Patent Pending Application 2238/MUM/2014.

RESEARCH PAPER PUBLICATIONS

- [1.] Jimil M. Shah, Richard Eiland, Ashwin Siddharth, Dereje Agonafer, "Effects of mineral oil immersion cooling on IT equipment reliability and reliability enhancements to data center operations", IThERM 2016, Las Vegas, NV.
- [2.] Prabjit Singh, Levente Klein, Dereje Agonafer, Jimil M. Shah and Kanan D. Pujara, "Effect of Relative Humidity, Temperature and Gaseous and Particulate Contaminations on IT Equipment Reliability, ASME InterPACK 2015, San Francisco, Ca.
- [3.] Tejaskumar Bagul, Kanan Pujara, Jimil M. Shah, Oluwaseun Awe and Dereje Agonafer, "Computational Study of Behavior of Gas Absorption in Data Center Equipment and Its Effects on the Rate of Corrosion/Contamination", InterPACK 2015, San Francisco, Ca.
- [4.] Jimil M. Shah, Akash B. Pandey and Ujjwell Y. Trivedi, "Design Alteration of Motor-cycle Engine Cam for Pneumatic Operation", International Journal on Theoretical and Applied Research in Mechanical Engineering, Volume 2, Issue 1, ISSN (Print): 2319-3182, 2013.

-- Many other publications in different technical scopes

TECHNICAL AND POSTER PRESENTATION

- [1.] Jimil M. Shah, "Issue on Operational Efficiency for Oil Immersion Cooled Data Centers", Session Co- Chair and Presenter for ASME Panel On "Thermal Management Challenges in Energy Conversion & Conservation", ASME IMECE 2015, November 13-18, Houston, Texas.
- [2.] Jimil M. Shah, "Critical Non-Thermal Factors for Oil Immersion Cooled Data Center", IMAPS Thermal Management Workshop, September 22-24 in Los Gatos, California (Best Student Abstract Award)
- [3.] Project#10- Impacts of Particulate and Gaseous Contamination on IT Equipment Where Air Side Economizers Are Implemented, a Quarterly review IAB Meeting | Steel Orca, New Jersey, spring 2015 | Georgia Tech., Atlanta, Ga, fall 2015 | SUNY Binghamton, NY, spring 2016
- [4.] Project#16- An In-Depth Understanding of Oil Immersion Cooling Strategies for Data Centers, a Quarterly review IAB Meeting | Steel Orca, New Jersey, spring 2015 | Georgia Tech., Atlanta, Ga, fall 2015 | SUNY Binghamton, NY, spring 2016
- [5.] Impacts of Particulate and Gaseous Contamination on IT Equipment Where Air Side Economizers Are Implemented, IUCRC Poster 2015 - 7X24 Exchange Conference, Orlando, FL | San Antonio, TX

EDUCATION

Master of Science in Mechanical Engineering – 3.78/4.0 G.P.A.

Certification: Electronic Packaging– 4.0/4.0 G.P.A.

University of Texas at Arlington, TX (May 2016)

Research Area: *Electronic packaging, Data Center Cooling, Immersion Cooling, Two-phase cooling, gaseous contamination, heat transfer, thermal engineering, Refrigeration and Air-Conditioning and Internet of Things*

Presently, I am working on Thermal Guidelines, Operational efficiency and reliability of data center cooling technologies, estimation of the life cycle of emerging technologies such as immersion cooling and environmental effects on the reliability of wearables.

Research Adviser: Dr. Dereje Agonafer

Bachelor of Engineering in Mechanical Engineering - 7.98/10.00 C.G.P.A.

Gujarat Technological University, Ahmedabad, Gujarat, India (June 2012)

GRADUATE RESEARCH PROJECTS

ES2 an NSF Industry/University Cooperative Research Center (Team Leader)

[1.] An In-Depth Understanding of Oil Immersion Cooling Strategies for Data Centers

Substantial results and proposed methodology to derive Effects of Mineral Oil Immersion Cooling on IT Equipment Reliability | Reliability Enhancements to Data Center Operations | Critical Non-Thermal Design Considerations for Oil Cooled Data Centers

[2.] Impacts of Particulate and Gaseous Contamination on IT Equipment Where Air Side Economizers Are Implemented

Quantifiable results to obtain Effect of Relative Humidity, Temperature and Gaseous and Particulate Contaminations on Information Technology Equipment Reliability | Qualitative Study of Cumulative Corrosion Damage of IT Equipment in a Real Data Center Environment Utilizing Air-side Economizer

Hewlett-Packard Development Company, L.P. (Team Leader)

[1.] Corrosion on wearables charging pins

Reliability testing of smart watch | Study of electro-migration on wearable charging pins due to corrosion

UNDERGRADUATE RESEARCH PROJECTS

[1.] Retrofitting of single cylinder 4-stroke motor-cycle engine into pneumatic engine. (Team Leader)

[2.] The Remote controlled Airplane using Methanol based Internal Combustion Engine and Servo motors exploring Aerodynamics

PROFESSIONAL EXPERIENCE

Graduate Apprentice Trainee in Manufacturing-Engine Crankshaft Department, Powetrain Division | **FIAT INDIA AUTOMOBILES LIMITED**, Ranjangaon, Pune 2012 - 2013

Key Responsibilities

- To supervise the crankshaft manufacturing line. (Shift In charge)
- To monitor SPC characteristics (Process capability- Pp, Ppk, Cp & Cpk by using Q-DAS software)
- To optimize the machine performance for WCM (World Class Manufacturing) Audit
- Member of Autonomous Activity Pillar and Environment Pillar
- To maintain the PQC characteristics | To analyze rejection
- Implementing and Maintaining TS-16949 documents

Lecturer and Project/ Case Study Coordinator in Mechanical Department | **Parul Institute of Engineering and Technology** | Limda, Vadodara 2013 - 2014

Key Responsibilities

- Employ differentiated teaching methods, incorporating audio and visual activities to address all learning styles
- Provide individualized instruction to keep all students at expected skill level
- Develop discipline plans and work closely with at-risk students

Graduate Research and Teaching Assistant | **The Electronic, MEMS and Nanoelectronics Systems Packaging Center** | **University of Texas at Arlington, Arlington, TX** 2014-2016

PROFESSIONAL AFFILIATIONS

- American Society of Mechanical Engineers (ASME), Member
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), Active Member
- UTA Graduate Student Senate, Active Member