CHETHAN RAMAKRISHNA REDDY (PREFFERED NAME – CHETHAN)

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OBJECTIVE: To contribute my skills in an engineering research and product development environment and have a relation of mutual growth, passion and benefit.

EDUCATION

- Currently pursuing (2016-Present) **Ph.D. in Mechanical Engineering – Engineering Mechanics (ME-EM)** from Michigan Technological University (MTU), USA. CGPA (so far) – 3.84 on a scale of 4
- Highest degree earned (2011-2013) is **Master of Technology (M.Tech.) in Mechatronics Engineering** from National Institute of Technology Karnataka (NITK), India. CGPA – 8.37 on a scale of 10, US CGPA equivalency – 4.00

PHD

- Co-advised by Dr. Mahdi Shahbakhti and Dr. Rush D. Robinett III
- Thesis topic – "Exergy-based control of thermal to electrical energy conversion through an Organic Rankine Cycle by model-based engineering
  Part I - Micro-Concentrated-Solar-Power (Building to Grid)
  Part II - Waste Heat Recovery of Diesel IC Engine (Tank to wheels)"
- Key Academic Projects
  - *Fuel Consumption reduction technologies and hybrid design* – A study on the impact of engine downsizing, aerodynamic drag reduction, tire rolling resistance reduction, start-stop technology, and a rule-based parallel hybrid strategy on fuel consumption using a Matlab/Simulink simulation model (parameterised to Chevy Malibu vehicle).
  - *Control-system for a hybrid ECU (MotoTron ECU)* – Control system built for a parallel HEV using model-based embedded control system design approach. (Tools: Matlab/Simulink and MotoHawk tool-chain).
  - *Effect of external supercharging in a CI diesel engine with swirl combustion chamber* – A validation of experimental result in simulation (Tool GT-Suite).
  - *Efficacy of PV Solar Energy in Houghton, MI* – A study on technical and economic feasibility (break even time).

OTHER ACADEMIC PROJECTS

- Practical Training at Robert Bosch Engineering & Business Solutions Private Limited, India (RBEI).
- Masters' project/thesis – *Development of Automotive Thermoelectric Generator (ATEG)* at RBEI.
- Bachelors' project/thesis – *Design and Fabrication of Boundary Layer Turbine as a Potential Automotive engine (Compressed Air as Fuel)*.

WORK EXPERIENCE

Organization	Duration	Role
Michigan Technological University, Houghton, Michigan, USA	22 May 2017 to Present	Graduate Research Assistant in Energy Mechatronics Lab
	28 August 2017 to Present	Graduate Teaching Assistant for the course MEEM 3911 – Mechanical Engineering Practice IV
Robert Bosch Engineering and Business Solutions Limited (RBEI), Bangalore, Karnataka, India	1 October 2015 to 5 August 2016	Senior Engineer– Modeling and System Simulation
	19 August 2013 to 30 September 2015	Engineer– Modeling and System Simulation
	4 June 2012 to 29 March 2013	Project Intern

WORK DETAILS (Projects Handled)

- Internship – Model-based design (2 months), and master's project work (8 months).
- Employee – Modeling, System Simulation, and Software development: HIL plant model development, Model-based testing, Model-based design & calibration, Virtual hardware, Active Noise Cancellation and Enhancement (ANCE), Bosch Boost Recuperation System (BRS) Simulation, Automobile Waste Heat Recovery using thermoelectric generators

TECHNICAL SKILLS

1. Modeling/Simulation/Data Analysis in MATLAB/Simulink environment
2. Knowledge of Automobile System Modeling & Simulation – GT-SUITE, AMESim
3. Automobile system understanding (Intermediate level)
4. Automobile exhaust system acoustics understanding (Basic to Intermediate level)
5. Automotive Embedded Software Development Cycle – Usage of Automated tool chain, eg. ETAS, DSPACE
6. Hardware in loop (HiL) testing
7. Basics in CAN communication

CERTIFICATION COURSES

1. Automobile Servicing and Maintenance from G.D. Naidu Charities, Coimbatore, India
2. Familiarization course in H.A.L. (Hindustan Aeronautics Limited) Aircraft division, Bangalore, India

LANGUAGES KNOWN

1. English – Business fluent (Read, write & speak).
2. Indian Languages known – Telugu (mother tongue), Kannada, Hindi
3. German (Basic Conversation skills) – 1A qualified

PUBLICATION (http://www.ijsr.net/archive/v2i5/IJSRON2013977.pdf**)**

Chethan R Reddy, Shrikantha S Rao, Vijay Desai, Karthikeyan Ramachadran – "Modeling of an Automotive ThermoElectric Generator (ATEG)." Volume 2 Issue 5 May 2013 in International Journal of Science and Research (IJSR).

INTERNATIONAL EXPERIENCE

Germany for a 2-week business visit to BEG (Bosch Engineering Group) in Feb 2014.

PERSONAL DETAILS

Date of Birth: 14 December 1989 **Sex:** Male **Marital Status:** Single
Passport: H5362516 (India) **US VISA Class:** F1