Priyanka *Chemudugunta*

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Highlights of the CV

M. Tech. *Mechatronics* / ***06*** *years of academic and research experience* / ***02*** *Patents filed* / ***11*** *Publications* / ***02*** *Workshops organized*

Education

M. Tech. in *Mechatronics* (***8.8 CGPA***)	VIT University, Vellore	**2009**
B. Tech. *ECE* (***68.67%***)	JNTU Anantapur	**2007**

Highlights of the Master's Thesis

Title: Design and Control of the Robotic arm using embedded web server Technology

Brief Outline: Controlling the operations of the robotic arm using web page, using PIC18F97J60 which has an inbuilt Ethernet controller, the interfacing between the robot and the client is done. Once the client sends the request, the server will send the webpage and the robot is controlled accordingly. The coding is done using Embedded C language, MPLAB IDE, and Proteous Simulator is used.

Highlights of the Undergraduate Thesis

Title: Design and implementation of Ethernet MAC Transmitter using VHDL

Brief Outline: Transmission of the data packets from transmitter to the receiver is done using the CSMA/CD protocol. The controller waits for the bus till becomes free and sends the data packet with the source and destination addresses, once the collision occurs the data will be sent to the defer block, after certain delay the data will be sent to the destination, if the transmitter finds the bus to be free, if the collision is not cleared within certain delay then the whole data which has to be sent will be retransmitted.

Employment

May 2012 – January 2017	*Assistant Professor*, School of Mechanical and Building Sciences, VIT University, Chennai.
July 2010 – April 2012	*Assistant Professor*, Priyadarshini Institute of Technology, Nellore.

Major Achievements @ Work

Established a **Robotics Lab** (**INR 50 Lakhs**) for Postgraduate Students at VIT Chennai Campus, Vandalur – Kelambakkam Road.

Faculty Advisor – **Robotics Club**, VIT Chennai and ROBOCON Team, Asia Pacific Robot Contest, Pune March 2014 and 2015.

Built a **LIBBOT** (**Lib**rary-Ro**bot**) for peripatetic monitoring of the library ambience at VIT Chennai Campus, Vandalur – Kelambakkam Road. The LIBBOT is designed with IP Camera for night vision, IR sensors, ultrasonic sound detector and microcontroller - costs INR 25,000. The information collected is stored in a computer system in the control room. *Wi-fi* system facilitated in the library ropes this operation. The robot can trek straight path and move back on detecting obstacles. The LIBBOT is also designed to capture noise in the library.

Scientific Publications

Journals – 11 & Conferences – 5

1. Priyanka Chemudugunta, Nithin S, Control of wall climbing robots using mobile phone through dual tone multi frequency, *International Journal of Mechanical And Production Engineering*, 2015, Vol.3, 7, pp 124-128.
2. Priyanka Chemudugunta, Kiran M Easow, Fabrication Of Robotic Prosthetic Hand For The Paralyzed Using RF Signals, *International Journal of Management and Applied Science*,2015, Vol.3, 7, pp 79-81.
3. V.Arvind and Ch. Priyanka, Design of gyroscope based gripper for balancing weights, *International Journal of Applied Engineering Research*, Vol.10, Special issue, pp 211-213.
4. P Vishnu Chithamacharyulu, D Phani Sashanka, G Uday Kiran, Ch Priyanka, Design of automated hotline maintenance robot using haptic technology, *International Journal of Scientific and Research Publications*, 2014, Vol.4, 1, pp 1-6.
5. K Sivakumar, C Priyanka, Grasping objects using shadow dexterous hand with tactile feedback, *International Journal of Innovative Research in Science, Engineering and Technology*, 2015, Vol.4, 5, pp 3108-3116.
6. V.Arvind and Ch. Priyanka, Design and Analysis of Automated Bicycle, *International Journal of Applied Engineering Research*, Vol.10, Special issue, pp 266-272.
7. D.Phani Sashanka, and CH. Priyanka, Design of Graphical user interface of automated test equipment, *International Journal of Applied Engineering Research*, 2015 Vol.10,Special Issue,pp 2556- 2559.
8. G. Uday Kiran, P Vishnu Chithamacharyulu, and Ch. Priyanka, Study of reduction and optimization of installation and cycle time of MIG welding Robotic system in automation factory, *International Journal of Applied Engineering Research*, 2015 Vol.10, Special issue, pp.4093-4098.
9. P Vishnu Chithamacharyulu, G. Uday Kiran and Ch. Priyanka, Study on vehical body painting using six axis robots for factory automation, *International Journal of Applied Engineering Research*, 2015 Vol.10, Special issue, pp.4099-4104.
10. S.V. Tejaswi, and CH. Priyanka, Audio signal Processing through FSK Modulator (DDS) for industry applications, *International Journal of Applied Engineering Research*, 2015 Vol.10, Special issue, pp. 972-976.
11. Thameem Ansari and Priyanka Chemudugunta, Face Recognition and Obstacle Avoidance System using MATLAB for Humanoid Robot, *International Journal of Applied Engineering Research*, 2015 Vol.10, Special issue, pp. 328-333.

Conference Proceedings (Referred)

1. Ch. Priyanka, P Vishnu Chithamacharyulu, Study of vehicle body painting using six axis robots for factory automation, *International Conference on Advances in Applied Engineering and Technology*, Syed Ammal Engineering College, Ramanathapuram, May 2015.
2. Ch. Priyanka, G Uday Kiran, Study of reduction and optimization of installation and cycle time of MIG welding robotic system in automation time, *International Conference on Advances in Applied Engineering and Technology*, Syed Ammal Engineering College, Ramanathapuram, May 2015.

Presentations at Professional Conferences

1. Ch. Priyanka, Design and analysis of automated bicycle, National Conference on Trends and Innovations in Mechanical Engineering, Dr. MGR University Chennai, April 2015
2. Ch. Priyanka, Design of Gyroscope based gripper for balancing weights, *National Conference on Trends and Innovations in Mechanical Engineering*, Dr. MGR University Chennai, April 2015.

3. Ch. Priyanka, Design of MEMS gas sensor array, *National Conference on Water Treatment, Reuse, Modeling and Control of Desalination Process*, Easwari Engineering College, Chennai, September 2014.

Professional Training Completed

1. Undergone training in "**Principles of Data Acquisition and SCADA**" by Fluid Control Research Institute, Ministry of Heavy Industries, Govt. of India, November 2013, Kerala.
2. Four days training on "Industrial Robots" by ABB Robotics, 2014, Bangalore

Workshops Organized

1. Priyanka *Chemudugunta*, Coordinator, Two days robotics workshop for ROBO-ZEST '15 – an *International Robotics Championship*, VIT University Chennai, February 26 & 27, 2015.
2. M. Sasikumar/Ch. Priyanka, Organizing Secretaries, *National Level One Day Workshop on Advances and Analysis of Composites*, VIT Chennai May 31, 2013.

Pending Patents

Title	Inventor(s)	Application Number
Hotline Maintenance Robot	CH.Priyanka	5914/CHE/2014
Development of Single wheeled wall climbing Robot	CH.Priyanka	441/CHE/2015

Teaching Expertise

Post Graduate Courses	Under Graduate Courses
Robot Dynamics and Analysis	Robotics
Digital Electronics	Signals and Systems
Principles of Electronic Devices	Digital Signal Processing
	Electro Magnetic Waves and Transmission Lines
	Engineering Graphics/Workshop Practice

Personal Information

Nationality	Indian
Date of Birth/Age in years	06.07.1986/ 34 Years
Civil Status	Married & Mother of a Child (Age: 4 Years)
Aadhar Number	609665807791
PAN	ASHPC3717H
Passport Number	P2488958
Nativity/Languages	Nellore (A.P)/ Telugu & English (Read/Write/Speak)

Referees

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Current Research Interests

Current research interests include: Automation, Robotic Prosthesis, Unmanned vehicles, Micro-electro Mechanical Systems (MEMS).

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