**SAI KRISHNA V**

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# EDUCATION

**University of North Texas, Denton, TX** *– Masters in Electrical Engineering (Spring*

*2017) -* **GPA: 3.6/4.0**

• **Courses:** Wireless Communications, Computer Networks, Data Communications, Control Systems Design, Renewable Power Systems, Digital Communications, Analog IC Design, Information Theory, Digital Logic Design Techniques, Digital Signal Processing, Computer Vision.

**Jawaharlal Nehru Technological University, Hyderabad, India** *–**Bachelors of Technology in Electronics and Communications.(June 2015)**-* **GPA: 3.55/4.0**

# CERTIFICATIONS

* **Applications of MATLAB to engineering problems** (Bharat Institute of Engineering and Technology, Hyderabad, India)
* **Emerging trends in embedded systems** (Avanthi Institute Of Engineering and Technology, Hyderabad, India)

# WORK EXPERIENCE

**GOVERNMENT OF INDIA** (Ministry Of Defence)

**RESEARCH CENTRE IMARAT, Hyderabad, India** (December 2014-April 2015)

Directorate of Navigation and Embedded systems

* Worked with scientists in the research environment.
* Understood the concepts of different electronic and electrical parts and equipment like FPGA,PROM,UART and many other sensors.
* Analyzed the Working Principle involved in the process.
* Was part of the team working for INS(Inertial Navigation System).

Research Assistant at the computers lab

Bharat Institute Of Engineering and Technology - Part time (2012-2014)

* Created, serviced and completed trouble tickets for a variety of support tasks related to computer hardware and software issues.
* Provided onsite assistance for trouble tickets that are too complex or time consuming for front-line phone support to resolve.
* Processed machines on the workbench by conducting a backup, OS reinstall, data restoration and application re-installations.
* Researched, documented, and developed solutions for various software and configuration issues.
* Was promoted to the lab assistant position for exhibiting good leadership qualities.

# TECHNICAL SKILLS

* **Programming Languages**: Experienced in Verilog, C, Java script, some work with Embedded C, and Python .
* **Computer-based EDA tools**: Experience with Xilinx ModelSIM, CADENCE Virtuoso.
* **Software IDE**: Visual Studio
* **Other Skills**: MATLAB, HTML, CSS
* **Operating Systems**: Comfortable with Windows, Linux and Mac.

# COURSE PROJECTS

**Distributed source coding For Wireless Sensor Networks :**

* I have dealt with the distributed source coding and techniques like Slepien Wolf Coding, Wyner-Ziv coding in this project.
* I have understood that it provides a practical distributed source coding in WSN (Wireless Sensor Networks) based on LDPC codes which ensures the data correction along with the reduced energy consumption due to the joint decoding at the decoder end.
* By analyzing the results I have observed that distributed source coding in WSN (Wireless Sensor Networks) is energy efficient with fruitful reconstruction of data using side information.

**2 stage Op-Amp**

* For designing a 2 stage Op-Amp I had to review differential amplifiers, two stage amplifiers, Common source etc.
* I understood that I have to use Miller theorem for using a capacitor in the second stage.
* Small signal analyses was done and also I have done necessary calculations like gain, ICMR, Slew rate etc. to satisfy the designed specifications.
* I have observed that depending on our circuit requirements tradeoff has to be made among these parameters to get the desired outputs.

**2D simulation of electrostatic fields**

* Studied about the FEM(Finite Element Method) and FDM(Finite Difference Method) techniques and used them to calculate electric field and voltage over any type of complex region.
* I have used the concept of FEM in designing an Electrostatic lens which is used to focus at certain point . I traced the path of electrons which incident on one end of lens with some initial velocity and reached the other end at the same point.
* This Project mainly deals with the voltage and electric field variations over a selected region. These are calculated and plotted using FDM and FEM in MATLAB.

**A Full-Rate Full-Diversity 2×2 Space-Time Block Code with Linear Complexity for the Maximum Likelihood Receiver**

* This project proposes a full-rate STBC which benefits from a linear complexity for the optimum receiver and full-diversity properties.
* Understood the problem of multipath fading in the wireless communications systems and applied the concept of diversity to overcome it.
* Studied and analyzed the terms Bit Error Rate, STBC, MIMO techniques, etc.
* Simulated the results between BER and variance.

**Performance of spatial multiplexing in presence of polarization diversity**.

* The goal of the project is the capacity of the MIMO system must be increased by applying polarization diversity for one antenna at the transmitter and receiver. Also estimate the Symbol error rate Vs Signal to Noise Ratio.
* Studied the use of polarization diversity for spatial multiplexing and found that in the presence of high spatial fading correlation dual-polarized antennas can yield a significantly improved multiplexing gain. Thus by increasing the capacity of the system.
* The results are plotted between SNR and symbol error rate and observed that the symbol error rate is obtained along with the estimated SNR.

# OTHER PROJECTS

**Electronic Lock Code System For Ac Appliances**

National Small Industries Corporation Limited (NSIC), Hyderabad, India

* This project is a part of my under graduation at NSIC, a large Indian government funded company.
* The main purpose of this project is to provide more security to the authorized users only.

**GSM Based Real Time Irrigation System**

* This project concentrates on GSM technology.
* The aim of the project is to implement the new dimension in the irrigation field with less utilization of human, maintains proper water regulation by preventing loss of water and easily controlled even by an illiterate person within minutes of time.

**Credi-Crypt: An Improvised Anti-Counterfeiting Technique For Credit Card Transaction System**

**Directed study for the degree of masters**

* Here we introduce a technique for hiding sensitive credit card information in an arbitrary background image without the sensitive data getting exposed in public domains.

# EXTRA CURRICULAR

* Worked as freelance recruitment coordinator with MeritTrac Services Pvt. Ltd for 2+ years. The job responsibility includes coordination with HRs in recruitment process, conducting online and offline assessment exams for initial screening of candidates etc.
* Worked as an active member in Indian Student Association in the University of North Texas.
* Worked as Anti-Ragging Squad Leader in college for 2 years.
* Worked as placement coordinator and trained students for interviews.
* Participated in many blood donation events and won awards from NTR trust and Lions Club, Hyderabad.
* Conducted personality development and social awareness programs in Bharat Engineering College.
* ECE mentor for first year under graduate students in Robotic Workshop at Bharat Engineering College.
* Worked as team to launch a new initiative from Bharat Engineering College to educate illiterates.

# AWARDS & ACHIEVEMENTS

* Elected as **President** of student organization of ECE department at Bharat Engineering College.
* Won several prizes in Robotic events conducted in various Engineering colleges during 2012-2015.
* Won 1st prize in quiz competition at ‘Engineers day celebrations’(Bharat Institute of Engineering and Technology)
* Nominated for the best undergraduate project award in Electronics & Communications Engineering at Bharat Engineering College.

Sai Krishna V