SURYA TEJA PARUCHURI

surya@terpmail.umd.edu, 240-330-5384
www.terpconnect.umd.edu/~surya
linkedin.com/in/suryatejaparuchuri

EDUCATION

University of Maryland, College Park, MD.
Master of Science in Telecommunications   CGPA: 3.86. Top 5%   Expected – May 2017
Honors: Awarded Academic Scholarship, February 2017.
Relevant Courses: Wireless Networks and Systems, Wireless OFDM Systems, Algorithms & Data Structures, Embedded Systems.
VIT University, Vellore, India.
Bachelor of Technology in Electronics and Communication Engineering   CGPA: 8.35/10   Top 10%   May 2014

SKILLS

- *Analytical:*   Monte-Carlo analysis, Linear/Nonlinear programming, Regression, Time series forecasting.
- *Programming languages:*   Proficient: {MATLAB, C, C++ (including GDB)}   Novice: {Java, Bash}.
- *Typesetting & Productivity:* Windows, Linux, Microsoft Office, LaTeX, VIM, Git.
- *Technologies:*   OFDM, LTE, HSPA, EVDO, UMTS, CDMA-2000, CDMA, GSM, Bluetooth, 6LoWPAN.
- *Network Protocols:*   TCP/IP, OSI, DNS, HTTP, IPv4.

RELEVANT EXPERIENCE

RTOS Scheduler Simulations, University of Maryland   Spring 2017
- Mastered RTOS scheduler simulation & discrete event simulation by implementing discrete event simulator for FIFO, Earliest deadline First (EDF) and Rate Monotonic Scheduling (RMS) in C++, using C++ Standard Template Library.

CD2DAT Format Convertor, University of Maryland   Spring 2017
- Mastered data flow model programming in C by implementing a CD to DAT convertor in C, using Low Weight Data Flow model.

OFDM Tx/Rx chain with Rayleigh fading channel, University of Maryland.   Spring- 2016
- Modelled independently an OFDM transmitter/receiver chain in MATLAB, with Rayleigh fading channel, QPSK & 16QAM modulated pilots and data, cyclic prefix, transmit/receive filters and zero-forcing equalizer.
- Observed advantages of an OFDM system in a fading cellular channel over complex channel equalization techniques.

UDP based Network Application, University of Maryland   November 2015
- Developed a UDP based network application in Java, with application level reliability and RC4 cryptographic authentication.
- Implementing reliable data transfer Client program, and integrating with colleague improved professional programming skills.

Radar Target Simulator (RTS) - *Engineering Intern,* Defense R&D Organization, India   January 2014 – May 2014
- Designed RTS for hardware in the loop testing of Active Antenna Array Unit (AAAU), using Digital Radio Frequency Memory and real time signal processing algorithms on Vector Signal Transceiver (VST) to significantly reduce avionics testing costs.

RESEARCH EXPERIENCE

Voluntary Research Assistant, Institute for Systems Research, University of Maryland   December 2016 – Present
- Implemented social ties based coalitions formation & resource allocation algorithms for Internet of Things (IOT) in MATLAB and verified numerical results against analytical solutions.
- Implemented social interests based self-organizing communities formation algorithm towards a participatory action research based museum visitors approach in MATLAB, and verified numerical results against analytical solutions.
  - ✓ Co-authored a conference paper presented at *51st Conference on Information Sciences and Systems*
  - ✓ Submitted a manuscript to *12th International Workshop on Semantic and Social Media Adaptation and Personalization*

Research Project Assistant, ECE, Indian Institute of Science, India   July 2014– May 2015
- Implemented a statistical signal processing algorithm for QRS detection in ECG in MATLAB, and improved heart anomalies detection and algorithm complexity compared to Pan Tompkins and Wavelet based beat classification algorithms.
- Developed Fuzzy Logic based medical diagnosis algorithm- to remotely monitor and assess patient's health in MATLAB.
- Expedited field testing of *6LowPAN* Wireless Sensor Network (WSN) by preventing data misinterpretation in socket program.
  - ✓ Co-authored a conference paper presented at *12th IEEE International Conference on Services Computing*

LEADERSHIP & SERVICE

Teaching Assistant, University of Maryland   September 2016 – Present
- Improved my mentoring skills by resolving students (fall-86 & Spring-89) questions from Operations Research course.

Vice president, IEEE Electron Devices Society-VIT, VIT University, Vellore, India   May 2012 – July 2013
- Increased membership by 30% by deciding and organizing events, guest lectures on Quantum Sciences & national workshops.