

DUAL DEGREE PROJECT

Implementation of cognitive radio on the USRP kit | June 2013 - till date

Guide: Prof S N Merchant, Dept. of Electrical Engineering, IIT Bombay

- Carried out energy detection spectrum sensing to find the lowest energy frequency band.
- Working on a cognitive OpenBTS system.

PROGRAMMING SKILLS

Languages: C, Matlab, Python, bash scripting, Assembly for the Intel 8080 microprocessor, Octave, Verilog, Ruby, SQL, XML.

Operating systems: Unix, Linux and Mac OS X.

COURSE PROJECTS

Scalable video coding using wavelets | Feb-Apr 2013

Guide: Prof V M Gadre, Dept. of Electrical Engineering, IIT Bombay

- Compressed three different spatial resolutions of a video together into a single bitstream
- At the receiving end, uncompressed the best resolution for the bit rate available.

Principal Component Analysis in face recognition | Oct-Nov 2012

Guide: Prof V Rajbabu, Dept. of Electrical Engineering, IIT Bombay

- Implemented an iterative algorithm of using PCA in face recognition.

Design and test an algorithm for restoring a brain image | Sep-Nov 2012

Guide: Prof Arjun Arunachalam, Dept. of Electrical Engineering, IIT Bombay

- Implemented an algorithm to remove noise artifacts from a brain image.

Mini UID for IIT Bombay Campus | Oct-Nov 2009

Guide: Prof Deepak Phatak, Dept. of Computer Science and Engineering, IIT Bombay

- Automated fingerprint matching for the purposes of registration, verification and attendance.

SEMINARS

Measurement of interference temperature | Jan-Apr 2013

Guide: Prof S N Merchant, Dept. of Electrical Engineering, IIT Bombay

- Surveyed various ways of measuring interference temperature efficiently.

LED's for high speed applications (over 100 Mbps) | Mar-Apr 2013

Guide: Prof Joseph John, Dept. of Electrical Engineering, IIT Bombay

- Presented a seminar on how LED's could be used for high speed fiber optic communications.
- LED's are cheaper, rugged and safer to handle compared to laser diodes

EXTRACURRICULARS

- Won a silver medal in the All India Computer Knowledge Competition 2006.
- '9/10' in the course EE 717: Advanced Computing for Electrical Engineers.
- **Organizer, Infrastructure Team**, Techfest 2010.
- **Social Service**: surveyed water and electrical resources of remote villages in Maharashtra.
- **Interests**: Computer programming for technical problems, communications, problem solving, functional programming.