

## WORK EXPERIENCE

- **Graduate Engineering Trainee ( C & I ), Adani Power Limited** (July 2010-January 2011)
- **Senior Engineer ( C & I ), Adani Power Limited** (January 2011-July 2011)

As an engineer in Control and Instrumentation department at Adani Power Limited my responsibilities were to ensure proper working and maintenance of the C & I equipments at the powerplant.

## ACHIEVEMENTS

- Our team secured a spot in the finals of **DARPA Spectrum Challenge**.
- Best outgoing student of the year 2004 in JNV Malampuzha.

## POSITION OF RESPONSIBILITY

- **System Administrator in WEL** (July 2011-Present)  
Wadhvani Electronics Lab is one of the largest lab in IIT Bombay, with more than a hundred computers and about four server grade machines. The duties of the system administrator involves configuring and maintaining the computers and the servers.
- **School Captain, JNV Malampuzha** (May 2003 - March 2004)  
The school captain is responsible for maintaining the discipline and decorum in the school.

## HOBBIES

- Reading, music and movies.

## TECHNICAL SKILLS

- **Softwares Skills:** GNU Radio
- **Programming Skills:** C, C++, Python
- **Hardware Platforms:** USRP, RTL SDR

## PROJECTS AND SEMINARS

- **M.Tech. Project: Application of LDPC codes to Multiuser Communications** (July 2013-Present)  
**Guide** - Prof. Sibiraj B Pillai, IIT Bombay.

LDPC codes are a class of linear error correcting codes characterized by a sparse parity check matrices. We study the current LDPC encoding and decoding algorithms and extend them to multiuser scenario. GNU Radio blocks for encoder and decoder are developed.

- **Google Summer of Code, 2013: LDPC codes and more FEC in GNU Radio** (June 2013-Present)  
**Mentor** - Dr.-Ing. Jens Elsner, CEL, KIT.

This project aims to develop generic encoders and decoders for LDPC Codes and other FEC schemes currently not available in GNU Radio. GNU Radio is an open-source software defined radio platform. Various algorithms for obtaining LDPC Codes are also implemented.

- **DARPA Spectrum Challenge: Developing Communication system in competing and cooperating scenario** (March. 2013)

The challenge is to develop a pair of nodes consisting of a transmitter and receiver, in two scenarios, one competing with another pair and the other cooperating with three other pairs.

- **M.Tech. Seminar: Resource allocation in Wireless Networks** (Nov. 2011)  
**Guide** - Prof. Sibiraj B Pillai, IIT Bombay.

We studied various power allocation schemes in a wireless network in an Information Theoretic setup

- **DSP Course Project: Design of Digital Filters** Nov. 2011

**Instructor** - Prof. Vikram M Gadre, IIT Bombay.

The project involved designing bandpass and bandstop digital filters in python.

- **DSP Course Project: Localization of audio source** Nov. 2011

**Instructor** - Prof. Vikram M Gadre, IIT Bombay.

The project involved developing codes for locating an audio source from the delay between signal captured from mics kept at a distance.

- **B. Tech. Main Project: Study of Orthogonal Frequency Division Multiplexing** (Jan. - June 2010)

**Guide** - Prof. P Harikrishna Prasad, NIT, Warangal.

This goal of the project was to study OFDM systems and implement the same in matlab.

- **Industrial Training: BSNL Kerala Circle** (May 2008 - June 2008)

Various aspects of GSM Architecture were studied. Specifically, training on OMC Radio, OMC Switch, Radio Planning and BSS were obtained

## COURSE WORK

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|-------------------------------------|----------------------------------|
| ◦ Communication Systems             | ◦ Error Correcting Codes         |
| ◦ Information Theory                | ◦ Digital Message Transmission   |
| ◦ Digital Signal Processing         | ◦ Wireless Communication         |
| ◦ Statistical Signal Analysis       | ◦ Applications of Linear Algebra |
| ◦ Markov chains and Queuing Systems | ◦ Optimization Techniques        |