

## AREAS OF INTEREST

- Communication Systems
- Information Theory
- Error Correcting Codes
- Digital Signal Processing
- Wireless Communication
- Software Defined Radio

## TECHNICAL SKILLS

- **Softwares Skills:** GNU Radio, Scipy, Scilab and  $\text{\LaTeX}$
- **Programming Skills:** C, C++ and Python
- **Software Defined Radio Platforms:** USRP and RTL SDR
- **Operating Systems:** Linux and Windows.

## PROJECTS AND SEMINARS

- **M.Tech. Project: Application of LDPC codes to Multiuser Communications** (July 2013-Present)  
**Guide** - Prof. Sibiraj B Pillai, IIT Bombay.  
We study LDPC encoding and decoding algorithms and extend them to multiuser scenario. Blocks for belief-propagation decoder and back-substitution encoder are designed.
- **Google Summer of Code, 2013: LDPC codes and more FEC in GNU Radio** (June 2013-Present)  
**Mentor** - Dr.-Ing. Jens Elsner, CEL, KIT.  
In this project we develop generic encoders and decoders for LDPC Codes in GNU Radio.
- **DARPA Spectrum Challenge:**(March 2013-Present)  
During the hurdles and wild-card tournaments we designed a transmitter receiver pair using USRP and GNU Radio competing or cooperating with other pairs.
- **M.Tech. Seminar: Resource allocation in Wireless Networks** (Nov. 2011)  
**Guide** - Prof. Sibiraj B Pillai, IIT Bombay.  
We studied optimal power allocation in a flat-fading multiple access channel in an Information Theoretic setup
- **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

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

## ACHIEVEMENTS

- Our team secured a spot in the finals of **DARPA Spectrum Challenge**.
- Our team won first prize in Junk-Yard wars in Technozion 2010.
- **Best outgoing student** of the year 2004 in JNV Malampuzha.

## WORK EXPERIENCE

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

## HOBBIES

- Reading, coding, music and movies.