K. Prasanna kumar

5G Lab, Dept.of ECE, IISc Bangalore
CV Raman Rd, Bangalore, Karnataka 560012
✆ (+91) 9491291037
✉ kprasannakumar.iith@gmail.com
🖱 www.github.com/PrasannaIITH

I am keen to contribute to the development and growth of my nation by undertaking the challenging assignments and delivering timely results by applying best of my knowledge and skills.

Experience

February 2020 — **Project Engineer**, 5G Test Bed Project, Indian Institute of Science.
Work Experience : *Implementation of Live Video Streaming over OAI LTE System for the Demo on IISc Open Day 2020, Design of RF Front-ends for OAI 5G NR using RF SoM (ZCU102 with ADRV9009 & FMCOMMS3), RF SoC (ZCU111) with Vivado - IP Integrator & Petalinux, Understanding of 5G NR with respect OAI, Implementation of test cases using USRP B210 interfaced with MATLAB - Simulink, Verification of Systems Design using Keysight VSG(Vector Signal Generator) & VSA(Vector Signal Analyzer).*
Project In-charge : Prof. Chandra R. Murthy, Dept. of ECE, IISc Bangalore

August 2019 - January 2020 — **Engineer**, RADAR System Design Team, OptimusLogic Systems Pvt Ltd, Hyderabad.
Work Experience : *Design of Algorithms for Monte Carlo simulation in MATLAB, Emulation Test over the air using RF SoM (Zeedboard with FMCOMMS3 & ZC706 with FMCOMMS5) interfaced with MATLAB*
Technical Adviser : Dr. G.V.V.Sharma, Dept. of Electrical Engineering, IIT Hyderabad

July 2019 — **Technical Coordinator**, Smart India Hackathon 2019 Hardware Edition - IIT Hyderabad.

January-June 2019 — **Sr. Project Associate**, National Resource Centre - IIT Hyderabad.
Work Experience : *Development of course material for SWAYAM, Low cost 3D Printing Lab Establishment, Development of Mapping Schemes with respect to DVB-S2 Standards in MATLAB & Python, Implementation of LTE System using OAI*
Project In-charge : Dr. G.V.V.Sharma, Dept. of Electrical Engineering, IIT Hyderabad

Sept- Dec 2018 — **Project Associate**, Teaching Learning Centre - IIT Hyderabad.
Work Experience : *Development of course material for the particle oriented way of learning in Signal Processing & Communication, using open-source software tools & Hardware, such as GNU Radio, gr-osmsdr, USRP (B210, N210), OctoClock-G CDA-2990, BladeRF, RTL-SDR, Raspberry Pi, Odroid XU4 etc.*
Project In-charge : Dr. G.V.V.Sharma, Dept. of Electrical Engineering, IIT Hyderabad

July-August 2018 — **Visiting Faculty**, Department of ECE, Central University of Karnataka.
Single Credit Course on "Signals and Communication". Regular course work for the 1st year B.Tech of Central University of Karnataka

05 - 11 July 2018 — **Resource Person**, *Short Term Course on "Introduction to Programming & Prototyping"*, Conducted by Central University of Karnataka in collaboration with Teaching Learning Centre IIT Hyderabad .

25 - 26 August 2016 — **Student Coordinator**, Techradiance'17.
organization by Harbour Technologies in association with Radiance, IIT Bombay at CUK Gulbarga

Education

2013–2018 — **Integrated M Tech**, *Central University of Karnataka* , (Gulbarga, Karnataka).
M.Tech - Information & Communication Technology (ICT)—*Percentage – 73%*
B. Tech - Electronics & Communication Engineering (ECE)—*Percentage – 71%*

2009–2011 — **Intermediate**, *Gayathri Junior College*, (Viziayanagaram, Andhra Pradesh).
Maths,Physics and Chemistry
Percentage – 91%

2008-2009 — **Xth Board**, *Janahitha Public School*, (Parvathi puram, Andhra Pradesh).
Secondary School Certificate
Percentage – 85%

Projects

August 2017–Present
Post Graduation Project, *Under the Guidance of* Prof. Mohammed Zafar Ali Khan.
INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD
'Spectrum & Energy efficiency Improvement in Cognitive Radio Networks'.
Abstract: Development of mathematical algorithm to increase energy efficiency of Cognitive Radio Networks operating in underlay scenario and Verification of those algorithm by MATLAB simulation

March–June 2017
Under Graduation Project, *Under the Guidance of* Mr. Vidhyadhar S. M.
CENTRAL UNIVERSITY OF KARNATAKA, GULBARGA
'Modeling and Simulation of OFDM based Communication System'.
Abstract: Modeling of OFDM based communication system using MATLAB which can transmit real world Audio, Image & Text signals and performance, study analysis of communication system at various stages

Extra Courses

e-Course "General Course on Intellectual Property" offered by WIPO Academy from April to May 2017

Research Interests

- Design & Development of PHY Layer Algorithms
- Design & Development of SDR's

Industrial Training's & Internships

June–July 2017
Summer Internship Program 2017, CYBER PHYSICAL SYSTEM LAB.
Department of Electrical Engineering, Indian Institute of Technology Hyderabad
'Introduction to Cognitive Radio Networks'

30th Jan–3rd Feb 2017
1-Week Training Program, APEX HI - TECH INSTITUTE, Bangalore.
'GSM and CDMA Mobile Communication'

June–July 2016
Summer internship - 2016, MICROSOFT INNOVATION LAB, PES University, Bangalore.
7-Weeks Project based internship
Development of a prototype on 'Speaker Recognition System using Artificial Neural Networks'

26 Dec 2015–14 Jan 2016
Winter Internship, NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA.
Dr N. Jayaram, Assistant Professr, Department of Electrical Engineering
'Study, Analysis and MATLAB simulation over various power Electronics converters'

8th June–4th July 2015
Summer Industrial Training, VIZAG STEEL PLANT.
Mini project on 'Calculation of Efficiency of Feed Air Compressor' under the guidance of Manoranjan Mandal GM of Mechanical Department in "Air Separation Plant"

23–29 Jan 2015
Winter Internship, *IBNC (I- Media Learning Solutions (P) Ltd & ACES- AZM IIT Delhi)*.
'Design of CAN, LAN, WAN etc Cisco packet tracer, hand work on real Cisco routers and switches'

Workshops

- Shannon Centenary Day Celebrations at Indian Institute of Technology Kanpur (IITK) on Wednesday October 19th 2016
- National Workshop on Innovative Research Techniques, Organization by Central University of Karnataka, Kalburgi, on 25th, 26th November 2016.
- Participated in "IEEE Research Methodology Workshop" conducted by IEEE Bangalore section in June 2017

Award

- Received Freeship from the Central University of Karnataka, for being in the list of top students in the academic year 2013-2014

Technical skills

Programing MATLAB, Python, C, C++, Verilog HDL.

Software MATLAB - Simulink, GNU Radio, Open Air Interface (OAI), Vivado - IP Integrator, Petalinux, CISCO Packet Tracer, LaTeX, MS Office

Hardware	USRP (X310, N210, B210), RF SoM (Zedboard with FMCOMMS3, ZC706 with FMCOMMS5, MP SoC (ZCU102) ADRV9009 & FMCOMMS3), RF SoC (ZCU111), SBC (Jetson Nano, Odroid XU4, Raspberry Pi), Arduino, ICOBoard, 3D Printing

Languages

Telugu	*Native Speaker*
English	*Near Native*
Hindi, Kannada	*Intermediate*
Tamil	*Basic*

Declaration

I hereby declare that the above mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above mentioned particular.

Date : May 19, 2021

Place: Bangalore

K. Prasanna kumar