Sai Teja Kollimarla
PG (II year I semester)
MTech. Communication Systems
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Research and Area of Interest

- Wireless Communications
- 5G/6G Communication Technologies

Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2023	Graduate (PG)	IIT Roorkee	8.2
2018	Graduate (UG)	JNTU Hyderabad	72.90%
2014	Intermediate	Sri Chaitanya	95.80%
2012	Matriculate (Class X)	Triveni Talent School	9.3

Project (MTech)

Implementation of Full-Duplex Cell Free massive MIMO with Orthogonal time frequency space (OTFS) Modulation. | Supervisor: Prof Ekant Sharma, IIT Roorkee

- The research objective is to design and formulate a cell-free massive MIMO system model on a full-duplex mode and processing the transmit signal with the help of OTFS, a probable candidate for next Generation Beyond 5G/6G signal processing technique.
- Compare, analyze and improvise the design w.r.t the latest proposed models.

Status: Completed simulations and have submitted for IEEE ICC 2023.

Relevant Courses

Wireless Communications
Information and Coding Theory
Linear Algebra and Random Process
Detection and Estimation Theory
Signal Processing Techniques
Digital Communication
Advanced Wireless Communications
Compressed Sensing
5G and Beyond Technologies

Papers Implemented

P3: Understanding the Heart of the 5G Air Interface: An Overview of Physical Downlink Control Channel (PDCCH) for 5G New Radio (NR).

P2: Cell-Free Massive MIMO with Low-Complexity Hybrid Beamforming.

P1: Implementation of Regularized Orthogonal Matching Pursuit (ROMP) Algorithm.

Experience

Research Intern | IIT Roorkee, Prof Ekant Sharma May 2022 – July 2022

- The aim of the project is to bring up the Xilinx ZCU111 board for implementation of 5G chains through Vivado/Petalinux.
- Testing of PS-RAM, PL_RAM, UART, JTAG, of ZCU111 hardware using Vivado.
- Booting up Linux on the system on chips (SOCs) using an SD card and QSPI through petalinux.
- Implemented Hello world and Nand gate on the ZCU111 using Vivado.
- Provided test vectors for Physical Uplink Control Channel (PUCCH) of 5G New Radio (NR) through MATLAB.

Project Engineer | Wipro July 2018 – October 2020

- Worked as a software engineer for a period of over two years and was responsible for the delivery of the assigned tasks which includes designing, developing and maintaining the products as per the client requirements.

Projects

Appleapac Project | Wipro January 2019 - April 2020

- The aim of the project is to gather a great deal of financial raw data related to its members and sort the data according to their requirements into a database.
- Involved in creating stored procedures and has ample experience in using of Teradata.
- Responsible for extracting, transforming and loading data using the Linux and provided tool.

BP-Ist_Turing Project | Wipro August 2018 - November 2018

- This project is to develop an app and web services for energy calculation and consumption details of the power usage in a day which gives the price details of the usage every second.
- Involved in development of the Apiflows using MuleSoft and written several Munit test cases.

Scheduling of Protocols | JNTUH College January 2018 - May 2018

- To simulate, evaluate and compare the scheduling mechanisms like Round Robin (RR), Weighted Fair Queuing (WFQ) and Strict Priority (SP) and determine the best scheduling mechanisms.

Wordament Solver | Self July 2017

- Generating all the English words from the Wordament using backtracking algorithm and trie data structure.

Skills

Computer Languages: C, Latex, Teradata

Software Packages: MATLAB, VIVADO

Achievements:

- Was in top 95 percentile in the Gate exam.
- Was in top 90 percentile in the IIT Advanced Exam
- Got a district level 1st rank in Chintana Olympiad exam in school level.

Declaration:

I hereby declare that the details and information given above are complete and true to the best ofmy knowledge.

Sai Teja Kollimarla