



# GAURAV GOYAL

WIRELESS PHY/RF ENGINEER

## SUMMARY

11+ years of experience in developing Physical layer for several Cellular Technologies. Have a general understanding of call flow across protocol stack.

## SKILLS

### DSP :

Filter Design • Equalizer design(SC/OFDM Systems) • Timing estimation • DC Offset • CFO • Gain Imbalance and Quadrature Skew

### Physical Layer :

NR • NB-IoT • LTE • GSM • CDMA2k/EVDO • WiMAX

### Languages :

Swift • Labview • Matlab • C • VHDL • Verilog

### General

Good understanding of Baseband, Transceivers and Front End

## EXPERIENCE

### SW ENGG • APPLE • DEC 2019 TO PRESENT

Working on a broad range of activities

- Own 2G Protocol Conformance Test
- QA DRI for Machine Learning based SMS Filter Extension for Messages, getting launched for India.

### SOFTWARE ARCHITECT • INTEL • OCT 2018 TO NOV 2019

- Add(and Enhance) ModAcc/ACLR Measurements for Self Test of Modem, for 5G sub-6 GHz (and Legacy). Write Matlab code, and ensure measurement accuracy. Assist team during implementation.
- Define Key RF performance Indicators for 5G Modem sub-6 GHz including ENDC, for non-signaling and reduced signaling measurements.

### ADVANCED SENIOR ENGINEER • NATIONAL INSTRUMENT • JAN 2011 TO SEPT 2018

• Prototyped Reduced Signaling Waveform Generators for LTE FDD/TDD, EVDO & TDSCDMA

- Enabled Production testing of Mobile phones using Qualcomm Chipset
- Won \$Million accounts including Apple/Microsoft, and later got developed as a product aka Wireless Test System.
- Lead a team of 7-8 engineers developing Generators & Measurements for LTE, NB-IoT, CDMA2k/EVDO and GSM standards
  - Development of NB-IoT & LTE Downlink Generators & Measurements (Modacc, ACLR,...etc) from scratch
  - Feature enhancement & bug fixing for all cellular standards
  - Interface with Customers and Marketing, and define upcoming features for each release
  - Assist System Engineers in Product deployment and bug fixing



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GG**GAURAV GOYAL**

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## EDUCATION

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**PG DIPLOMA • FEB 2007 •  
CDAC PUNE • 79%**

**B.E. IN ELECTRONICS &  
COMM. • JUNE 2006 •  
U.P.T.U • 72%**

## **SENIOR ENGINEER • TATA ELXSI • APR 2007 TO DEC 2010**

Model and performance evaluation on Matlab, Implementation on Xilinx/Altera FPGA's for various projects, and I worked on following :

- Implementation of WiMAX Upconverter/Downconverter for 1.25 MHz and 5 MHz WiMAX
- Time and Frequency Synchronization of proprietary OFDM based PHY layer targeted at high speed communication
- FPGA IP Development of Turbo coder/decoder for WiMAX

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