MAHIN ANJUM
Bangladesh University of Engineering and Technology, Dhaka 1000, Bangladesh
Email – 1806017@eee.buet.ac.bd
mahinanjum558@gmail.com

Website: https://mightymahin017.github.io/mahin_anjum.github.io/
Phone: 01601212792

EDUCATION

Bachelor of Science (B.Sc.) in Electrical and Electronic Engineering,
Bangladesh University of Engineering and Technology (April 2019 – June 2024)
Major – Electronics
CGPA – **3.87** / 4.00

HSC: Notre Dame College, Dhaka
GPA: 5.00 out of 5.00 (Talent-Pool Schlorship,129th in Dhaka Board)
Group: Science

SSC: Panchagarh B.P.Govt. High School, Panchagarh
GPA: 5.00 out of 5.00 (Talent-Pool Schlorship,24th in Dinajpur Board)
Group: Science

RESEARCH INTEREST

Low Noise Amplifier Design, Electronic Devices, Nano electronic Circuits, Machine Learning

RESEARCH EXPERIENCE

Research Supervisor:
Dr. Apratim Roy,
Professor,
Bangladesh University of Engineering and Technology, Dhaka 1000, Bangladesh.

Title: Advancements in MM-Wave LNA Design: Optimizing Performance with Modified DS and Post-Linearization Techniques at 26GHz.

Abstract: — This paper presents a 26 GHz mm wave band low noise amplifier that achieves higher linearity and gain by utilizing three alternative linearization methods. In order to achieve high gain and low noise figure, the amplifier is constructed using 0.09um CMOS technology and uses a cascode structure as the primary amplifier stage. To improve the third-order interception point (IIP 3), the proposed design makes use of post-linearization techniques and one strong Modified Derivative Superposition Branch. With a noise figure (NF) of 4.51 dB and a simulated gain (S21) of 13.154 dB, this work uses just 20.21mW from a 1.2V power supply. With an input return loss of - 8.87dB and an output return loss of -4.04dB, the LNA achieves an IIP3 of 8.25dBm.

KEY SKILLS

- Programming Language : C, C++, Matlab, Python
- Framework and Libraries : Django, Matplotlib,App Designer (Matlab)
- Simulation Software/Tools : LTSpice, PSpice, CYME PSAF, Proteus, Cadence Virtuoso, Cadence NC-Sim, EDA Playground, Matlab Simulink
- Drafting Tool : Autocad 2007
- Computer Proficiency : MS Office, Windows OS
- Web Development : HTML 5

- Hardware & Embedded System : STM-32, FPGA Module, ATMEGA Microcontroller, Arduino
- Language Proficiency : English, Bangla

PROJECTS

- Ordinary differential equation solver and filter design using MATLAB [Files]
- Voice based attendance system using Machine Learning (KNN) [Files]
- Line Following and Obstacle Avoider Robot using PID controller [Files]
- Message Transmission through LASER [Files]
- Analytical Behavior of HVDC Under Normal and Faulty Conditions [Files]
- Speed Control of DC Motor with Feedback from Digital Tachometer [Files]
- IOT based door lock system [Files]
- Low Dropout Regulator (LDO) design [Files]
- Electronic Fuse Design using Op-amp [Files]
- Four ways traffic controller using Digital Logic Design [Files]
- Nine story building design in AutoCAD [Files]
- I2C bus protocol using Verilog [Files]
- Experimental setup to measure L-I characteristics of LED [Files]

AWARDS AND ACHIEVEMENTS

- Recipient, Dean's List Award and University Merit Scholarship (July 2021)
- Regional Champion at Regional Mathematical Olympiad
  Regional Mathematical Olympiad 2014
  Category: Junior, Champion
  Regional Mathematical Olympiad 2015
  Category: Secondary, 1st runner up
  Regional Mathematical Olympiad 2016
  Category: Secondary, 2nd runner up
- National Champion at Bangladesh Physics Olympiad
  6th Bangladesh Physics Olympiad
  Category: Secondary, Position: 2nd
  8th Bangladesh Physics Olympiad
  Category: Higher Secondary, Position: 16th
- Recipient, Board-Talent Pool Scholarship
  Board of Intermediate and Secondary Education, Dinajpur
  SSC-2016
  Board of Intermediate and Secondary Education, Dhaka
  HSC-2018

CORE COURSES

- Analog Integrated Circuits
- VLSI circuits and Design
- Digital signal Processing
- Digital Logic Design
- Compound Semiconductor Devices
- Microprocessors and Embedded Systems
- Process and Fabrication Technology
- Communication Systems (2 Courses)
- Power Transmission and Distribution
- Electrical Service Design
- Power System - 1
- Energy Conversion (2 Courses)
- Power Electronics
- Electrical and Electronic Circuits (4 Courses)
- Control System
- Semiconductor Device and Materials (5 Courses)

EXTRA CURRICULAR ACTIVITIES

- Membership, BUET Robotics Society
- Intern, Inovace Technologies (Nov,2023-Dec,2023)

REFERENCES

Dr. Apratim Roy Associate Professor,
BUET Dhaka,Bangladesh
mail : apratimroy@eee.buet.ac.bd
mobile: +8801714253752

Dr. Muhammad Abdullah Arafat
Assistant Professor, BUET
Dhaka, Bangladesh
mail: abdullah_arafat@eee.buet.ac.bd
mobile: +8801553287666