Haocheng Hu

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EDUCATION

Columbia University Sep 2022 – Dec 2023
Master of Science, Electrical Engineering

Michigan State University Sep 2018 – May 2022
B.S, Electrical Engineering
GPA: 3.724/4.0

PROFESSIONAL EXPERIENCE

Wayang company Wuxi,China
Air compressor designer Jun 2019 - Jul 2019

- Created shell of an air compressor by operating an automatic lathe

Lihu community
Community volunteer Wuxi,China

- Managed blindness and taught washing dish skills Jan 2014 - Feb 2014

Maxscend Technologies Wuxi,China
Low noise Amplifier designer Jun 2023 -Aug 2023

- Bandgap reference circuit was designed to meet zero temperature coefficient
- Low dropout regulator is made to regulate output voltage around 1.2V
- Bandgap and Low dropout regulator start up time are within 0.3us
- LNA , gain larger than 21dB,S11,S22 smaller than -10dB, current is 7-8mA

Projects

9-Bit DAC Design Project New York, NY

- A 9 bit DAC was successfully designed to meet SFDR requirements Mar 2023 - May 2023
- Static performance satisfies the project description

OpenSea GraphQL Subgraph New York,NY

- subgraph is able to collect data from the OpenSea NFT exchange smart contract on Ethereum mainnet Mar 2023 - May 2023
- schema and our subgraph pass the Jtest

Design of a Simple Microcontroller New York,NY
- Layout of all the component of microprocessor was built Sep 2022 - Dec 2022
- Layout is LVS and DRC clean

An All-region DC Model with a Uniform Substrate New York,NY
- a single-piece model based on the equations Sep 2022 - Dec 2022
  from the textbook built by MATLAB
- The all-region drain current model is fitted to the data given in description
- Derivative is plotted

Oscilloscope Driver Amplifier New York, NY
- Pmos and nmos are sized correctly in OTA Sep 2022 - Dec 2022
- Noise is 1.67uV smaller than 30 which meets requirement
- DC and AC parameters meet requirements by simulation

Analysis of wire length in reducing interference on Liquid Crystal Display East Lansing, MI
- Quantified relationship between wire length and interference from LCD May 2022 - Sep2022
  mitigate 10% interference

Stepped Impedance Low-Pass Filter (top3 in class) East Lansing, MI
- Built low-pass 915MHz filter Jan 2022 - May 2022
- Insertion Loss < 0.5 dB at < 1 GHz, >10 dB at frequency between 1.5GHz to 2GHz
- Return loss >10dB at <1GHz
- Filter has edge mount SMA connectors
- Impedance between 20-100 ohms

Amplifier Circuit East Lansing, MI
- Center frequency is 915MHz Jan 2022 - May 2022
- S11 and S22 <-8dB at center frequency
- Gain meet requirement
- design within substrate area of 2.5” X 2.5”
- Impedance meets requirements by using Smith Chart

RF Detector East Lansing, MI
- Design requirements are met at each frequency Jan 2022 - May 2022
- Circuit is folded up to occupy less space

Remote mmWave Radar Data Capture System Controlled over Wireless Networks
Sponsored by Texas Instruments East Lansing,MI
- Edited Python code to control the mmWave boards Sep2021-Dec2021
- Made devices can be deployed remotely

I forgot mobile APP East Lansing, MI
- Built forgot app by using swift Sep 2018 - Dec 2018
- Iforgot app can remind users on time

Skills
Python,Matlab,C++,leadership,Cadence,ADS