

Contact

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Rochester, NY

Education

Rochester Institute of
Technology (BS/MS Electrical
Engineering)-

Anticipated Graduation: April
2024

Undergraduate GPA: 3.68

Dean's List: 2020 - 2023

Graduate GPA: 4.00

Thesis Title: "Explorations and
Advancements

In Several Emerging Packaging
Technologies for Silicon Photonics"

Publications

Conference Paper, ECTC
(abstract accepted, pending
publication): "Packaged Tunable
Single-Mode III-V Laser Integrated
on a Silicon Photonic Integrated
Chip using Photonic Wire Bonding"

Conference Paper, CELO
(abstract accepted, pending
publication): "Low-Loss Alumi-
num Nitride Waveguides in a 300
nm CMOS Foundry Process"

Certifications & Skills

Autodesk Fusion 360:
Certified User, 2018.

Programming:

C, C++, shell/bash, Python,
LabVIEW, MATLAB,
VHDL/Verilog, Perl, PHP.

Design Software: Fusion
360, Solidworks, Ki-Cad,
Altium Designer 23,
Cadence Virtuoso

Portfolio of Work

For detailed documenta-
tion of personal, profes-
sional, and academic
projects see:

<https://eot105.github.io>

(Or scan QR Code below)



Eric Thornton

About

Passionate and motivated electrical engineer with extensive experience and interest in embedded systems, digital communication protocols, high and low-level software development, digital circuits, and photonics. Experienced with top-down design and skilled in understanding problems holistically. Professional exposure working in both the public and private sector, from startups to large firms. I believe that truly elegant solutions to meaningful problems emerge from teams composed of members that are skilled in a diverse set of fields, have rapport and respect for each other's efforts, understand the larger context of their work, and engage in continuous discussion and constructive debate of ideas.

Experience

RIT Nanophotonics Group - Researcher (August 2022 - present)

- Ongoing development of MOSAICS (Multi Output Synchronized Adjustable Independent Current Sources) allowing an arbitrary number of nanoamp precision current sources to be controlled using a Python API to support the operation and testing of next generation photonic integrated circuits.
- Developed multiple process improvements and innovations related to the use of a state-of-the-art nanometer scale 3D printer used for heterogeneous integration of lasers and silicon photonic circuits, polymer MEMS structures, and micro-optics systems.

RIT Materials Science Department - Engineer (August 2022 - December 2022)

- Supported team researching light activated self healing polymers in engineering custom solutions to improve process consistency.
- Worked closely with lab technicians to understand current process shortcomings and developed a dual wavelength LED exposure system with precise intensity and exposure time control via a custom GUI.

Z-Axis, Inc - Electrical Engineering Intern. (August 2021 - August 2022)

- Top down, complete design (CAD, machining, electrical and software) of the "LED Poker", an electromagnetic actuator designed to automatically dislodge SMT LEDs from the vacuum pickup of a 3-axis LED sorting robot. Increased output of the machine from 50 to 300 LEDs/day, allowing the company to bid on higher volume, higher value orders with confidence of on-time delivery.
- Developed the Universal Test Fixture, a complex and application agnostic system designed to test power supplies with software defined test procedures, thus eliminating the need for bespoke test fixtures for each supply. Involved the development of a high-level user oriented GUI (written in python), and a low level communication protocol (parsed in C++).

SRC, Inc - Electrical Engineering Intern. (May 2021 - August 2021)

- Developed IPMI Parse and Control (IPAC) for the Agile Condor high performance edge computing system.
- IPAC extended the standard Intelligent Platform Management Interface (IPMI) to allow access to high level OS functions (e.g. IP addresses). This allowed richer diagnostics of networked client "slice" CPUs/GPUs from the host computer if the network interface was malfunctioning.

Oak Ridge National Laboratory, Unmanned Vehicles Development Group – Intern. (May 2019 – August 2019)

- Developed a novel packet protocol (BRNR-S.Bus) capable of transmitting low latency and fault tolerant telemetry data to unmanned vehicles over secure digital radio networks.
- Designed the hardware and firmware needed to implement this protocol and worked closely with other team members to integrate this hardware into the high level vehicle control system.