# Tin Thurein

Electrical Engineer · Hardware Enthusiast · EIT: 166315

*San Francisco, CA*

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## Summary

Highly motivated electrical engineer who possesses Electrical, Mechanical and Communication engineering knowledge with hands-on experience, with a focus on finding solutions to energy, transportation, and sustainability.

## Education

**UC Santa Cruz** — *Santa Cruz, CA*

B.S. in Electrical Engineering — *June 2017*

- **Concentration:** Electronics/ Opto-electronics
- **Major GPA:** 3.50/4.00
- **Project Area**: Signal processing and interfacing, IoT, SCADA, ZigBee Mesh network, 3G Communication

**City College of San Francisco** — *San Francisco, CA*

Associate of Science & Engineering — *May 2015*

- Dean's Honor List

**Relevant Coursework**

- Computer Networks
- Signals and Systems
- Optical Electronics/Photonics
- Digital Signal Processing
- Micro System Design
- Logic Design
- Analog Electronics

## Skills

**Programming**

C, MIPS Assembly, Verilog, PLC, HMI

**Engineering**

Mechanical design and assembly, FPGA, Logic Design, DSP, Optical Communication, Analog & Digital Communication, PCB, Circuit Simulation, Material Properties

**Software**

Microsoft Office Suite: Access, Excel, Outlook, PowerPoint, Project, Word, SolidWorks, Autodesk Inventor, MATLAB, Allegro PCB Design, Cadence Suite, PSPICE, EAGLE CAD, National Instrument Circuit Suite, Xilinx, PSoC IDE, WireShark

**Lab Equipment**

Spectrum Analyzer, Signal Generator, Signal Analyzer, Oscilloscope, Multimeter, High power RF generator and matching network, Thin Film Mapping Tool

**Machining Tools**

Milling, Drill Press, Lathe, Band Saw, Soldering Iron, 3D Printing

## Employment

**Analog Devices** — *Santa Clara, CA*

Reliability Operation Engineer — *07/2019 - Present*

- Responsible for developing and implementing reliability test plans for new products, conducting accelerated testing of packaged and wafer-level chip-scale packaged devices including the board design and setup of the test.
- Define reliability qualification requirements for new silicon, packages and process qualification and troubleshoot PCB boards and component level failures occurring during burn-in or HAST cycles.
- Define and develop ESD and Latch-up methodology for all new and existing silicon to characterize properties.
- Generate ESD/Latch-up device characterization plans and perform data analysis on ESD/Latch-up related failure.

**Nordson March** — *Concord, CA*

Engineering: R&D Product Development — *10/2017 - 07/2019*

- Assist engineers with mechanical system designs, chemical process testing and data analysis to characterize system performance, along with software and system endurance testing.
- Perform EFEM (Equipment Front End Module) system integration with plasma modules, FAT (Factory Acceptance Test), train customers as well as performing QA and QC procedures on product shipments.
- Improve process cycle time for customers by developing process recipe, optimizing RF power delivery systems, and RF matching networks for the highest plasma treatment, uniformity, and throughput.

## Projects

**Automated Water Monitoring System with Secure Control**

(1st Place Pitch at Santa Cruz IDEA Hub 2017)

- An IoT Supervisory Control and Data Acquisition (SCADA) system with the capability of continuous monitoring reservoirs with secure remote access to control the pumps.
- Responsible for implementing control algorithms, 3G and ZigBee communication links, and preparing electrical system specification.
- Created engineering schematics, electronic sensor interfacing modules, and system diagrams.
- Responsible for designing 3D models using CAD, fabrication and assembly of electronics housing.

**Adjustable Power Supply**

- A switch mode, variable power supply with output voltage from 0 to 20 Volts, and adjustable current.
- Responsible for schematics capture, circuit simulation, prototyping and testing of the final printed circuit board and fabrication of the electronic enclosure.
- Conducted power efficiency test with varying load and verified the reliability of the power supply.

**Signal Processing in MATLAB**

- Designed frequency Domain Adaptive Filter in MATLAB for echo cancellation of real and synthetic signals.

**Reversi: wifi-connected two-player game**

- Designed a two-player wifi connected game with the ability to play against a computer on 16x32 RGB display matrix.

**AM/FM Radio Receiver**

- Responsible for designing a superheterodyne FM receiver with pre-selector, 2-stage mixer and demodulator using Phased Lock Loop.
- Designed AM receiver with envelope detector and audio amplifier.

**Audio Amplifier**

- Designed an audio amplifier with 20-20KHz Range, low SNR, adjustable volume and gain.