Yong Da Li

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EDUCATION

ETH Zurich ***Sept 2023 – Aug 2025***
MSc in Electrical Engineering and Information Technology Zurich, Switzerland
Specialization in electronics

University of Toronto ***Sept 2018 – May 2023***
Bachelor of Applied Science in Engineering Science Toronto, Canada
Major: Engineering Physics
Thesis: Hierarchical matrix methods for boundary element problems
Supervisor: Prof. Piero Triverio
cGPA: 3.73/4.00

Marc Garneau Collegiate Institute ***Sept 2014 – May 2018***
Talented Offerings for Programs in the Sciences (TOPS) *Toronto, Canada*
Average: 96%

EXPERIENCE – WORK AND ACADEMIC

Intel Corporation ***Sept 2022 – August 2023***
Intel FPGA Virtual Platforms and Solutions intern (part-time) Toronto, Canada

- Creating and maintaining DevOps infrastructure for the simulation platform of next generation FPGA products
- GitHub actions, deploying daily builds, code style checks/linting/test coverage

University of Toronto - Modelics Lab ***May 2022 – Sept 2022***
Summer research student with Prof. Piero Triverio Toronto, Canada

- Investigated performance of hierarchical matrix library to accelerate numerical solve of dense matrices generated from boundary element method formulation
- Continued into 4th year undergraduate thesis

Intel Corporation ***May 2021 – May 2022***
Intel FPGA Software Program Management intern Toronto, Canada

- Represented software organization at cross-department reviews and meetings.
- Successfully oversaw software support completion for Intel's 1st generation structure ASIC device
- Managed tracking of requirements, bugs, and change requests on internal tool
- Created and managed the initial software engineering timeline for next-generation hybrid FPGA and structured ASIC product
- Trained 6 full-time new hires and 3 new interns as the team doubled in size

University of Toronto – Helmy Photonics Lab ***May 2020 – Sept 2020***
Summer research student with Prof. Amr Helmy Toronto, Canada

- Simulated asymmetric hybrid plasmonic waveguides in Lumerical Mode Solutions
- Reported mode-coupling and exception points by sweeping design parameters

National University of Singapore – Smart Solar Systems Lab ***May 2019 – Aug 2019***
Summer exchange research student with Prof. Ho Ghim Wei Singapore

- Synthesized TiO_2 nanofibres with silver nanoparticules by electrospinning process
- Tested effectiveness of synthesized material for water evaporation and H_2 gas production

AWARDS

NSERC Undergraduate Student Research Award (ECE department)	2022
Kenneth C. Smith Award in Engineering Science	2021
Engineering Science Research Fellowship (ESROP)	2020
*NSERC Undergraduate Student Research Award (ECE department)	2020
*NSERC Undergraduate Student Research Award (Astronomy department	2020
*Summer Undergraduate Research Program (Astronomy Department)	2020
Engineering Science Research Fellowship (international exchange)	2019
Faculty of Engineering Admission Scholarship	2018
Kiwanis Club of East York Scholarship	2018

*awards were declined due to University of Toronto policy, one can only accept 1 summer research award per summer.

EXPERIENCE – DESIGN TEAMS

University of Toronto Aerospace Team – Space Systems ***Mar 2020 - current***
Payload Electronics lead Toronto, Canada

- Team goal: design, build, and launch a 3U hyperspectral remote sensing CubeSat
- Lead and train a team of ~5-10 undergraduate students in embedded systems and electro-mechanical design
- Built and tested firmware modules using the STM32 ecosystem for I2C, CAN-FD, SDMMC, DCMI-via-DMA, FreeRTOS
- Currently finishing ARM math-optimized hyperspectral compression algorithm based on CCSDS123 and high-redundancy Earth-to-orbit firmware upgrade capability
- Architect the inter-system communication protocol onboard the satellite
- Selected and acquired infrared camera module to meet mission performance, mass, volume, power, cost, and legal constraints

University of Toronto Aerospace Team – Space Systems ***Nov 2021 - current***
Lab Space Manager and Finance Director Toronto, Canada

- Negotiated and signed lease to a permanent lab space for the team
- Currently in talks with the engineering faculty to move into a better space
- Create yearly budgets in the $100,000's
- Enforce good budget and documentation practices (especially for younger members)

- Coordinate design timeline with budget projections for the satellite mission life

University of Toronto Aerospace Team – Space Systems ***Sept 2018 – March 2020***
Electrical, software, and microfluidics member Toronto, Canada

- Designed, built, and tested battery tab spot welder
- Built and tested SPI module for payload instrument subsystem data collection
- Created system communication breakout/pass-through PCB and machined aluminum interface plate for use in successful thermal-vacuum chamber testing
- Prototyped and finalized burst plate design for in-house microfluidic chips
- Integrated final flight-version biology payload into microfluidic assembly, in ISO-6 cleanroom

EXTRA-CURRICULARS

Intramural Sports ***Sept 2020 – May 2023***

Engineering Volleyball Captain

- Lead logistics for the 8-10 faculty affiliated student volleyball teams
- Organize tryouts for 200+ people

University of Toronto Campus Philharmonic Orchestra ***Sept 2018 – March 2020***

2nd Flute

- Performed 2x per year, playing popular orchestral music

Toronto Youth Symphonic Winds ***Sept 2015 – May 2018***

1st Flute

- Performed 3x per year, playing mostly contemporary wind orchestra music

Key Cub ***April 2017 – April 2018***

Eastern Canada District Governor

- Student head of volunteering, service, and leadership club for Ontario, Quebec, and maritime provinces (total ~40 schools, 1500 members)
- Organized fundraising and service events such as school overnight sleepover fundraiser, old shoe drive, Christmas food drive, tree planting
- Organized annual 3-day convention in Halifax. Liaison with hotel, A/V suppliers, workshop speakers, budget, t-shirt design
- Represented Canada at the 2017 and 2018 Key Club international convention

PUBLICATIONS

FINCH mission team. *FINCH: A Blueprint for Accessible and Scientifically Valuable Remote Sensing Satellite Missions*. 2022 Small Satellite Conference.

FINCH mission team. *Inspiring the Next Generation: Challenges and Strategies for Onboarding and Retention in an Undergraduate CubeSat Design Team*. 2021 Small Satellite Conference.

HERON mission team. *HERON: Demonstrating a Novel Biological Platform for Small Satellite Missions*. 2021 Small Satellite Conference.

LANGUAGE SKILLS

English	native
Chinese	heritage language (conversational)