Yingao (Elaine) Yao

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Education

2021–present	**MASc student in Electrical and Computer Engineering**. University of British Columbia, Vancouver, Canada
2017–2021 :	**B.E. in Electrical and Computer Engineering**. University of Electronic Science and Technology of China, Sichuan, China GPA: 3.96/4.0

Publications

CCS'22	**Poster: May the Swarm Be With You: Sensor Spoofing Attacks Against Drone Swarms**, Yingao (Elaine) Yao, Pritam Dash, Karthik Pattabiraman. ACM Conference on Computer and Communications Security (CCS), Los Angeles, U.S.A.

Work Experience

2021–present	***Research Assistant***, *Dependable Systems Lab*, Univerisity of British Columbia, Vancouver, Canada. Supervisor: Karthik Pattabiraman
2021–present	***Teaching Assistant***, *CPEN 333 - Software Engineering*, Univerisity of British Columbia, Vancouver, Canada. Supervisor: Farshid Agharebparast

Projects

Sept,2021 – Dec,2021	***Encryption in ICS Networks: Is it enough?***. Designed the side-channel attacks in Industrial Control Systems (ICS) with encrypted network protocols. The attackers are able to drop essential packets based on the observed network patterns.
Advisor :	Aastha Mehta
Feb,2022 – April,2022	***Is the Synthesized Scene in the Autonomous Driving Realistic?***. Evaluated the feasibility of the MSF-ADV attack on autonomous driving cars under different environmental settings.
Advisor :	Karthik Pattabiranman

Fellowships & Awards

2020	***Outstanding Winner (0.2%)*** in COMAP Interdisciplinary Contest in Modeling
2020	***Thanksgiving Scholarship for Modern Scientists*** CAD 4,000, 12 per school per year
2020	***National Scholarship*** CAD 1,600, for top 1.5% students per school
2019	***National Second Prize (3%)*** in China Undergraduate Mathematical Contest in Modeling
2018	***Third Place*** in Microsoft Student Club Hackathon

Computer skills

Programming	Python, Matlab, Bash, C++, Java, Verilog
Tools	MATLAB&Simulink, ArduPilot, PX4, Gazebo, Linux, Git