Sepehr Samavi

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(Last updated July 1, 2021)

EDUCATION

Ph.D., University of Toronto *since 01/2021*
Institute for Aerospace Studies, Toronto, Canada
Advisors: Professor Angela Schoellig, Professor Florian Shkurti

M.A.Sc., University of Toronto *11/2021*
Institute for Aerospace Studies, Toronto, Canada
Title: Accounting for Unpredictability in Autonomous Driving Behaviour
Advisor: Professor Angela Schoellig

B.A.Sc. in Engineering Science (with Honours), University of Toronto *06/2018*
Engineering Science, Robotics Engineering Major
Division of Engineering Science, Toronto, Canada
Thesis Title: Lane Detection for an Autonomous Vehicle
Thesis Advisor: Professor Angela Schoellig

AFFILIATIONS

Vector Institute for Artificial Intelligence
Graduate Student Researcher *since 01/2020*

University of Toronto Robotics Institute
Graduate Student Researcher *since 06/2019*

aUToronto, U of T's self-driving car team
Deputy Lead
Mentored undergraduates, supervised work sessions and field trials *09/2018 - 09/2019*
Autonomy Software Member *08/2017 - 09/2019*

AWARDS AND HONOURS

Alexander Graham Bell Canada Graduate Scholarship, $105K *01/2021 - 12/2023*
Natural Sciences and Engineering Research Council, Government of Canada
Scholarship for three years of Ph.D. research

Ontario Graduate Scholarship, $10K *09/2019 - 04/2020*
Government of Ontario, *Scholarship for M.A.Sc. research*

Vector Scholarship in Artificial Intelligence, $17.5K *09/2018 - 09/2019*
Vector Institute, *Scholarship for M.A.Sc. research*

Exceptional Opportunities Award, $3K *06/2014 - 08/2014*
University of Toronto, *Funding for undergraduate research at Harvard Medical School*

President's Entrance Scholarship, $2K *09/2013*
University of Toronto, *Entrance scholarship for undergraduate studies*

Best Poster Presentation *06/2019*
International Conference of Computer and Robot Vision (CRV)
as the presenting author for publication [C2]

First Place in 2019 SAE AutoDrive Challenge *06/2019*
GM and SAE International, Second year of three-year competition
as a member of the University of Toronto team, aUToronto

First Place in 2018 SAE AutoDrive Challenge *06/2018*
GM and SAE International, First year of three-year competition
as a member of the University of Toronto team, aUToronto

PUBLICATIONS

Peer Reviewed - Journal Publications

[J1] Keenan Burnett, Jingxing Qian, Xintong Du, Linqiao Liu, David J. Yoon, Tianchang Shen, Susan Sun, **Sepehr Samavi**, Michael J. Sorocky, Mollie Bianchi, Kaicheng Zhang, Arkady Arkhangorodsky, Quinlan Sykora, Shichen Lu, Yizhou Huang, Angela P. Schoellig, and Timothy D. Barfoot. Zeus: A system description of the two-time winner of the collegiate SAE AutoDrive competition. *Journal of Field Robotics*, 1(28), 2020.

Peer Reviewed - Conference Proceedings

[C1] Keenan Burnett, Andreas Schimpe, **Sepehr Samavi**, Mona Gridseth, Chengzhi Winston Liu, Qiyang Li, Zachary Kroeze, and Angela P. Schoellig. Building a Winning Self-Driving Car in Six Months. In *Proc. of the IEEE International Conference on Robotics and Automation (ICRA)*, pages 9583–9589, May 2019.

[C2] Keenan Burnett, **Sepehr Samavi**, Steven L Waslander, Timothy D Barfoot, and Angela P Schoellig. aUToTrack : A Lightweight Object Detection and Tracking System for the SAE AutoDrive Challenge. In *Proc. of the International Conference on Computer and Robot Vision (CRV)*, May 2019.

EMPLOYMENT HISTORY

University of Toronto, Toronto, Canada *01/2021 - 04/2021*
Division of Engineering Science
Teaching Assistant, *Artificial Intelligence ROB311*

Magna International, Greater Toronto Area, Canada *05/2016 - 07/2017*
Magna Electronics Vision Centre
Algorithms Research Intern, *Perception for Magna Automated Parking Project*

Harvard Medical School, Boston, USA *06/2014 - 08/2014*
Tearney Lab, Wellman Center for Photomedicine
Undergraduate Research Intern, *Prototyping for gastrointestinal tethered capsule retraction device*

MEDIA

AI: Hype vs. Reality. S1E1 AI That Drives: Self-Driving Cars, A popular science podcast and video by Dell Technologies about emerging AI technologies. 09/2019. [audio] [video] [website]

University of Toronto Engineering News, A news article announcing recipients of the Vector Institute Graduate Scholarship in AI. 12/2018. [url]

SKILLS AND LANGUAGES

Programming Languages: Python, C/C++, Java, MATLAB

Computing: Mac OS, Unix, Windows, Slurm, git

Languages: English (native), Persian (native), French (professional proficiency) [1]

OUTREACH AND VOLUNTEERING

STEM outreach & live demonstrations *09/2018 - present*
I often volunteer to show live demonstrations of our robots to visitors, who have included government officials, representatives from industry, journalists, professors and their research groups, elementary and high-school students (e.g. 40 students aged 10-12 years and 30 high school students in 11/2019), as well as undergraduate and graduate students.

Drummer, University of Toronto Institute for Aerospace Studies Band *11/2018 - present*

Community Volunteer, Sunnybrook Hospital, Toronto (100 hours) *07/2012*

[1] Proficiency levels defined by the ILR scale.