# Bahar Partov

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Profile

I am a generalist with a background in engineering, computer science and mathematical modeling. I have hands on skills in building practical systems and I am passionate about community development and promoting diversity and inclusion.

Skills **Analytic:** Optimization, statistical learning, data analysis and wireless system design Research: Track record of research work: Goole scholar (Link). Community: Mentoring, public speaking, organizing events, writing articles Languages: Persian: Native, English: Fluent, French: Intermediate Arabic/Turkish: basic understanding Golang, Perl, Python, C, Bash, SQL, Javascript **Development: Tools:** MATLAB, R, LaTEX Hardware: Optoelectronic devices, programmable radios Work Experience have been doing mostly software development and partly devops on hosted email services purposed for a very large scale customer base, contributing to the anti-abuse tooling and provisioning/statistics back-end. Chebucto Community Net, is a none-profit community based network located in Halifax, NS. CCN started as a community network to provide variety of internet services mostly, to the communities in need. I have been working to upgrade the existing platforms built in 1995. This included the email, mailing list, office management web interfaces, wireless service management, and web-hosting services. URELLES is a platform that advocates diversity and inclusion. In these articles, I interviewed technology experts who chose to take a rather unconventional path in their careers. HaiLa/Wavelite incubated by TandemLaunch, Co-Founder, Montreal, Canada 04/2017 - 05/2019 I contributed towards building functional prototypes, technology roadmap creation, recruiting, and steering the software and hardware development. These contributions were highlighted through: CES climate change award and being featured in RFID journal. Contributed in research work at Prof. Dina Katabi's group. Worked on improving the capacity of indoor small cell (basestations) through distributed synchronization among the basestations. Contributed towards integration of the proposed architecture with open source LTE stack libraries. My research at senseable city lab was concerned with developing methods for localization of mobile phone users within indoor and outdoor environments while preserving their privacy. The result to be used on various localized services for smart cities, such as localized heating, smart lighting and air quality control. Worked on experimental and measurement studies to better understand impacts of network delay on LTE and

Worked on modeling and optimization of 5G access networks, where multiple access protocols exists.

Designed lightweight recommendation systems for choosing WiFi access points where a WiFi AP, will be automatically recommended to WiFi user, according previous training data and in a privacy preserving manner. Worked on distributed optimization methods in network utility maximization as well as auction algorithms.

WiFi links, and to design multipath schedulers that reduce path delays in a multipath TCP setup.

This involved using machine learning, and statistical method as well as mathematical analysis of these network's behavior. As well as working with large cell phone data sets in order to design an energy efficient deployment of the base stations.

### Grants and Funding

Joint recipient of 25K CAD grant in collaboration with Dalhousie University 08/ 2018
For university/industry collaboration from Natural Sciences and Engineering Research Council in Canada
(NSERC), as the industrial co-applicant. Project scope is to design integrated circuits for ultra low power RF
energy detection to be used at Wavelite products.

- Recipient of 60K CAD university-industrial partnership grants (by Mitacs) ... 06/2017, 10/2017 Provided internship opportunities for graduate students to collaborate on Wavelite's research and development in software, hardware, and RF design fields.
- Secured 600k CAD investment fund from TandemLaunch Inc. 07/2017 Recipient of Computing Research Association travel grant, MobiCom 10/2016 Recipient of  $N^2$  Women young researcher fellowship 02/2015 Supported by Microsoft Research/HP labs

#### Funded by Science Foundation Ireland and Bell Labs

## Community

Service d'Entraide Saint-Romuald,	Volunteer	 06/2022-present
Neigbourhood support services		

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Α	cad	emics	

Hamilton Institute / Bell Labs, Ph.D., Maynooth/Dublin, Ireland	08/2012 -11/2015
In network mathematics. Thesis topic: Resource Allocation for Next Generation RANs. A	Adviser: Prof. Douglas
Leith. Industrial advisers: Dr. Holger Claussen- Dr. Rouzbeh Razavi	

## Selected Talks and Teaching

AI4 Social Good Summer Lab , 06/2018 Lecturer, ""

Women in engineering McGill, 06/2018 Invited Speaker, "Wavelite in the Internet of Things era"

Microsoft Research Cambridge , 06/2016 Invited Speaker, "Resource Allocation for Next Generation of radio access Networks: how effective are my schedulers?"

University of Texas at Austin , 03/2015 Invited Speaker, "Utility Fair User Associations in LTE/WiFi Networks"

Statistical Methods for Computer Science , Fall 2015, Teaching Assistant

Other Interests

Includes but not limited to music, books, and open air.