Bahar Partov

Technologist • Community Development
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Profile

I have a multidisciplinary background in engineering, computer science and mathematical modeling. I have hands on skills in building practical systems. The core of my recent, and future activities are set around community development and promoting diversity and inclusion.

Skills

Analytic:	Mathematical modeling, optimization methods, statistical learning, data analysis and wireless system design
Research:	Track record of research work appeared in top tier IEEE/ACM journals and conferences: Goole scholar (Link) .
Community:	Mentoring, public speaking, organizing events, writing articles
Languages:	**Persian:** Native, **English:** Fluent, **French:** Intermediate in reading, writing and listening, basic in speaking, **Arabic/Turkish:** basic understanding
Development:	Python, C, C++, AWK, Perl, Bash, Databases, PhP
Tools:	MATLAB, R, Ns2, LaTEX, Adobe tools
Hardware:	Optoelectronic devices (test and evaluation), programmable radios (USRPs and PicoZed radios).

Work Experience

Tucows, *Software Engineer* ..... 11/2020 - present

Chebucto Community Net, *Technology Consultant* ..... 02/2020 - 11/2020

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 mostly independently for the organization to upgrade their existing platforms built in 1995. This included the email, mailing list, office management web interfaces, wireless service management, and web-hosting services.

URELLES, *Contributing Writer* 11/2020-present

URELLES is a platform that advocates diversity and inclusion. The platform is available both in French and English. I have been asked by the editor and founder of URELLES Chloè Freslon to contribute as writer with URELLEs, and gladly accepted the offer. Upto this date I have been interviewing influential women in technical fields who have been following rather unconventional paths.

HaiLa, Funded by TandemLaunch Inc, *Co-Founder, Montreal, Canada* ..... 04/2017 - 05/2019

I specifically worked as the technical lead of the startup, Wavelite (now re-branded as HaiLa). HaiLa's technology is a hardware/software IoT solution that aims at enabling scalable and sustainable development of IoT sensors. HaiLa addresses the key challenge with limited life time of wireless sensors. I worked as the technical lead, contributed towards building functional prototypes, technology roadmap creation (included filing patents), recruiting, and steering the software and hardware development. The startup project received a number of awards and recognition during my time there e.g. CES climate change award and being featured in RFID journal.

CSAIL, MIT, *Visiting Postdoc, Cambridge, USA* ..... 10/2016 - 03/2017

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.

Senseable City Lab, MIT , *Postdoc Scholar, Cambridge, USA* ..... 9/2016 - 02/2017

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. The goal hence is to optimize the use of resources in the environment. I applied various methods, such as localization by passively analyzing LTE signals as well as passive listening to WiFi signal levels. In the latter applied recommendation based algorithms to predict location of the mobile users based on their WiFi signal strengths.

Trinity College Dublin, *Postdoc Fellow, Dublin, Ireland* ..... 11/2015 - 09/2016

Worked on experimental and measurement studies to better understand impacts of network delay on LTE and WiFi links, and to design multipath schedulers that reduce path delays in a multipath TCP setup.
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.

Bell Labs, Nokia, *PhD fellow, Dublin, Ireland* ..... 08/2012 - 08/2015

Worked on modeling and optimization of 5G access networks, where multiple access protocols exists.
This involved using machine learning, and statistical method as well as mathematical analysis of these network's behavior, aiming to maximize utility fair objective functions. As well as working with large cell phone data sets in order to design an energy efficient deployment of the base stations. These works have been parts of my PhD thesis and lead to a number of publications in top tier journals and conferences.

Oclaro Inc, *Product Engineer, Paignton, U.K.* ..... 02/2010 - 08/2012

Started as a graduate engineer, and through a rotation program gained experience across various departments including product development, application engineering, reliability, quality, new product introduction and product management. Transitioned into the product engineering, worked on automating the test and verification processes for 10Gig opto-electronics transceivers. Collaborated in developing one of these optical transceivers for wind turbines applications.

Community

Chebucto Community Net, *Volunteer* 11/2020-present

Persian Women In Tech, Montreal, *Team lead and co-founder* 09/2018-12/2020

Team lead of the Montreal's chapter, organizing career fairs, monthly events, inviting speakers, approaching potential sponsors for hosting the event.

AI for Social Good, summer school, *Lecturer and Mentor* ..... May 2018, May 2019

Giving workshops and mentoring young students selected across Canada to attend AI for social good's conference.

Toastmasters, Entrepreneurs' Club, Montreal, *Volunteer* 06/2017-06/2018

Participated in weekly meetings.

NetLab, Trinity College Dublin, *Organizer* 11/2015-08/2016

Coordinated NetLab group weekly seminar series at the school of computer science and statistics, Trinity College Dublin.

N^2 Women IEEE/ComSoc society, *Fellow* 09/2012-present

Organized an N^2 Women meeting at ICC, 2015, London.

IEEE conferences and Journals, *Volunteer Reviewer* ..... 12/2012 - present

Reviewer and program committee member for leading conferences and journals in wireless networking.

Academics

Hamilton Institute / Bell Labs, *Ph.D. , Maynooth/Dublin, Ireland* ..... 08/2012 -11/2015

In network mathematics. Thesis topic: *Resource Allocation for Next Generation RANs.* Adviser: Prof. Douglas Leith. Industrial advisers: Dr. Holger Claussen- Dr. Rouzbeh Razavi

University of Essex, ***M.Sc., Colchester, U.K.*** ..... 09/2008 -11/2009

In telecommunication and information systems (Distinction). Thesis Topic: Novel video Streaming over IEEE 802.16 Networks. Advisers: Dr. Martin Fleury and Prof. Mohammad Ghanbari

University of Tabriz, ***B.Sc. Tabriz, Iran*** ..... 09/2003 -09/2007

In electrical engineering. With a major in communications engineering (1st among communications engineering students for which I was exempted of the nation-wide graduate school entrance examination).

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.

Joint recipient of 25K CAD grant in collaboration with Polytechnique Montreal 11/2017

Funded by NSERC. The scope of the project was to evaluate low power digital design techniques for Wavelite's hardware development.

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

Four year PhD studentship 08/2012-11/2015

Funded by Science Foundation Ireland and Bell Labs

Honors and Awards

Winner of Smart City FIA Global startup competition in Montreal 07/2017

Ranked 2nd among telecommunications master students 11/2009

Telecom Technologies prize awarded by university of Essex 11/2009

Ranked 1st among 2003 communications engineering students 09/2007

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

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Other Interests

I enjoy playing music, spending time outdoors and reading during my free time.