Bahar Partov

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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, modeling, mathematical analysis of the modern wireless networks as well as good understanding of Internet of Things applications. Looking for research based positions that align with my multidisciplinary background and personal interests.

Skills

Analytical:	Mathematical modeling, convex/non-convex and distributed optimization methods, wireless system design, statistical learning
Development:	Python, C, C++, AWK, Perl, Bash
Tools:	MATLAB, R, Ns2, LaTEX, Adobe tools
Hardware:	Optoelectronic devices (test and evaluation), programmable radios (USRPs and PicoZed radios).
Research:	Track record of research work appeared in top tier IEEE/ACM journals and conferences: Goole scholar (Link)
Community:	Mentoring, public speaking, organizing events

Work Experience

Wavelite (Rebranded as HaiLa) ventur, *Co-Founder, Montreal, Canada* .... 04/2017 - 05/2019
Funded by TandemLaunch Inc.
Wavelite is hardware/software IoT solution that aims at enabling scalable and sustainable development of IoT sensors. Wavelite 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, recruiting, and steering the software and hardware development. The company 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 analysing 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 Collge 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.

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 Fundings

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

Hounours 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

Community

Persian Women In Tech, Montreal, *Organizer* 09/2018–08/present
    Team lead of the Montreal's chapter, organizing 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 confer-
    ence.

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.

Selected Talks

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"

Other Interests

I enjoy playing violin and hammered dulcimer. I am a past member of University of Dublin choir. I like traveling
as well as cycling, and other outdoor activities. I love to spend my spare time on reading (in specific interested in
sociology, psychology, and history) and learning languages, currently enjoy learning French and Mandarin.