

# Bahar Partov

<https://baharxy.github.io/>  
PhD (in Computer Science)

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🐙 GitHub Profile  
🌐 LinkedIn Profile

## SUMMARY

Seasoned Software Engineer with a robust background in back-end development notably at Tucows Inc. Co-founded Wavelite NKA Haila Technologies Inc. leading to a CES Eureka Park climate change award and gaining traction. Recognized for analytical expertise and community development, adept at mentoring and driving innovative ideas into practice.

## SKILLS

**Analytical:** mathematical optimization, statistical learning, data analytics, and wireless system design  
**Research:** track record of publications: <https://scholar.google.com/citations?user=FyIV8yoAAAAJ&hl=en>  
**Languages:** Shell scripting, GoLang, Perl, Lua, Python, C/C++, Javascript  
**Development Tools:** VScode, Git, Github, Copilot, Nodejs  
**Open Source Tools:** RabbitMQ, Grafana, OpenStack, Docker, PostgreSQL, MySQL, srsLTE, RspamD, Postfix, Dovecot, Roundcube, etc.  
**Hardware:** optoelectronic devices, programmable radios, IoT sensors  
**Soft Skills:** mentoring, public speaking, planning events, working with volunteers, writing articles, communicating specialized subjects to the non-specialist audience

## EXPERIENCE

### •Software Engineer

11/2020 - present

*Tucows Inc*

Remote

- developed software plugins, created Debian software packages, and applied security practices for large-scale networked operations.
- supported operations with problem-solving and debugging skills throughout the infrastructure migrations process.
- developed tools for provisioning and statistical back-end, RESTful APIs using Golang, PostgreSQL, PostgREST, and Docker Engine.
- developed and deployed a proof of concept observability platform powered by micro-services, relational databases, and open-source visualization tooling.

### •Software Consultant

02/2020 - 11/2020

*Chebucto Community Net*

Remote

- fully upgraded decades-old web services (Apache), email services (LDAP, Postfix, MailMan3, SpamAssassin, ClamAV), admin UI (PHP, SQL), and wireless services (FreeRadius) for the community network that was maintained by volunteers since 1994.
- migrated 600 subscribed user accounts to work seamlessly with the new services.
- autonomously completed the transition within 7 months.

### •Co-Founder and Tech Lead

03/2017 - 05/2019

*Wavelite NKA Haila Technologies Inc*

Monreal, Canada

- raised 600K investment fund from TandemLaunch Inc.
- built prototypes as proof of concept for a passive IoT sensor that relies on WiFi signals for its operation.
- recruited a co-founder and a strong technical team of junior and senior software and hardware engineers.
- recruited summer interns and received several joint research grants.
- pitched and promoted the project globally at events such as CES, Taiwan's Garaga+, CDL Lab at Toronto University, Quebec's Chamber of Commerce alliance in China, etc.
- highlighted by RFID journal, and received the CES Eureka Park's climate change award in 2018.
- together with the co-founder locked in a development contract with a major home automation company based in Germany.

### •Visiting Scholar

09/2016 - 03/2017

*MIT*

Cambridge, USA

- actively contributed to the design and the initiation of new research projects in the Sensable city lab, namely Philips smart lighting and the city scanner projects.
- contributed to applied research at CSAIL to develop synchronization algorithms suited for large-scale LTE networks. The results demonstrated  $2.7\times$  throughput improvement over traditional synchronization methods.

### •Postdoc Fellow

11/2015 - 09/2016

*Trinity College Dublin*

Dublin, Ireland

- designed and deployed experiments to evaluate the impacts of network delay on LTE and WiFi links. The results provided new insights into the design of future multi-path TCP schedulers.

- designed lightweight recommendation systems for automatic selection of the WiFi APs based on previous training data and in a privacy-preserving manner.
- performed research on distributed optimization methods for network utility optimization as well as in auction algorithms.

#### •PhD Fellow

08/2012-08/2015

Nokia Bell Labs

Dublin, Ireland

- proposed mathematical models for solving resource allocation problems in 5G access networks.
- applied machine learning models, data analytics, and distributed optimization algorithms to solve such problems. This resulted in a total of 6 conference and journal publications with a total of 78 citing.
- used simulations, statistical analysis tools and real-world experiments for data collection and evaluation.

#### •Engineer

02/2010 - 08/2012

Oclaro Inc NKA Lumentum

Paignton, UK

- improved the existing C# based test automation suit with additional features and test cases.
- performed laboratory tests for product specification verification, and prepared reports that were further used for creating product specifications.
- contributed to research on the use of optical lasers in wind turbine array sensing applications. This solution indicated a significant reduction in inventory complexity and associated cost of installation and operation, as well as a high degree of measurement accuracy comparable with existing systems.

### GRANTS AND FUNDING

#### •25K CAD grant in collaboration with Dalhousie University

08/2018

*to design integrated circuits for ultra low-power RF energy detection.*

awarded by NSERC Canada

#### •60K CAD university-industrial partnership grants

05/2017, 10/2017

*created internship opportunities for graduate students.*

awarded by mitacs Canada

#### •25K CAD grant in collaboration with Polytechnique Montreal

11/2017

*created a graduate student internship opportunity to evaluate low-power digital design techniques.* awarded by NSERC Canada

#### •600k CAD investment fund

07/2017

funded by TandemLaunch Inc

#### •Computing Research Association travel grant

10/2016

awarded by Mobicom, ACM SIGMOBILE

#### •N2 Women Young Researcher Fellowship

02/2015

supported by Microsoft Research and HP labs.

#### •Full PhD scholarship

08/2012 - 08/2015

awarded by Hamilton Institute and Nokia Bell Labs

### ACADEMICS

#### PhD in Computer Science

08/2012 - 09/2015

*thesis: Resource Allocation for Next Generation RANs*

GPA: NA

#### MSc in Telecommunications and Information Systems

09/2008 - 11/2009

*thesis: Novel video Streaming over IEEE 802.16 Networks*

GPA: 87/100, Graduated with Distinction

#### BSc in Electrical Engineering

09/2003 - 10/2007

*minored in Communications Engineering*

GPA: 17.53/20 (ranked 1st among communications engineering students)

### COMMUNITY

#### •Service d'Entraide Saint-Romuald, Volunteer

06/2022 - present

*Neighbourhood support services*

#### •Women of Middle East and North Africa in Tech, Montreal, Team lead and co-founder

05/2018 - 10/2020

*Team lead of the Montreal's chapter, organizing career fairs and ongoing monthly events*

#### •AI for Social Good, summer school, Lecturer and Mentor

06/2018 , 06/2019

*Giving workshops and mentoring young selected students across Canada*

#### •Crowd2map Tanzania, Volunteer

01/2018 - 11/2018

*Crowd mapping rural Tanzania, to fight FGM*

#### •NetLab, Trinity College Dublin, Organizer

11/2015 - 08/2016

*Coordinated weekly seminar series at the school of Computer Science and Statistics, Trinity College Dublin*

#### •IEEE conferences and Journals, Volunteer Reviewer

11/2012 - 06/2019

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