Curriculum Vitae

Given Name: Ayoob
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Ayoob Salari

Education

- ✓ **PhD, Electrical Engineering, 2019-present**
  Centre of IoT and Telecommunication, School of Electrical and Information Engineering,
  The University of Sydney
  Sydney, Australia
  Thesis: The Interplay between Computation and Communications
  Supervisor: **Dr. Mahyar Shirvanimoghaddam**

- ✓ **MSc, Electrical Engineering, 2015-2017**
  Wireless Communication Systems Laboratory, School of Electrical Engineering, ITC Building,
  Korea Advance Institute of Science and Technology (KAIST)
  Daejeon, Republic of Korea
  Thesis: Maximizing Received Energy in Magnetic Resonance Wireless Power Transfer Using Feedback, 2017
  Supervisor: **Dr. Wan Choi**

- ✓ **BSc, Electrical Engineering, 2010-2014**
  Mobile Broadband Network Research Group, Department of Electrical Engineering,
  Iran University of Science & Technology,
  Tehran, Iran
  Thesis: Resource Allocation for Two-Way OFDM Relays, 2014
  Supervisor: **Dr. Razavi Zadeh**

Professional Experience

- ✓ **Associate Research Engineer (Future Wave UltraTech Company FWUTech)**
  Developing Methods on the Optimization of Telecommunication Networks,
  R&D department, 2018~2019

Academic Experience

- ✓ **Research Assistant** (Internet of Things), Supervisor: Dr. M. Shirvanimoghaddam, School of Electrical and Information Engineering, Link Building, The University of Sydney, 2019 ~ Present

- ✓ **Research Assistant** (Wireless Communication Systems), Supervisor: Dr. W. Choi, School of Electrical Engineering, Korea Advance Institute of Science and Technology (KAIST), 2014~2017

- ✓ **Casual Academic:**
  - ❖ Teaching Assistant of Error Control Coding course, Lecturer: Dr. Y. Li, School of Electrical and Information Engineering, The University of Sydney, 2020-2022
  - ❖ Teaching Assistant of IoT for Critical Infrastructure course, Lecturer: Dr. M. Shirvanimoghaddam, School of Electrical and Information Engineering, The University of Sydney, 2021-2022
  - ❖ Teaching Assistant of Antennas and Propagation course, Lecturer: Dr. S. Abbas, School of Electrical and Information Engineering, The University of Sydney, 2020
  - ❖ Teaching Assistant of Numerical solution with Matlab course, Lecturer: Dr. M. Shirvanimoghaddam, School of Electrical and Information Engineering, The University of Sydney, 2021-2022

Research Interest

- ✓ Federated Learning
- ✓ Massive IoT Communication
- ✓ Machine Learning
- ✓ MIMO and Beamforming

Publication

- ✓ **A. Salari**, M. Shirvanimoghaddam, S. Johnson, "*Rate-Convergence Tradeoff of Federated Learning over Wireless Channel*," ready for submission to IEEE Internet of Things Journal.
- ✓ **A. Salari**, M. Shirvanimoghaddam, B. Shahab, R. Arablouei, S. Johnson, "*Clustering-Based Joint Channel Estimation and Signal Detection for NOMA*," Submitted to IEEE Transaction on Vehicular Technology, Dec. 2022.
- ✓ **A. Salari,** M. Shirvanimoghaddam, M. B. Shahab, Y. Li and S. Johnson, "NOMA Joint Channel Estimation and Signal Detection Using Rotational Invariant Codes and GMM-Based Clustering," in *IEEE Communications Letters*, vol. 26, no. 10, Oct. 2022.
- ✓ M. Shirvanimoghaddam, **A. Salari**, Y. Gao and A. Guha, "Federated Learning with Erroneous Communication Links," in *IEEE Communications Letters*, vol. 26, no. 6, pp. 1293-1297, June 2022.
- ✓ **A. Salari**, M. Shirvanimoghaddam, B. Shahab, R. Arablouei, S. Johnson, "*Clustering-Based Joint Channel Estimation and Signal Detection for Grant-free NOMA*," IEEE Global Communications Conference (Globecom), Dec. 2020.
- ✓ **A. Salari** and W. Choi, "Maximizing Received Energy in Magnetic Resonance Wireless Power Transfer Using Feedback," in IEEE Transactions on Green Communications and Networking, vol. 3, no. 3, pp. 565-574, Sept. 2019.

Patent

- ✓ Wan Choi, **Ayoob Salari**, Sangjun Park, Jinho Kang, *System and Method for controlling wireless power using support double charging mode and feedback*, Issued Jul 2, 2017, Kr 2014R1A5A1011478

Honors and Awards

- ✓ **University of Sydney Postgraduate Research Support Scholarship (PRSS), 2022.**
- ✓ **The University of Sydney Postgraduate Scholarship, 2019-2022.**
- ✓ **KAIST Postgraduate Scholarship (MSc.) 2015-2017.**
- ✓ Ranked in top 0.1% of the Nationwide University Entrance Exam for B. SC. program with nearly 480,000 participants. (BSc)
- ✓ Semi-finalist in Mathematics National Olympiad competitions.
- ✓ Ranked within top 10 percent among undergraduate cohort.
- ✓ Accepted in NODET (National Organization for Development of Exceptional Talents), Junior School national entrance exam and high-school national entrance exam.

Computer Skills

- ✓ **Engineering Software:** ThingsBoard, Node-Red, WSO2, CellSens, CST, HFSS, PSpice, Proteus, Multisim, Orcad
- ✓ **Programming:** Matlab, CPLEX, CVX, Python
- ✓ **Network Simulation and Management:** Network Packet Tracer, GNS3 (Graphical Network Simulator)
- ✓ **Math Tools:** Maple
- ✓ **Other:** MS Office, Latex, Adobe Photoshop, Adobe Premier

Extracurricular Activities

- ✓ Chess (Silver and Bronze Medal in 2001 and 2002; in Province Competitions)
- ✓ Football (Gold and Silver Medal in 2010 and 2011; in university competitions)
- ✓ Running (Two Gold Medal in 2009 and 2012; in university competitions)

References

- ✓ Dr. Mahyar Shirvanimoghaddam, Academic Fellow, Department of Electrical and Information Engineering, The University of Sydney, Sydney, Australia, E-mail: Mahyar.Shirvanimoghaddam@sydney.edu.au
- ✓ Dr. Sarah Johnson, Professor, Department of Electrical Engineering, The University of Newcastle, Newcastle, Australia, E-mail: Sarah.Johnson@newcastle.edu.au
- ✓ Dr. Reza Arablouei, Research Scientist, CSIRO's Data61, Pullenvale, QLD , Australia, Reza.Arablouei@csiro.au