

AHMAD R. SHARAFAT

EXPERIENCE



PROFESSOR OF ELECTRICAL AND COMPUTER ENGINEERING, TARBIAT MODARES UNIVERSITY, TEHRAN, IRAN JULY 1991 - PRESENT

Graduate level teaching and research on communication systems, networks, and platforms, as well as on machine learning and advanced signal processing techniques. Courses include Advanced Neural Networks, Adaptive Signal Processing, and Advanced Computer Networks.

DIRECTOR OF COMPUTERS AND COMMUNICATIONS, IRAN TELECOMMUNICATIONS RESEARCH CENTER MARCH 1981 – JUNE 1991

Directed advanced research on the application of computers to modern communications systems, including design, implementation, and prototyping digital switching systems.

LEADERSHIP, AWARDS, & ACHIEVEMENTS

- Iranian Academy of Sciences, January 2013 – Present
- Team Lead, Experts on Strategic Foresight, International Telecommunication Union, since 2025
- Chairman, Think Tank on Artificial Intelligence, Iranian Academy of Sciences, June 2022-Present
- Life Senior Member, IEEE
- Life Member, Sigma Xi
- Vice-Chairman, Telecommunications Development Advisory Group (TDAG), International Telecommunication Union, since 2014
- Vice Chairman, World Telecommunications Development Conference, ITU, June 2022
- Vice-Chairman, World Telecommunications Policy Forum, ITU, December 2021
- Councilor, International Telecommunication Union, Geneva, 2018-2022
- Chairman, ITU-D Study Group 2 (Information and communication technology services and applications for the promotion of sustainable development), International Telecommunication Union, Geneva, 2014 – 2022
- Chairman, IEEE Iran Section, 2018-2020
- Chairman, Management Committee, Asia-Pacific Telecommunity, since 2021
- Editor, International Journal on Wireless Information Networks (IJWIN)
- Editor, Scientica Iranica
- Lifetime Education and Teaching Award, IEEE Iran Section, 2023
- Published extensively in scientific scholarly refereed journals, has numerous presentations to international conferences, has co-authored 4 books, and has 12 patents

EDUCATION

STANFORD UNIVERSITY, STANFORD, CALIFORNIA, PHD IN ELECTRICAL ENGINEERING, 1981

STANFORD UNIVERSITY, STANFORD, CALIFORNIA, MSC IN ELECTRICAL ENGINEERING, 1976

SHARIF UNIVERSITY OF TECHNOLOGY, TEHRAN, IRAN, BSC IN ELECTRICAL ENGINEERING, 1975

SELECTED RECENT WORKS

Recent Papers:

1. M. Tajallifar, **A. R. Sharafat**, and H. Yanikomeroglu, "Robust and Feasible QoS-Aware mmWave Massive MIMO Hybrid Beamforming," *IEEE Transactions on Wireless Communications*, vol. 23, no. 2, pp. 1520-1534, July 2023.

2. R. Ganjavi and **A. R. Sharafat**, "Edge-Assisted Public Key Homomorphic Encryption for Preserving Privacy in Mobile Crowdsensing," *IEEE Transactions on Services Computing*, vol. 16, no. 2, pp. 1107-1117, May 2022.
3. M. Fozi, **A. R. Sharafat**, and M. Bennis, "Fast MIMO Beamforming via Deep Reinforcement Learning for High Mobility mmWave Connectivity," *IEEE Journal on Selected Areas in Communications*, vol. 40, no. 1, pp. 127-142, January 2022.
4. M. Tajallifar, **A. R. Sharafat**, and H. Yanikomeroglu, "QoS-Aware Hybrid Beamforming with Minimal Power in mmWave Massive MIMO Systems," *IEEE Access*, vol. 9, pp. 164668-164680, April 2021.

Recent Reports:

1. **Shaping Education for Tomorrow.** This is a comprehensive report commissioned by the Innovation and Entrepreneurship Alliance for Digital Development, International Telecommunication Union (Geneva, Switzerland), 2025.
2. **Digital Transformation for Sustainable Development: A Compendium of Trend Research Topics.** This is a comprehensive report commissioned by the Innovation and Entrepreneurship Alliance for Digital Development, International Telecommunication Union (Geneva, Switzerland), 2024.
3. **Shaping the Ecosystem of Artificial Intelligence, Machine Learning, and Smart Systems in Iran.** This is a comprehensive report commissioned by the Iranian Academy of Sciences and published in March 2023. Other coauthors are Prof. H. R. Rabiee (Sharif University of Technology), Prof. M. Nili AhmadAbadi (University of Tehran), Prof. H. R. SafaBakhsh (AmirKabir University of Technology), and Prof. K. Badie (Iran ICT Research Institute).

Books:

1. **Ahmad R. Sharafat** and William H. Lehr, *ICT-Centric Economic Growth, Innovation, and Job Creation*, ITU, Geneva, Switzerland, 2017.
2. Saeedeh Parsaeefard, **Ahmad R. Sharafat**, and Nader Mokari, *Robust Resource Allocation in Future Wireless Networks*, Springer-Nature, Cham, Switzerland, 2017.

International Patents:

1. **Ahmad R. Sharafat** and Mohsen Tajallifar, "Hybrid Beamforming in Communication Systems," US Patent 11,258,498 B2 - Patent Granted 22 February 2022.
2. **Ahmad R. Sharafat** and Saeed Rezajoo, Method and Apparatus for Real-Time and Robust Starin Imaging," US Patent 9,687,213 B2 - Patent Granted 27 June 2017.

Book Under Preparation:

1. **Artificial Intelligence / Machine Learning (AI/ML) in Communication Systems, Networks, and Platforms.**