Pedram Kheirkhah Sangdeh

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EDUCATION

University of Tehran **Tehran, Iran**

Master of Science in Electrical Engineering, Telecommunication Systems 2011 – 2014

- **GPA: 15.48/20.00**
- **Thesis:** "Impact of Channel State Information at Transmitters (CSIT) in Interference Alignment with Relays" (18.5/20)
- **Advisors:** Dr. Mahtab Mirmohseni, Dr. Mohammad Ali Akhaee
- **Related coursework: "**Network Information Theory", "Information Theory", "Coding Theory", "Wireless Communication", "System Identification", "Digital Signal Processing", "Digital Communication", "Numerical Optimization (Audited)", "Cryptography (Audited)", "Estimation Theory", "Stochastic Process"

Iran University of Science and Technology **Tehran, Iran**

Bachelor of Science in Electrical Engineering 2006 – 2011

- **GPA: 15.60/20.00**
- **Thesis:** "A Novel Routing Protocol in Wireless Sensor Network Based on LEACH Protocol" (19.75/20)
- **Advisor:** Dr. Abolfazl Falahati
- **Related coursework:** "Computer Architecture", "Programming", "Linear Algebra", "Telecommunication Systems", "Antenna", "Microwave", "Filters", "Signals and Systems", "Telecommunication Circuits"

RESEARCH INTERESTS

- Network Information Theory
- Communication Theory
- Optimization and Resource Allocation
- Networking
- Wireless Sensor Networks
- Physical Layer Secrecy and Cryptography
- Digital Signal Processing and Estimation Theory

HONORS AND AWARDS

- Nomination for the best paper award in 23rd Iranian Conference on Electrical Engineering, May 2015.
- **Ranked 51st** among more than 30,000 participants in the M.Sc. nationwide entrance examination of Iranian universities, September 2011.
- The Best Student Award in Electrical Engineering, 2006-2007 educational season in Iran University of Science and Technology (IUST).
- **Ranked 67th** among more than 270,000 participants in the nationwide entrance examination of Iranian universities, July 2006.
- Member of Iranian National Elite Foundation, 2006 - present.

PUBLICATIONS

1. **P. K. Sangdeh**, M. Mirmohseni and B. Akhbari, "A systematic blind interference alignment for k-user SISO interference channel", *submitted to IET Communication-Under review.*
2. **P. K. Sangdeh**, M. Mirmohseni, "Reliable energy-efficient Byzantine agreement in wireless sensor networks", *Ready for submission to IET Networks.*

3. **P. K. Sangdeh**, M. Mirmohseni and F. Poursabzi, "Applying the Byzantine agreement in wireless sensor networks based on clustering", *the 23rd Iranian Conference on Electrical Engineering(ICEE)*, Tehran, Iran**,** May. 2015.
4. **P. K. Sangdeh**, M. Mirmohseni and M. A. Akhaee, " Interference alignment for two-user two-hop interference X-channel with delayed and no CSIT", *International Congress on Ultra- Modern Telecommunications and Control Systems (ICUMT)*, St. Petersburg, Russia, Oct. 2014.
5. **P. K. Sangdeh**, M. Mirmohseni and M. A. Akhaee, " Blind interference alignment for three-user multi-hop SISO interference channel", *International Congress on Ultra-Modern Telecommunications and Control Systems (ICUMT)*, St. Petersburg, Russia, Oct. 2014.

PROFESSIONAL SERVICE

Technical Program Committee and Reviewer

- International Conference on Computers, Data Management and Technology Applications (ICCDMTA), Cairo, Egypt, 28-29 January, 2017.
- Global Summit on Computer and Information Technology (GSCIT), Sousse, Tunisia, 16-18 July, 2016.
- IEEE International Circuits and Systems Symposium (ICSyS), Langkawi, Malaysia, 2-4 September, 2015.
- Global Summit on Computer and Information Technology (GSCIT), Sousse, Tunisia, 11-13 June, 2015.
- International Conference on Signal Processing and Data Mining (ICSPDM), Istanbul, Turkey, 26-28 July 2015.

Teaching Assistantship

- Mathematic I — Iran University of Science and Technology
  Instructor: Dr. Morteza Ebrahimi — Fall 2007
- Mathematic II — Iran University of Science and Technology
  Instructor: Dr. Morteza Ebrahimi — Spring 2008
- Communication Systems — Iran University of Science and Technology
  Instructor: Dr. Abolfazl Falahati — Fall 2010
- Probability and Statistic — Sharif University of Technology
  Instructor: Dr. Mahtab Mirmohseni — Fall 2013

Selected Course Projects and Seminars

- Wireless sensor network lifetime maximization — Iran University of Science and Technology
  Advisor: Dr. Abolfazl Falahati — 2010-2011
- Network coding with a cost criterion — University of Tehran
  Advisor: Dr. Farshad Lahouti — 2011
- Information-theoretic capacity of clustered networks — University of Tehran
  Advisor: Dr. Farshad Lahouti — 2012
- Relay channel with causal and non-causal channel state information — University of Tehran
  Advisor: Dr. Mahtab Mirmohseni — 2013-2014

SKILLS

- **Languages:** Persian (Native)
  English (Fluent): **TOEFL IBT : 100 (R: 28 – L: 26 – S: 22 – W:24)**
  GRE : 322 (QR: 170 – VR: 152 – AW: 3.5)
- **Programing languages and simulators:** C/C++, MATLAB, NS2, OMNeT++

REFERENCES

- Dr. Mahtab Mirmohseni (Assistant Professor in Sharif University of Technology)
  Email: Mirmohseni@sharif.edu
- Dr. Farshad Lahouti (Visiting Faculty in California Institute of Technology)
  Email: lahouti@caltech.edu
- Dr. Morteza Ebrahimi (Assistant Professor in University of Tehran)
  Email: Mo.ebrahimi@ut.ac.ir
- Dr. Abolfazl Falahati (Professor in Iran University of Science and Technology)
  Email: Afalahati@iust.ac.ir