

Amir Zarei

PhD Candidate,
Department of Information Security and Communication Technology,
Norwegian University of Science and Technology (NTNU)
Email: amir.zarei@ntnu.no
Call Number: 047 40962197



EDUCATION

2020 – present

PhD Candidate of Information Security and Communication Technology
Norwegian University of Science and Technology, Norway

Thesis Abstract: A theoretical research on how to efficiently use population data under privacy constraints. The research has been planned to investigate the implementation of privacy constraints in terms of modern definitions of privacy. These, exemplified by Differential Privacy, are defined in terms of properties of randomized data access/query algorithms. This allows quantitative analysis of the inherent risk – benefit trade-offs associated with data privacy.

Supervisor: Prof. Staal A. Vinterbo

2015 - 2018

M.Sc. of Computer Science

Institute for Advanced Studies in Basic Sciences, Zanjan, Iran

Master's GPA: 17.14/20

Thesis Abstract: We investigated Sparse Network Coding (SNC) as a mechanism to improve the performance of real-time multimedia applications in terms of Average Decoding Delay (ADD). We showed that the SNC reduces the ADD per packet in compared with Random Linear Network Coding, and establishes a trade-off between ADD and the number of total transmissions by choosing an appropriate the size of finite field.

Supervisors: Prof. Peyman Pahlavani and Mansoor Davoodi Monfared

Score: 19.90/20

2010 - 2014

B.Sc. of Computer Software Engineering

University of Ilam, Ilam, Iran

Bachelor's GPA: 14.57/20

RESEARCH INTEREST

- Wireless Communications
- Privacy Preserving
- Differential Privacy
- Error Correction Codes

PUBLICATION

- **Title:** On the Partial Decoding Delay of Sparse Network Coding

Author: A. Zarei, P. Pahlevani, and M. Davoodi

Publisher: IEEE Communications Letters, May, 2018

Link: <https://ieeexplore.ieee.org/document/8364597>

- **Title:** An Analytical Model for Sparse Network Coding

Author: A. Zarei, P. Pahlevani, and D. E. Lucani

Publisher: IEEE Communications Letters, January, 2020

Link: <https://ieeexplore.ieee.org/document/8957070>

- **Title:** Sparse Network Coding for Real-Time Applications

Author: A. Zarei and P. Pahlevani

Under review in Computing Science Journal (CSJ)

COMPUTER SKILLS

Languages

C/C++, C#, Java, Python

Platforms

Linux, Windows

TEACHING EXPERIENCE

Winter 2016

Teacher Assistant, Computer Networks, Institute for Advanced Studies in Basic Sciences

Spring 2017

Teacher Assistant, Advanced Computer Networks, Institute for Advanced Studies in Basic Science

Instructive Activities

Participations

- Visiting researcher at Aarhus University under supervision of Prof. Daniel E. Lucani. March 22- June 19, 2018
- 5th Iran Workshop on Communication and Information Theory (IWCIT), Sharif University, Iran, May 2017.
(Keynote Speakers: Prof. Andrea Goldsmith, Prof. Michael Honig and Prof. Gerhard Kramer)

Memberships

- Robotic and Computational Geometry Laboratory (Robo-CG) and Wireless Communication Laboratory (WCL), Institute for Advanced Studies in Basic Sciences, Zanzan, Iran
- Agile Cloud Laboratory, Aarhus university, Aarhus, Denmark

Reviewer

- IEEE Communication Letters
- IEEE ACCESS

LANGUAGES

- ***English:*** Advanced
- ***Persian:*** Native
- ***Lahi:*** Mother tongue

Honors/ Awards

- Member of Iran's National Elites Foundation.
- Awarded Screening grant (24000 DKK for three months), Aarhus University, Denmark.
- Graduated with First Class Honor, Ranked 1st Best master thesis grade among all 25 entered Computer Science students at IASBS University.

REFERENCES

Supervisor

- **Prof. Staal A. Vinterbo**
Professor
Department of Information Security and Communication Technology
Norwegian University of Science and Technology, Gjøvik, Norway
Staal.vinterbo@ntnu.no
<https://www.ntnu.edu/employees/staal.vinterbo>

Supervisor

- **Prof. Peyman Pahlevani**
Assistant Professor
Department of Computer Science and Information Technology
Institute for Advanced Studies in Basic Sciences, Zanzan, Iran
Tel: (+98) 24-3315 3436
pahlevani@iasbs.ac.ir
<http://www.iasbs.ac.ir/~pahlevani/>

Supervisor

- **Prof. Daniel E. Lucani**
Associate Professor
Department of Department of Engineering - Communications Systems
Aarhus University, Aarhus, Denmark
Tel: (+45) 93508763
daniel.lucani@eng.au.dk
<http://pure.au.dk/portal/en/daniel.lucani@eng.au.dk>

Supervisor

- **Prof. Mansoor Davoodi Monfared**
Assistant Professor
Department of Computer Science and Information Technology
Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
Tel: (+98) 24-3315 3376
mdmonfared @iasbs.ac.ir
<http://www.iasbs.ac.ir/~mdmonfared>