Hoomaan Hezave Hesar Maskan

Resume vitae

Education

2013–2017 **B.sc in Electrical and Electronics Engineering**, *Iran University of Science and Technology*, Tehran, *GPA:15.99 out of 20*

2017–2019 **M.sc in Telecommunication Engineering**, *Iran University of Science and Technology*, Tehran, *GPA:18.38 out of 20*

2020–present **PhD in Mathematical Statistics**, *Umeå University*, Sweden

Research Interests

1 Optimization(Convex or Non-convex)
2 Difference of Convex Programming
3 Bayesian Inference Using Probabilistic Circuits
4 Convex-Concave Procedure (CCCP)
5 Sparse theory(Compressed Sensing and Super-Resolution)
4 Learning Algorithms
6 Inverse problems
7 Optimization on Manifolds
8 Accelerated algorithms
9 Stochastic methods in machine learning

Research Experience

2016–2017 **MRI Reconstruction using Hankel Matrix Completion**, *B.sc Final Project*,

Detailed Achievements:
- Achievement 1: Handling and processing MRI data
- Achievement 2: Learned compressed sensing and matrix completion
  - Sub-achievement (a): Selected Super-Resolution for my future studies.
- Achievement 3: Optimisation using ADMM
- Achievement 4: Learned image processing techniques

Tvistevägen 11A – Umeå – Sweden
+46 (73) 388 3343
hoomaan.maskan@umu.se,hoomaanhezaveh@yahoo.com
hoomyhh.github.io/ • *Hoomaan Hezaveh* • *hoomyhh*
Hoomaan Hezaveh

2016–2020 **Research Assistant in SSM Laboratory**, *Iran University of Science and Technology*, Blind Super-resolution & manifolds,

2020–present **PhD Student**, *Umeå University*, Sweden, Accelerated methods in optimization

2020–present **Research Assistant**, *Umeå University*, Sweden, Statistical Learning and Inference for Spatio-Temporal Data

2023 **Research Visit**, *Edinburgh University*, Scotland, Prof. K.Zygalakis

Achievements

Bachelor , *Secured 1113th rank in Iran University Entrance Exam out of 251956 students appeared*,
, Secured 12th rank in Iran University of Science and Technology (Department of Electrical Engineering) out of 120 B.sc. students appeared

Master , *Secured 434th rank in M.sc Entrance Exam out of 30288 students appeared*,
, Secured 1st rank in Iran University of Science and Technology (Department of Electrical Engineering) out of 44 M.sc. students appeared

PhD , *I was awarded 100,000 SEK from VetenskapsRådet for a research visit to the United Kingdom*

PhD , *I was awarded 30,000 SEK from Wallenberg Foundation to attend and present my research in Neurips 2023*

Publications

[1] Hoomaan Maskan Alp Yurtsever, Konstantinos C Zygalakis. Variational perspective on high-resolution odes. *Neurips*, 2023 (preliminarily accepted).

[2] Hoomaan Maskan Konstantinos C Zygalakis Alp Yurtsever, Armin Eftekhari. Revisiting high-resolution odes for faster convergence rates. *ICLR*, 2023 (Under Review).

[3] Hoomaan Hezave, Milad Javadzadeh, and Mohammad Hossein Kahaei. Sparse signal reconstruction using blind super-resolution with arbitrary sampling. *IEEE Signal Processing Letters*, 27:615–619, 2020.

[4] Hoomaan Hezaveh, Iman Valiulahi, and Mohammad Hossein Kahaei. Incorporation of prior knowledge into sparse time dispersive ofdm channel estimation via weighted atomic norm minimisation. *IET Communications*, 14(11):1704–1708, 2020.

[5] Milad Javadzadeh Jirhandeh, Hoomaan Hezaveh, and Mohammad Hossein Kahaei. Super-resolution doa estimation for wideband signals using non-uniform linear arrays with no focusing matrix. *IEEE Wireless Communications Letters*, 11(3):641–644, 2021.

[6] Hoomaan Maskan, Sajad Daei, and Mohammad Hossein Kahaei. Demixing sines and spikes using multiple measurement vectors. *Signal Processing*, 203:108786, 2023.

Tvistevägen 11A – Umeå – Sweden
+46 (73) 388 3343
hoomaan.maskan@umu.se,hoomaanhezaveh@yahoo.com
hoomyhh.github.io/ • *Hoomaan Hezaveh* • *hoomyhh*
Hoomaan Hezaveh

Talks

Aug, 2023 , *Revisiting High-Resolution ODEs for Faster Convergence Rates*, Corvinus University

Jun, 2023 , *A Variational Perspective on High-Resolution ODEs*, Imperial College London

Feb, 2023 , *Revisiting High-Resolution ODEs for Faster Convergence Rates*, JSS Seminars (Umeå University)

Teaching Experience

2018 **Teacher Assistant**, *Iran University of Science and Technology*, Tehran, T.A for Discrete Signal Processing

2019 **Teacher Assistant**, *Iran University of Science and Technology*, Tehran, T.A for Estimation Theory

2021-2022-2023 **Teacher Assistant**, *Umeå University*, Sweden, Statistik för teknologer
4 times

2023 **Pedagogical Studies**, *Umeå University*, Sweden, New as University Teacher (Ny som lärare)

2023 **Teacher and Assistant**, *Umeå University*, Sweden, Digital Signal Processing (Transform Methods)

Master's thesis

title *Blind Super-resolution using Arbitrary Sampling*

Supervisors M.H.Kahaei

description Incorporating arbitrary sampling scheme in blind super-resolution.

Computer skills

Programming Python,MATLAB,R

Others Github,Microsoft Office

Languages

Persian Native

English Fluent

German Basic

Swedish Basic

Tvistevägen 11A – Umeå – Sweden
+46 (73) 388 3343
hoomaan.maskan@umu.se,hoomaanhezaveh@yahoo.com
hoomyhh.github.io/ • *Hoomaan Hezaveh* • *hoomyhh*
Hoomaan Hezaveh

References

- Alp Yurtsever (PhD Advisor)
  Assistant Professor at Umeå University , alp.yurtsever@umu.se
- Armin Eftekhari (PhD Advisor)
  Assistant Professor at Umeå University , armin.eftekhari@gmail.com
- Konstantinos Zygalakis (Collaborator)
  Associate Professor at Edinburgh University , kzygalak@exseed.ed.ac.uk
- Mohammad Hossein Kahaei (Master's Advisor)
  Associate Professor at Iran university of Science and Technology, kahaei@iust.ac.ir
- Hooman Hezaveh (Brother)
  Researcher at Australian National University, hooman.hezaveh@anu.edu.au

Tvistevägen 11A – Umeå – Sweden
+46 (73) 388 3343
hoomaan.maskan@umu.se,hoomaanhezaveh@yahoo.com
hoomyhh.github.io/ • *Hoomaan Hezaveh* • *hoomyhh*
Hoomaan Hezaveh