

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

🌐 hoomyyhh.github.io/ • [in Hoomaan Hezaveh](#) • [hoomyyhh](#)

📄 [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

🌐 hoomyyhh.github.io/ •  [in Hoomaan Hezaveh](#) •  [hoomyyhh](#)

📄 [Hoomaan Hezaveh](#)

Responsibilities

- 2022– present , *Member of PhD Student Council in Umeå University, NTK*
2022– present , *Umeå University representative in WASP PhD Student Council*

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

🌐 hoomyyhh.github.io/ • [in](#) 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

Twistevägen 11A – Umeå – Sweden

☎ +46 (73) 388 3343

✉ hoomaan.maskan@umu.se, hoomaanhezaveh@yahoo.com

🌐 hoomyhh.github.io/ • **in** Hoomaan Hezaveh •  [hoomyhh](https://github.com/hoomyhh)

📄 Hoomaan Hezaveh