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/* • **in** *Hoomaan Hezaveh* • ⌂ *hoomyhh*
ℝᴳ *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	**Entry Exam & Ranking**, *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	**Entry Exam & Ranking**, *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	**Funding**, *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/* • in *Hoomaan Hezaveh* • ⓞ *hoomyhh*

ℝᴳ *Hoomaan Hezaveh*

Responsibilities

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

Talks

Aug, 2023	**Corvinus University**, *Revisiting High-Resolution ODEs for Faster Convergence Rates*
Jun, 2023	**Imperial College London**, *A Variational Perspective on High-Resolution ODEs*
Feb, 2023	**JSS Seminars**, *Revisiting High-Resolution ODEs for Faster Convergence Rates*, 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/* • **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

Tvistevägen 11A − Umeå − Sweden
☐ +46 (73) 388 3343
✉ hoomaan.maskan@umu.se,hoomaanhezaveh@yahoo.com
🌐 hoomyhh.github.io/ • in Hoomaan Hezaveh • ⓞ hoomyhh
ℝᴳ Hoomaan Hezaveh