

Hoomaan Hezave Hesar Maskan

Resume vitae

Education

- 2020–present **PhD in Mathematical Statistics**, *Umeå University, Sweden*
- 2017–2019 **M.sc in Telecommunication Engineering**, *Iran University of Science and Technology, Tehran, GPA:18.38 out of 20*
- 2013–2017 **B.sc in Electrical and Electronics Engineering**, *Iran University of Science and Technology, Tehran, GPA:15.99 out of 20*

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

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

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Hoomaan Hezaveh

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.

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



Research Experience

- 2016–2020 **Research Assistant in SSM Laboratory**, *Iran University of Science and Technology*, Blind Super-resolution & manifolds,
 - Processing MRI data
 - Compressed sensing and matrix completion
 - Optimization using ADMM
 - Image processing
- 2020–present **Research Assistant**, *Umeå University*, Statistical Learning and Inference for Spatio-Temporal Data,
 - Machine Learning
 - Scalable/Distributed Learning
 - Optimization Theory
 - Natural Language Processing
- 2023 **Research Visit**, *Edinburgh University*, Scotland, Prof. K.Zygalakis

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

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Pedagogical Studies

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

Achievements

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

Responsibilities

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

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

Computer skills

Programming Python, MATLAB, R

Others Github, Microsoft Office

Languages

Persian Native

English Fluent


German Basic

Swedish Basic

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

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