Marie Maros

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Current Appointment

Purdue University   West Lafayette, IN
Postdoctoral Fellow   9/2021-Present
Adviser: Prof. Gesualdo Scutari
Lillian Gilbreth Postdoctoral Fellow   9/2019-9/2021
Advisers: Prof. Gesualdo Scutari and Prof. Guang Cheng

Education

KTH Royal Institute of Technology   Stockholm, Sweden
Ph.D. in Electrical Engineering   9/2014-8/2019
Title: "Distributed Optimization in time-varying environments"
Adivser: Prof. Joakim Jaldén
Oponent: Prof. Alex Olshevsky
Committee: Prof. François Glineur, Prof. Geert Leus, and Prof. Kostas Margellos
KTH Royal Institute of Technology   Stockholm, Sweden
Double Degree Program, B.Sc. and M.Sc in EE   9/2012-4/2014
ETSETB, UPC   Barcelona, Spain
B.Sc. and M.Sc with honors in EE   9/2008-4/2014

Pre-prints

(1) **M. Maros**, G. Scutari, "Decentralized algorithms for sparse high-dimensional M-estimation", *submitted to Journal of Machine Learning Research (JMLR)*.

(2) Y. Sun, **M. Maros**, G. Scutari, G. Cheng, "High-dimensional inference over networks: Linear convergence and statistical guarantees," *submitted to Journal of Machine Learning Research (JMLR)*, https://arxiv.org/abs/2201.08507.

Publications

(1) **M. Maros**, G. Scutari, "Decentralized Matrix Sensing: Statistical Guarantees and Fast Convergence," *accepted to Conference on Neural Information Processing Systems 2023 (NeurIPS2023)*, acceptance rate 26.1%.

(2) **M. Maros**, G. Scutari, "A unified view of decentralized algorithms for sparse linear regression," *accepted to the IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing 2023 (CAMSAP 2023)*.

(3) **M. Maros**, G. Scutari, "DGD^2 : A Linearly Convergent Distributed Algorithm for High-dimensional Statistical Recovery," *Conference on Neural Information Processing Systems 2022 (NeurIPS2022)*, acceptance rate 25.6%.

(4) **M. Maros**, G. Scutari, "Acceleration in Distributed Sparse Regression," *Conference on Neural Information Processing Systems 2022 (NeurIPS2022)*, acceptance rate 25.6%.

(5) **M. Maros**, J. Jaldén, "A geometrically converging dual method for distributed optimization on time-varying graphs," *IEEE Trans. on Automatic Control* vol. 66, no. 6, pp. 2465-2479.

(6) **M. Maros**, J. Jaldén, "On the Q-linear convergence of distributed generalized ADMM under non-strongly convex function components," *IEEE Trans. on Signal and Information Processing over Networks,* vol. 5, no. 3, pp. 442-453.

(7) **M. Maros**, J. Jaldén, "ECO-PANDA: a computationally economic, geometrically converging dual optimization method on time-varying undirected graphs," *IEEE International Conference on Acoustics, Speech, and Signal Processing 2019 (ICASSP2019).*

(8) **M. Maros**, J. Jaldén, "A dual linearly converging method for distributed optimization over time-varying undirected graphs," *IEEE Conference on Decision and Control 2018 (CDC2018).*

(9) **M. Maros**, J. Jaldén, "ADMM for distributed dynamic beamforming," *IEEE Trans. on Signal and Information Processing over Networks,* vol. 4, no. 2, pp. 220-235.

(10) **M. Maros**, J. Jaldén, "Dynamic Power Allocation for Smart Grids via ADMM," *IEEE International Workshop on Signal Processing Advances in Wireless Communication 2018, (SPAWC2018)).*

US Funding Experience

Contributed to the genesis and writing of the following proposals (with full responsibility of half of the thrusts of the proposals)

- NSF-CCF: (PI Prof. Gesualdo Scutari) on the interplay between distributed optimization and high dimensional statistics

- ONR: (PI Prof. Gesualdo Scutari, based on a white paper) on online decentralized optimization.

- ARO: (PI Prof. Gesualdo Scutari, based on a white paper) on distributed algorithms for non-convex statistical inference.

Teaching Experience

- Spring 2019: Teaching Assistant for EN2300/FEN3202 Pattern Recognition and Machine learning with Prof. Saikat Chatterjee, at KTH Royal Institute of Technology.

- Fall of 2014, 2015, 2016 and 2017: Teaching Assistant for EQ1220 Signal Theory with Prof. Tobias Oecthering, at KTH Royal Institute of Technology.

Awards and Honors

- 2018 Englom Foundation Travel Award, SEK 60000 ($\approx$ 6000 USD).

- 2018 Gålöstiftelsen Travel Award, SEK 12000 ($\approx$ 1200 USD).

- 2012 ERASMUS exchange studies scholarship, EUR600 ($\approx$ 600 USD).

- 2009 ETSTB-UPC Award for top 10 first year students.

- 2008 Bank Caixa Manresa Scholarship EUR 1000 ($\approx$ 1000 USD) for top grades on national access to university tests

Professional Service

- Reviewer for Elsevier Signal Processing

- Reviewer for IEEE Transactions on Automatic Control

- Reviewer for IEEE Transactions on Smart Grid

- Reviewer for IEEE Transactions on Information and Signal Processing over Networks

- Reviewer for IEEE Transactions on Signal Processing

- Reviewer for JMLR

- Reviewer for SIAM Optimization

- Reviewer for ICML 2022

- Reviewer for NeurIPS 2023

- Reviewer for ICLR 2024

Additional Experience

- 9/2018-2/2019: Visiting student at ASU Arizona State University, under the supervision of Prof. Angelia Nedić.

References

Prof. Gesualdo Scutari	Prof. Guang Cheng	Prof. Joakim Jaldén
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