

Curriculum Vitae

Michal Yemini

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Current Position Assistant professor,
Faculty of Engineering, Bar-Ilan University, Israel.

Education

2017 PhD in Electrical Engineering, Bar-Ilan University,
(joint MSc-PhD program).

2013 MSc in Electrical Engineering, Bar-Ilan University,
(joint MSc-PhD program).
Cum laude (highest distinction in the joint MSc-PhD track).

2010 BSc in Computer Engineering, Technion – Israel Institute of Technology.
Awarded by the Faculty of Electrical Engineering.

Awards and Honors

2023 Co-winner of the Zuckerman Travel and Research STEM Fund at Harvard University.

2017 The Eric and Wendy Schmidt Postdoctoral Award for Women in Mathematical and Computing Sciences.

2017 Council of Higher Education's Postdoctoral Fellowships Program for Outstanding Women in Science.

2017 Bar-Ilan University's Postdoctoral Fellowship for Women.

2016 Student travel grant for the International Symposium on Information Theory- ISIT 2016 (non-competitive).

2015 Travel award for the Graduate Summer School: Games and Contracts for Cyber-Physical Security, UCLA, USA (IPAM GSS2015).

2014 BIU Rector's list for excellence.

2013-2016 BIU President's Fellowship.

Previous Positions

11.2022-10.2023 Visiting Research Collaborator, Department of Electrical and Computer Engineering, Princeton University, USA.

2.2021-10.2022 Associate research scholar at Princeton University.

9.2020-1.2021 Visiting postdoctoral researcher at Princeton University.

11.2017-1.2021 Postdoctoral researcher at Stanford University.

2012-2017 Recitation instructor and teaching assistant.

2014-2015 Researcher in a research group led by Prof. Amir Leshem and Prof. Ephraim Zehavi. This group studied methods for resource allocation in future wireless networks, as part of the NEPTUNE consortium.

Research Group

PhD Students

- Maya Gohfeld
- Yehuda Rudin (co-advised with Alexander Fish)

MSc Students

- Benaya Hazan
- Shai Hermon
- Idan Uri
- Hannah Fassi (co-advised with Nir Weinberger)
- Yafit Dajan (co-advised with Reuven Cohen)
- Ron Malka (co-advised with Nisan Ozana)

Teaching

Course Instructor [2024–present]

2024-2025 Seminar on distributed optimization and learning.
2025 Introduction to probability.
2025 Projects in Data Science.

Teaching Assistant [2012–2017]

2014-2017 Information Theory.
2013-2016 Statistical Signal Processing 2 - Estimation and Detection Theory.
2014-2017 Random Processes (homework grader).
2013 Signals and Systems.
2012-2013 Microcontroller Laboratory.
2012 Microprocessors and assembly language.

Service

Technical Reviewer: Journals

- Automatica
- IEEE Transactions on Automatic Control
- IEEE Control Systems Letters Submission
- IEEE Transactions on Control of Network Systems
- IEEE Transactions on Robotics
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Communications

- IEEE Transactions on Mobile Computing
- IEEE Transactions on Signal Processing
- IEEE Open Journal of Signal Processing
- Optimization Methods and Software
- Statistics and Probability Letters
- AIMS Mathematics

Technical Reviewer: CS Conferences and Workshops

PC = Program Committee

- Workshop on Privacy Regulation and Protection in Machine Learning at ICLR 2024 (**PC**)
- Federated Learning and Analytics in Practice: Algorithms, Systems, Applications, and Opportunities Workshop at ICML 2023 (**PC**)
- International Workshop on Federated Learning: Recent Advances and New Challenges (in Conjunction with NeurIPS) 2022 (**PC**)
- Innovations in Theoretical Computer Science (ITCS), 2023

Technical Reviewer: IEEE Conferences

- American Control Conference (ACC), 2023, 2025
- IEEE Conference on Decision and Control (CDC), 2024
- IEEE International Symposium on Information Theory (ISIT), 2021- 2024
- IEEE Global Communications Conference (GLOBECOM), 2020-2021
- IEEE International Conference on Communication (ICC), 2020
- IEEE Global Conference on Signal and Information Processing (GlobalSIP), 2015

Additional Service

- Invited session co-organizer: Robust Distributed Optimization, Estimation, and Coordination in Multi-Agent Systems - CDC 2022
- Session chair: Communication and Coding (I and II) - CISS 2022
- A co-founder and committee member of the Princeton AI Club - 2022
- Reviewer for the IEEE Pre-University STEM Grant - 2024

Publications

Journal Papers and Full CS Conference Papers

Preprints and Submitted Papers

1. L. Ballotta, A. Vekassy, S. Gil, and M. Yemini, “Friedkin-Johnsen model with diminishing competition” - submitted. Preprint: arXiv:2409.12601.
2. A. K. Day*, O. E. Akgün*, S. Gil, M. Yemini and A. Nedić, “Fast Distributed Optimization over Directed Graphs under Malicious Attacks using Trust” - submitted. Preprint: arXiv:2407.06541.

3. Q. Li, M. Yemini and H. T. Wai, “Clipped SGD Algorithms for Privacy Preserving Performative Prediction: Bias Amplification and Remedies” - submitted. Preprint: arXiv:2404.10995
4. S. Gil., M. Yemini, A. Chorti, A. Nedić, H. V. Poor and A. J. Goldsmith, “How physicality enables trust: a New Era of trust-centered cyberphysical systems” - submitted. Preprint: arXiv:2311.07492.

Published/ In Press Papers

1. M. Yemini, Nedić, A. J. Goldsmith and S. Gil, “Resilient distributed optimization for multi-agent cyberphysical systems” - accepted for publication in the IEEE Transactions on Automatic Control, 2024.
2. R. Saha, M. Seif, M. Yemini, A. J. Goldsmith and H. V. Poor, “Privacy preserving semi-decentralized mean estimation over intermittently-connected networks” - accepted for publication in the IEEE Transactions on Signal Processing, 2024.
3. M. Cavorsi, O. E. Akgün, M. Yemini, A. J. Goldsmith and S. Gil, ”Exploiting trust for resilient hypothesis testing with malicious robots,” IEEE Transactions on Robotics, vol. 40, pp. 3514-3536, 2024 (evolved version).
4. M. Yemini, R. Saha, E. Ozfatura, D. Gündüz and A. J. Goldsmith, “Robust Semi-Decentralized Federated Learning via Collaborative Relaying,” IEEE Transactions on Wireless Communications, vol. 23, no. 7, pp. 7520-7536, July 2024.
5. N. Weinberger, M. Yemini, “Multi-armed bandits with self-information rewards,” IEEE Transactions on Information Theory, vol. 69, no. 11, pp. 7160-7184, November 2023.
6. M. Yemini, S. Gil and A. J. Goldsmith, “Cloud-cluster architecture for detection in intermittently connected sensor networks,” IEEE Transactions on Wireless Communications, vol. 22, no. 2, pp. 903-919, February 2023.
7. T. Gafni, M. Yemini and K. Cohen, “Learning in restless bandits under exogenous global Markov process,” IEEE Transactions on Signal Processing, vol. 70, pp. 5679-5693, 2022.
8. M. Yemini, A. Nedić, A. J. Goldsmith and S. Gil, “Characterizing trust and resilience in distributed consensus for cyberphysical systems,” IEEE Transactions on Robotics, vol. 38, no. 1, pp. 71-91, February 2022.
9. M. Yemini and A. J. Goldsmith, “Virtual cell clustering with optimal resource allocation to maximize capacity,” IEEE Transactions on Wireless Communications, vol. 20, no. 8, pp. 5099-5114, August 2021.
10. M. Yemini, A. Somekh-Baruch and A. Leshem, “The restless hidden Markov bandit with linear rewards,” IEEE Transactions on Signal Processing, vol. 69, no. 21, pp. 1108-1123, January 2021.
11. M. Yemini, A. Somekh-Baruch, R. Cohen and A. Leshem, “The simultaneous connectivity of cognitive networks,” IEEE Transactions on Information Theory, vol. 65, no. 11, pp. 6911-6930, November 2019.
12. A. Leshem and M. Yemini, “Phase noise compensation for OFDM systems,” IEEE Transactions on Signal Processing, vol. 65, no. 21, pp. 5675-5686, November 2017.

13. M. Yemini, A. Zappone, E. Jorswieck and A. Leshem, "Energy efficient bidirectional massive MIMO relay beamforming," *IEEE Signal Processing Letters*, vol. 24, no. 7, pp. 1010-1014, July 2017.
14. M. Yemini, A. Somekh-Baruch and A. Leshem, "On the multiple access channel with asynchronous cognition," *IEEE Transactions on Information Theory*, vol. 62, no. 10, pp. 5643-5663, October 2016.
15. M. Yemini, A. Somekh-Baruch and A. Leshem, "Asynchronous transmission over single-user state-dependent channels," *IEEE Transactions on Information Theory*, vol. 61, no. 11, pp. 5854-5867, November 2015.

Conference Papers

Conference Papers with Proceedings

1. Y. Rudin, O. Keren, M. Yemini, and A. Fish, "Hardware implementation of an adaptive finite state machine utilizing Tsetlin machine," *International Symposium on the Tsetlin Machine (ISTM)*, 2024.
2. L. Ballotta and M. Yemini, "The Role of Confidence for Trust-Based Resilient Consensus," *American Control Conference (ACC)*, 2024. **(Invited.)**
3. R. Saha, M. Seif, M. Yemini, A. J. Goldsmith, and H. V. Poor, "Collaborative Mean Estimation over Intermittently Connected Networks with Peer-To-Peer Privacy," *IEEE International Symposium on Information Theory (ISIT)*, 2023.
4. M. Cavorsi, O. E. Akgün, M. Yemini, A. J. Goldsmith and S. Gil, "Exploiting trust for resilient hypothesis testing with malicious robots," *IEEE Conference on Robotics and Automation (ICRA)*, 2023.
5. M. Yemini, A. Nedić, S. Gil, and A. J. Goldsmith, "Resilience to malicious activity in distributed optimization for cyberphysical Systems", *IEEE Conference on Decision and Control*, December (CDC), 2022. **(Invited.)**
6. M. Yemini, R. Saha, E. Ozfatura, D. Gündüz and A. J. Goldsmith, "Semi-centralized over-the-air federated learning with intermittent client connections," *Proceedings of the IEEE International Symposium on Information Theory (ISIT)*, 2022.
7. N. Weinberger, M. Yemini, "Upper Confidence Interval Strategies for Multi-Armed Bandits with Entropy Rewards," *Proceedings of the IEEE International Symposium on Information Theory (ISIT)*, 2022.
8. T. Gafni, M. Yemini and K. Cohen, "Restless multi-armed bandits under exogenous global Markov process," *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing*, 2022.
9. M. Yemini, E. Erkip and A. J. Goldsmith "Interference reduction in virtual cell optimization," *Proceedings of the IEEE Asilomar Conference on Signals, Systems, and Computers*, October-November, 2021.
10. M. Yemini, S. Gil and A. J. Goldsmith "Exploiting local and cloud sensor fusion in intermittently connected sensor networks," *Proceedings of the 2020 IEEE Global Communications Conference (GLOBECOM)*, Taipei, Taiwan, 2020.
11. M. Yemini, A. Leshem and A. Somekh-Baruch "Restless hidden Markov bandit with linear rewards," *Proceedings of the 59th IEEE Conference on Decision and Control (CDC)*, Jeju, Korea (South), 2020.

12. M. Yemini and A. J. Goldsmith, "Virtual cell clustering with optimal resource allocation to maximize cellular system capacity," Proceedings of the 2019 IEEE Global Communications Conference (GLOBECOM), Waikoloa, HI, USA, 2019.
13. M. Yemini and A. J. Goldsmith, "Optimal resource allocation for cellular networks with virtual cell joint decoding," Proceedings of the 2019 IEEE International Symposium on Information Theory (ISIT), Paris, France, 2019, pp. 2519-2523.
14. M. Yemini, A. Somekh-Baruch, R. Cohen and A. Leshem, "Simultaneous connectivity in heterogeneous cognitive radio networks," Proceedings of the IEEE International Symposium on Information Theory (ISIT'16), Barcelona, Spain, July 2016, pp. 1262-1266.
15. M. Yemini, A. Somekh-Baruch and A. Leshem, "On the asynchronous cognitive MAC," Proceedings of the IEEE International Symposium on Information Theory (ISIT'14), Honolulu, HI, USA, June/July 2014, pp. 2929-2933.
16. M. Yemini, A. Somekh-Baruch and A. Leshem, "On channels with asynchronous state information at the transmitter," Proceedings of the IEEE 27th Convention of Electrical & Electronics Engineers in Israel (IEEEI), 2012.

Peer-Review Conference and Workshop Presentations without Proceedings

1. Q. Li, M. Yemini and H. T. Wai, "Privacy-Efficacy Tradeoff of Clipped SGD with Decision-dependent Data", Workshop on Humans, Algorithmic Decision-Making and Society: Modeling Interactions and Impact (in Conjunction with ICML 2024), July 2024.
2. S. Apsel, V. Tarle, M. Yemini, Z. Zalevsky, N. Ozana, "Rolling-shutter laser speckle analysis in bio-photonics," SPIE Photonics Europe, April 2024.
3. R. Saha, M. Yemini, E. Ozfatura, D. Gündüz and A. J. Goldsmith, "ColRel: Collaborative Relaying for Federated Learning over Intermittently Connected Networks", Workshop on Federated Learning: Recent Advances and New Challenges (in Conjunction with NeurIPS 2022), December 2022.
4. M. Yemini, A. Nedić, A. J. Goldsmith and S. Gil, "Characterizing trust and resilience in distributed consensus for cyberphysical systems", IEEE Conference on Robotics and Automation (ICRA), May 2022.
5. M. Yemini, A. Zappone, E. Jorswieck and A. Leshem, "Energy efficient bidirectional massive MIMO relay beamforming," 2016 International Conference on the Science of Electrical Engineering (ICSEE 2016), Eilat, Israel.
6. M. Yemini, A. Somekh-Baruch and A. Leshem "Asynchronous state information," 2016 Information Theory and Applications (ITA) Workshop.

Invited Talks

1. Multi-armed bandits with self-information rewards, Air Force Center of Excellence, Rhodes Information Initiative at Duke, Duke University, August 2023.
2. Resilience, trust and connectivity in distributed networks, The Annual Retreat of the Bar-Ilan University's Data-Science Institute (DSI), June 2023.
3. Semi-Decentralized Federated Learning with Collaborative Relaying in Unreliable Networks, London Symposium on Information Theory (LSIT), May 2023.

4. Semi-Decentralized Federated Learning with Collaborative Relaying in Unreliable Networks, Israeli Networking Day, May 2023.
5. Resilience to Malicious Activity in Distributed Optimization for Cyberphysical Systems, Air Force Center of Excellence, Rhodes Information Initiative at Duke, Duke University, February 2023.
6. Reliability and trust in distributed information systems, Faculty of Engineering, Bar-Ilan University, February 2022.
7. Reliability and trust in distributed information systems, Department of Electrical and Computer Engineering, Ben-Gurion University, February 2022.
8. Trust and Resilience in Distributed Consensus Cyberphysical Systems, Air Force Center of Excellence, Rhodes Information Initiative at Duke, Duke University, October 2021.
9. Cloud-Cluster Architecture for Detection in Intermittently Connected Sensor Networks, Information Processing and Communications Lab, Imperial College London, April 2021.
10. Trust, Resilience and Simultaneous Connectivity in Wireless Distributed Networks, seminar on Information Theory and Communication, ECE, Technion, February, 2021.
11. "Fog" Optimization via Virtual Cells in Wireless Network Resource Allocation, XCOM Labs, March 2019.
12. Simultaneous percolation with two disk types, Probability seminar, Department of Mathematics, Bar Ilan University, May 2016.

Additional Activities

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| 2022 | A member of the Princeton AI Club. |
| 2018 | North American School of Information Theory 2018 (NASIT'18). |
| 2015 | Mostly Markov Mixing - Summer School 2015 - Summer Workshop for Graduate Students, Technion, Israel (Faculty of Mathematics, Technion). |
| 2015 | Game Theory Summer School - Graduate Summer School: Games and Contracts for Cyber-Physical Security (IPAM GSS2015), UCLA, USA. |