Curriculum Vitae and list of publications
AMIR LESHEM

Personal details

Name	Amir Leshem Faculty of Engineering Bar-Ilan University, 52900 Ramat-Gan, Israel
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Education

Ph. D. 1992- 97, Hebrew University of Jerusalem. Dept. of Mathematics.
Advisor: Prof. Menachem Magidor.
Thesis: Definable well- orderings of N and other definable objects.
M. Sc. 1986- 1990, Hebrew University of Jerusalem, Dept. of Mathematics.
Advisor: Prof. Menachem Magidor.
Thesis: The Determinacy of Projective Games.
Graduated cum laude.
B. Sc. 1984- 1986 Hebrew University of Jerusalem, in Mathematics and Physics.
A cadet in Israel Defense Force (IDF) ”Talpiot” Project - a special program qualifying research and development officers for the IDF.
Graduated cum laude.

Employment History

2010-	Professor, Bar-Ilan University.
2015-2017	Head of Communication Track in Engineering Faculty, Bar Ilan University.
2002-2015	Head of Signal Processing Track in Engineering Faculty, Bar Ilan University.
2007-2010	Associate Professor, Bar-Ilan University.
2009	Visiting Assoc. Professor, Stanford University.
2008-2009	Visiting Assoc. Professor, Delft University of Technology.
2002-2007	Senior lecturer, Bar-Ilan University.
08/2005-09/2005	Visiting Faculty, University of Illinois, Chicago
07/2004-08/2004	Visiting Faculty, Cornell University
2000-2003	Director, Advanced technologies. Metalink - Broadband Access. Directing the research for future DSL technologies, wireless communications and representing the company in International standard bodies.
2000-2002	Visiting researcher (part time). Delft University of Technology. Consulting to NoEMI project, in the field of signal processing for radio astronomy.
1998- 2000	Post- doctoral Researcher. Dept. of Electrical Engineering. Delft University of Technology. Working of interference cancellation for

synthetic aperture radio telescopes using advanced signal processing methods, advanced radio astronomical imaging methods and signal processing for communication.

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Professional activities

Editorial

2017-2021	Associate editor, IEEE Transactions on Signal and Information processing over Networks.
2012	Guest editor, IEEE Journal on Selected Topics in Signal Processing, Special issue on Learning based decision making under uncertainty.
2010	Guest editor, IEEE Journal on Selected Topics in Signal Processing, Special issue on Applications of game theory to signal processing and communications.
2009	Invited leading guest editor, IEEE Signal Processing Magazine, Special issue on signal processing for astronomy and cosmology.
2008-2011	Associate editor, IEEE Trans. on Signal Processing.
2008	Leading guest editor, IEEE Journal on Selected Topics in Signal Processing, Special issue on signal processing for space research and astronomy.

Committees

2025-2026	Member of IEEE Signal Processing Society, Fellow Evaluation Committee
2023-2026	Member of IEEE Signal Processing Society, SPCOM Technical Committee
2023-2026	Member of IEEE Signal Processing Society, Adaptive Systems Initiative
2017-2023	Member of IEEE Signal Processing Society, SPTM Technical Committee
2010	Co-chair of the technical program committee of "The 6'th IEEE Sensor Array and Multichannel Signal Processing", SAM 2010.

Funded research activities

2022-2026	Principle Investigator. Collaborative distributed learning over wireless channels: From Game theory to network protocols. Israel Science Foundation. 880,000 NIS.
2022-2024	Principle Investigator. Deep multi-agent reinforcement learning of Markov games for distributed traffic management in smart cities. Israel – Korea collaboration. Ministry of Science and Technology. 268,000 NIS.
2021-2023	Principle Investigator. Collaborative multi-agent Learning. Israel council for higher education- VATAT research grant. 40,000 NIS. Joint with Prof. David Sarne.
2022-2023	Principle Investigator. Experimental study of computational models for opinion dynamics and spreading of fake news in social networks. Ministry of Science, Social Sciences & Humanities. 350,000 NIS.
2020-2022	Principle Investigator. Spectrum shared approach. Ministry of Defense – MAFAT. 287,500 NIS.
2019-2020	Principle Investigator. Algorithms and protocols for multiplayer learning

for collaborative spectrum access. Ministry of Defense – MAFAT. 200,000 NIS.

2018-2023 Principle Investigator. Signal process techniques with finitely many samples. Israel Science Foundation 1,000,000 NIS.

2017-2018 Principle Investigator. CIF: Small: Identification and Isolation of Malicious Behavior in Networks. U.S.-Israel Binational Science Foundation (BSF),NSF BSF: Computing and Communication Foundations. 40,000 USD.

2016-2019 Principle Investigator. Game theoretic techniques for wireless network management. ISF- NRF Joint research Program. 220,000 NIS per year. Joint with Dusit Niyato.

2016-2019 Principle investigator. Israeli 5G consortium. Israeli Ministry of Economy. 240,000 NIS.

2016-2018 Principle investigator .Game Theoretic Aspects of Wireless Spectrum Access with Dynamic Medium Access Control in Future Heterogenous Networks / Czech- Israeli Cooperative Scientific Research /Israeli Ministry of Science Technology& Space with Czech Republic Ministry of Youth and Sports. 270,000 NIS.

2015-2018 Principle investigator. Resource allocation techniques for next generation cellular communications. German Israeli Foundation for scientific research (with E. Jorswieck). 90,000 Eu for each PI.

2014-2015 Principle investigator. Neptune consortium for Software defined Networks. Routing in Heterogenous Networks. 280,000 NIS .

2013-2017 Principle investigator. Signal processing for resource limited sensor networks. 800,000 IS. Israel Science Foundation.

2013-2015 Principle investigator. Gigabit DSL. 576,000 NIS. (joint with I. Bergel). Magneton program.

2009-2014 Principal investigator. Imaging and signal processing techniques for large radio telescopes. 798,000 NIS. Israel Science Foundation.

2010-2013 Principal investigator. Cognitive radio networks. CORNET consortium. Israeli ministry of trade and commerce. ~720,000. (joint with E. Zehavi).

2008-2009 Visiting grant. Netherlands Foundation For Science and Technology (STW). 25,000 Eu.

2008-2013 Principal investigator. Rescue consortium. Rapid deployment networks. 1,235,000 IS. Israeli Ministry of Trade and Commerce.

2007-2009 Principal investigator. Application of game theory to wireless communications (with E. Zehavi). Grant by Intel Corp. 40,000US$.

2006-2010 Scientific leader and principle investigator of dynamic spectrum management for next generation DSL access networks consortium (iSmart). A consortim lead by ECI. Total funding of the consortium is expected to be funded by 17 MIS per year by Ministry of Trade and Commerce. Personal funding (joint with E. Zehavi and I. Bergel) 1,845,000 IS for 4 years. Additional 800,000 shekels were joint with Prof. Messer-Yaron through Tel Aviv University.

2004-2007 Principal investigator of a short-range wireless communication research project focusing on channel characterization and tracking for next generation MIMO WLAN systems. Total funding by Israel ministry of trade and commerce for first four years 1,577,844 IS. (joint with Prof. Ephi Zehavi and Dr. Sharon Gannot)

2003-2005 Technical director of the U-BROAD consortium. An EU funded research on future wireline transmission. Total funding of the project 1.9 Meu. Personal funding 119 kEu.

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Awards and Honors

2023 Fellow of Asia-Pacific Artificial Intelligence Association.
2022 IEEE Fellow for contributions to multi-channel and multi-agent signal processing
2019 Rector's Prize for Scientific Innovation, Bar Ilan University
2015 CISE Resident Scholar, Boston University
1986 Dean’s list. Faculty of Natural Sciences, Hebrew University, Jerusalem.
1985 Dean’s list. Faculty of Natural Sciences, Hebrew University, Jerusalem.
1991 Distinguished employee. Digital Systems Department. Electronic systems division. RAFAEL.

Publication List

Books:

1. The Poem Notebook of the Eloquent Muse. Naomi Efron, V. Tohar., A. Leshem. E-vrit digital publishing. DOI: 10.71766/xxsk-wh36

Articles and Chapters in Books:

2. Scaglione A., H.T. Wai., Leshem A. Active sensing of Social Networks: Network Identification from Low-Rank Data. Chapter 22 in Cooperative and Graph Signal Processing - Principles and Applications. 2018, Pages 601-622.
3. Bergel, I.; Leshem, A. Signal Processing for Vectored Multichannel VDSL. Library in Signal Processing: Communications and Radar Signal Processing, Academic Press, vol. 2, 2013, Chapter 6, pp 295-328.
4. Cohen K., Leshem A. and Zehavi E. A Game Theoretic Optimization of the Multi-Channel Aloha Protocol. In Game Theoretic Networks, Volume 105 of the series Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, Springer Berlin Heidelberg, pp 77-87. May 2012.
5. A. Leshem, O. Naparstek and A. Nehorai. Information theoretic radar waveform design for multiple targets. Chapter C-X-5 in Principles of Waveform Diversity and Design, Amuso, Blunt, Mokole, Schneible and Wicks eds. SciTech Publishing, Inc. 2010. August 2010. Ch. 76, pp. 1129-1139.
6. A-J. van der Veen and A. Leshem. Constant modulus beamforming. Chapter 6 in Robust adaptive beamforming. Pages 299-347. P. Stoica and J. Li eds. Wiley. November 2005.
7. A-J. van der Veen, A. Leshem and A. J. Boonstra. Array signal processing in radio astronomy in The Square Kilometer Array, P. Hall editor. ISBN 1-4020-3797-x. A reprint of paper no.9. Chapter 17, pp 231-249.
8. A. Leshem and A- J. van der Veen. Introduction to interference mitigation techniques in radio- astronomy. In Perspectives in radio- astronomy: Technologies for large antenna arrays, A. B. Smolders and M. P. van Haarlem (ed.), pp. 201- 223, Astron, May 2000.

Articles in periodicals:

9. Leshem, A., Krishnamurthy, V., & Boyarski, T. (2024). Distributed learning in congested environments with partial information. *Automatica*, *169*, 111817.
10. Darweesh, R., Yadav, R. K., Adler, E., Poplinger, M., Levi, A., Lee, J. J., Leshem A, Ramasubramaniam A. and Naveh, D. (2024). Nonlinear self-calibrated spectrometer with single GeSe-InSe heterojunction device. *Science Advances*, *10*(20).
11. I. Achituve, W. Wang, E. Fetaya and A. Leshem, Communication Efficient Distributed Learning Over Wireless Channels, in *IEEE Signal Processing Letters*, vol. 30, pp. 1402-1406, 2023, doi: 10.1109/LSP.2023.3321561.

12. Distributed Learning for Optimal Spectrum Access in Dense Device-to-Device Ad-Hoc Networks,. T. Boyarski, W.B. Wang, and Amir Leshem. IEEE Trans. on Signal Processing, 2023, pages: 3149-3163. DOI: 10.1109/TSP.2023.3300630
13. Noisy Beeping Networks. Y. Ashkenazi, R. Gelles, A. Leshem. Information and Computation. Vol 289, Part A, Nov 2022. DOI:10.1016/j.ic.2022.104925
14. Joint Scheduling and Resource Allocation for Packets with Deadlines and Priorities, L.O Raviv, A. Leshem. IEEE Communications Letters. Oct. 2022. DOI:10.1109/LCOMM.2022.3211337
15. Localization of Data Injection Attacks on Distributed M-Estimation, O. Shalom, A. Leshem, A. Scaglione. IEEE Trans. on Signal and Information Processing over Networks. July 2022, pp 1-15. DOI: 10.1109/TSIPN.2022.3188450
16. Non-Convex Generalized Nash Games for Energy Efficient Power Allocation and Beamforming in mm Wave Networks, W. Wang, A. Leshem. IEEE Trans. on Signal Processing. Vol 70, June 2022, pp 3193 - 3205. DOI:10.1109/TSP.2022.3182501
17. Decentralized Learning for Channel Allocation in IoT Networks over Unlicensed Bandwidth as a Contextual Multi-player Multi-armed Bandit Game. W. Wang, A. Leshem, D. Niyato, Z. Han. IEEE Trans. on Wireless Communications. Volume: 21, Issue 5, May 2022, pp 3162 - 3178. DOI:10.1109/TWC.2021.3119204
18. Two-Stage Resource Allocation in Reconfigurable Intelligent Surface Assisted Hybrid Networks via Multi-Player Bandits. J. Tong,E, H. Zhang, L. Fu, A. Leshem, Z. Han. IEEE Trans. on Communications. March 2022, pp 1-16. DOI: 10.1109/TCOMM.2022.3161679
19. Energy Consumption Performance of Opportunistic Device-to-Device Relaying Under Lognormal Shadowing. S. M. Zafaruddin, J. Plachy, Z. Becvar, A.Leshem. *IEEE Systems Journal.* Vol 15, Issue 4, Dec 2021, Pages 5011-5022. DOI: 10.1109/JSYST.2020.3025106.
20. Decentralized Learning for Channel Allocation in IoT Networks over Unlicensed Bandwidth as a Contextual Multi-player Multi-armed Bandit Game. W. Wang, A. Leshem. *IEEE Trans. on Wireless Communications,* Oct. 2021.
21. Finite sample performance of linear least squares estimation. M. Kricheli, A. Leshem. *Journal of the Franklin Institute.* Vol 358, Issue 15, Oct 2021, Pages 7955-7991. DOI: 10.1016/j.jfranklin.2021.07.048
22. One for All and All for One: Distributed Learning of Fair Allocations with Multi-player Bandits. I. Bistritz, T.Z Baharav, A. Leshem, N. Bambos. *IEEE Journal on Selected Areas in Information Theory,* June 2021. Vol: 2, Issue: 2. pp 584-598. DOI: 10.1109/JSAIT.2021.3073065
23. The Interference Channel Revisited: Aligning Interference by Adjusting Antenna Separation. U. Erez, A. Leshem. *IEEE Trans. on Signal Processing*, 2021. Vol 69, pp 1874-1884, DOI: 10.1109/TSP.2021.3063442
24. Suppressing the impact of the COVID-19 pandemic using controlled testing and isolation. K. Cohen, A. Leshem. *Scientific Reports*. March 2021. DOI: 10.1101/2020.05.03.20089730
25. The Restless Hidden Markov Bandits with Linear Rewards and side information. M Yemini, A Leshem, A Somekh-Baruch. *IEEE Trans. on Signal Processing*. Jan 2021. Vol 69, pp 1108 - 1123, DOI: 10.1109/TSP.2021.3054344

26. Radio Transient Detection in Radio Astronomical Arrays. A. Antman, A. Leshem. *IEEE Trans. on Signal Processing*. Vol 68, pp 1-16. DOI**:** 10.1109/TSP.2020.3022826
27. Game of Thrones: Fully Distributed Learning for Multi-Player Bandits. I.Bistritz, A. Leshem. *Mathematics of Operations Research*. Nov. 2020.
28. Scheduling for Multi-User Multi-Input Multi-Output Wireless Networks with Priorities and Deadlines. L.O. Raviv, A. Leshsem. *'Future Internet' Special Issue on Signal Processing for Communication Networks.* Vol. 11 Issue 8, p172-172. Aug. 2019. DOI: 10.3390/fi11080172
29. Distributed Energy Efficient Channel Allocation. S. M. Zafaruddin, O. Naparstek, Eduard Jorswieck, A. Leshsem. *IEEE Trans. on Green Communications and Networking,* Vol 3, Issue 4, pp 1152-1166. DOI: 10.1109/TGCN.2019.2934868.
30. Joint Network Topology and Dynamics Recovery from Perturbed Stationary Points. H.T. Wai, A. Scaglione, B. Barzel, A. Leshem. *IEEE Trans. on Signal Processing,* Vol 67, Issue 17, pp 4582 - 4596. DOI: 10.1109/TSP.2019.2929471.
31. On the Simultaneous Connectivity of Cognitive Networks. M. Yemini, A. Somekh-Brauch, R. Cohen, A. Leshem. The *IEEE Trans. on Information Theory*, Vol 65, Issue 11, pp 6911 -6930. Nov. 2019. DOI: 10.1109/TIT.2019.2927479.
32. Distributed Learning for Channel Allocation Over a Shared Spectrum. S. M. Zafaruddin, I. Bistritz, A. Leshem, D. Niyato. *IEEE Journal on Special Areas in Communication, special issue on AI for communication,* Vol 37, no. 10, pp. 2337-2349. Doi: 10.1109/JSAC.2019.2933966. Special issue on AI for communication.
33. Asymptotic Performance of ZF and MMSE Crosstalk Cancelers for DSL Systems. S.M. Zafaruddin. I. Bergel, A. Leshem. *Digital Signal Processing*. Vol 88, pp 182-196. May 2019. DOI 10.1016/j.dsp.2019.02.007
34. Joint Sponsored and Edge Caching Content Service Market: A Game-Theoretic Approach. Z. Xiong, S. Feng, D.Niyato, P. Wang, A. Leshem and Z. Han. *IEEE Trans. on Wireless Communications.* Vol 18, Issue 2, pp 1166-1181. Feb 2019. DOI 10.1109/TWC.2018.2890469.
35. Asymptotically Optimal Resource Block Allocation with Limited Feedback. I. Bistritz, A. Leshem. *IEEE Trans. on Wireless Communications.* Vol 18, Issue 1, pp 34-36, Jan. 2019. DOI: *10.1109/TWC.2018.2875706*
36. Game Theoretic Dynamic Channel Allocation for Frequency-Selective Interference channels . I. Bistritz, A. Leshem. *IEEE Trans. on Information Theory*. Vol. 65, Issue 1, pp 330 - 353, Jan. 2019. DOI: 10.1109/TIT.2018.2868440
37. Spectrum and Energy Efficient Multiple Access for Detection in Wireless Sensor Networks. K. Cohen, A. Leshem. *IEEE Trans. on Signal Processing.* Vol 66, Issue 22, pp 5988 - 6001, Nov. 2018. DOI: 10.1109/TSP.2018.2873512.
38. Maximizing Service Reward for Queues with Deadlines . L.O. Raviv, A. Leshem. *IEEE/ACM Trans. on Networking.* Vol 26, *Issue 5, pp 2296 - 2308, Oct. 2018.* DOI: 10.1109/TNET.2018.2867815
39. The impact of random actions on opinion dynamics. A. Scaglione, A. Leshem. *Trans. on Signal and Information Processing over Networks,* Vol 4, Issue 3, Sept. 2018. DOI: 10.1109/TSIPN.2018.2797800.
40. On the Non-Existence of Unbiased Estimators in Constrained Estimation Problems. A. Somekh- Baruch, S. Venkatesh, A. Leshem. *IEEE Trans. on*

Information Theory, Vol 64, Issue 8, pp5549 - 5554. Aug 2018. DOI: 10.1109/TIT.2017.2731845

41. Active sensing of Social Networks: Network Identification from Low-Rank Data. H.T. Wai, A. Scaglione, A. Leshem. Chapter 22 in *Cooperative and Graph Signal Processing - Principles and Applications*. 2018, Pages 601-622. DOI: 10.1016/B978-0-12-813677-5.00022-5
42. Approximate Best-Response Dynamics in Random Interference Games . I. Bistritz, A. Leshem. *IEEE Trans. on Automatic Control*, Vol. 63, Issue 6, pp 1459-1472. June 2018. DOI: 10.1109/TAC.2017.2749139
43. Phase Noise Compensation for OFDM Systems. M. Yemini, A. Leshem. *IEEE Trans. on Signal Processing*, Vol 65, Issue 21, pp 5675 - 5686, Nov. 2017. DOI: 10.1109/TSP.2017.2740165
44. Signal Processing for Gigabit-Rate Wireline Communications. S.M. Zafaruddin, I. Bergel, A. Leshem. *IEEE Signal Processing Magazine,* vol 34, issue 5, pp 141- 164. Sep.2017. DOI: 10.1109/MSP.2017.2712824
45. Decentralized estimation of regression coefficients in sensor networks.L. Gispan, A. Leshem, Y. Be'ery. *Digital Signal Processing,* Vol 68, Pages 16-23. Sep 2017. DOI: https://doi.org/10.1016/j.dsp.2017.05.005
46. Energy Efficient Bidirectional Massive MIMO Relay Beamforming. M. Yemini, A. Leshem. *IEEE Signal Processing Letters,* Vol 24, Issue 7, pp 1010 - 1014. July 2017. DOI: 10.1109/LSP.2017.2703864
47. On the allocation of multiple divisible assets to players with different utilities. A. Leshem, E. Zehavi. *Computational Economics*, pp 1-22, March 2017.
48. Robust Spectrum Management with Incomplete Information over Fading Channels. Y. Noam, H. Messer-Yaron, A. Leshem. *Journal of the Franklin Institute,*vol 354, Issue 2, pp 1066–1086, Jan. 2017. DOI: 10.1016/j.jfranklin.2016.10.026
49. Distributed Resource Allocation for Energy Efficiency in MIMO OFDMA Wireless Networks. A. Zappone, Eduard Jorswieck, A. Leshem. *IEEE Journal on Selected Areas - Series on Green Communications and Networking,* vol 34, no 12, pp3451 - 3465, Dec. 2016.DOI: 10.1109/JSAC.2016.2621379
50. Data Injection Attacks in Randomized Gossiping.R. Gentz, A. Scaglione, H.T. Wai, A. Leshem. *Trans. on Signal and Information Processing over Networks,* vol 2, no.5, pp 523 - 538, Dec. 2016.DOI: 10.1109/TSIPN.2016.2614898
51. On the Multiple Access Channel with Asynchronomous Cognition. M. Yemini, A. Leshem, A. Somekh- Baruch. *IEEE Trans. on Information Theory,* vol 62, no.10, pp 5643-5663, Oct. 2016.DOI: 10.1109/TIT.2016.2601601
52. Active Sensing of Social Networks. H.T. Wai, A. Scaglione, A. Leshem. *IEEE Trans. on Signal and Information Processing over Networks*, vol. 2, no. 3, pp 406-419, Sep. 2016. DOI: 10.1109/TSIPN.2016.2555785
53. Distributed game theoretic optimization and management Multi-channel ALOHA Networks. K. Cohen, A. Leshem. *IEEE Trans. on Networking*, vol. 24, no.3, pp. 1718-1731, June 2016. DOI: 10.1109/TNET.2015.2431121
54. Radio Astronomical Image Formation using Constraint Least Squares and Krylov Subspaces. A. M Sardarabadi, A. Leshem, A.J. Van der Veen. *Astronomy and Astrophysics*, vol. 588, id A95, pp 19, April 2016. DOI:10.1051/0004-6361/201526214
55. Expected time complexity of the auction algorithm and the push relabel algorithm for maximal bipartite matching on random graphs. O. Naparstek, A.

Leshem. *Random Structures and Algorithms, vol.* 48, Issue 2, pp 384–395, March 2016. DOI: 10.1002/rsa.20578

56. Robust Turbo Analog Error correcting Codes Based on Analog CRC Verification. A. Zanko, A. Leshem, E. Zehavi. *IEEE Trans. on Signal Processing*, vol. 64, no. 3, pp. 757-770, Feb 2016. DOI: 10.1109/TSP.2015.2491879
57. RD Frequency estimation of multidimensional sinusoids based on eigenvalues and eigenvectors. C. Hui, Y. Wu, A. Leshem. *Multidimensional Systems and Signal Processing,* Vol 26, Issue 3, pp 777-786. July 2015. DOI: 10.1007/s11045-014-0277-4
58. Asynchronomus Transmission over Single-User State-Dependent Channels. M. Yemini, A. Somekh-Baruch, A.Leshem. *IEEE Trans. on Information Theory*, Vol. 61, issue 11, pp 5854-5867, November 2015. DOI: 10.1109/TIT.2015.2476477
59. Joint Pitch and DOA Estimation Using the ESPRIT Method, Y. Wu, A. Leshem J.R. Jensen, G. Liao. *IEEE/ACM Trans. on* Audio*, Speech, and Language Processing,* , vol.23, no.1, pp.32,45, Jan. 2015. DOI: 10.1109/TASLP.2014.2367817
60. Topology management and outage optimization for multicasting over slowly fading multiple access networks. A. Zanko, A. Leshem, E. Zehavi. *Computer Communications,* vol. 46, pp 43-53. June 2014. DOI: 10.1016/j.comcom.2014.03.006
61. Fully distributed optimal channel assignment for open spectrum access. O. Naparstek, A. Leshem. *IEEE Trans. on Signal Processing,* vol.62, no.2, pp.283,294, Jan.15, 2014. DOI: 10.1109/TSP.2013.2285512
62. Game theoretic analysis of the multichannel ALOHA protocol for cognitive radio networks. K. Cohen, A. Leshem, E. Zehavi. *IEEE Journal of Selected Areas in Communications*, vol. 31, Issue 11, pp 2276 - 2288, Nov. 2013. DOI: 10.1109/JSAC.2013.131109
63. Adaptive selective sidelobe canceller beamformer with applications to interference mitigation in radio astronomy. R. Levanda, A. Leshem. *IEEE Trans. on Signal Processing*, 2013, Vol. 62, Issue 20, pp 5063-5074. DOI: 10.1109/TSP.2013.2274960
64. Weighted max-min resource allocation for frequency selective channels. E. Zehavi, A. Leshem, R. Levanda and Z. Han. *IEEE Trans. on Signal Processing*, vol. 61, Issue 15, pp 3723 - 3732 ,Aug 2013. DOI: 10.1109/TSP.2013.2262278
65. Signal Processing for Vectored Multichannel VDSL. I. Bergel, A. Leshem. *Library in Signal Processing: Communications and Radar Signal Processing*, Academic Press, vol. 2, 2014, Chapter 6, pp 295-328. DOI: DOI: 10.1016/B978-0-12-396500-4.00006-5
66. The performance of Zero Forcing DSL systems. I.Bergel, A. Leshem. *Signal Processing Letters,* vol 20, Issue 5, pp 527 - 530, May 2013. DOI:10.1109/LSP.2012.2212011
67. Introduction to the issue on Learning - Based Decision Making in Dynamic Systems Under Uncertainty. Q. Zhao, E.K.P Chong, B. Krishnamachari, A. Leshem, S. Meyn, V.V. Veeravalli. *IEEE Journal of Selected Topics in Signal Processing,* vol 7, Issue 5, pp 743 - 745, Oct. 2013. DOI: 10.1109/JSTSP.2013.2263591

68. Performance Analysis of likelihood based multiple access for detection over fading channels. K. Cohen, A. Leshem. *IEEE Trans. on Information Theory,* vol 59, Issue 4, pp 2471 - 2481, April 2013. DOI: 10.1109/TIT.2012.2232348
69. Colinear stimuli induce local and cross areal coherence in the visual cortex of behaving monkeys. A. Gilad, E. Meirovithz, A. Leshem, A. Arieli, I. Ayzenshtat, H. Edelman, H. Slovin. *PLOS ONE*, November 2012. DOI: 10.1371/journal.pone.0049391
70. Arbitrary Partial FEXT Cancellation in Adaptive Precoding for Multichannel Downstream VDSL. I.Binyamini, I. Bergel, A.Leshem. *IEEE Trans. on Signal Processing*, vol.60, no.11, pp.5754-5763, Nov. 2012. DOI: 10.1109/TSP.2012.2210884
71. Robust Adaptive Beamforming Based on Interference Covariance Matrix Reconstruction and Steering Vector Estimation. G. Yujie, A. Leshem. *IEEE Trans. on Signal Processing*, vol.60, no.7, pp.3881-3885, July 2012. DOI: 10.1109/TSP.2012.2194289
72. Introduction to the issue of game theory in signal processing. E.A. Jorswieck, E.G. Larsson, M. Luise, H.V. Poor, A. Leshem. *IEEE Journal of Selected Topics in Signal Processing*, vol 6, issue 2 pp.73–75., April 2012. DOI: 10.1109/JSTSP.2012.2188750
73. Parametric Spectrum Shaping for Downstream Spectrum Management of Digital Subscriber Lines. Naparstek, O.; Cohen, K.; Leshem, A. IEEE Communications Letters,vol.16,issue3,pp.417-419,March2012. DOI: 10.1109/LCOMM.2012.011312.111939
74. Analog Product Codes Decodable by Linear Programming. Zanko, A.; Leshem, A.; Zehavi, E. Information Theory, IEEE Transactions on, vol.58, no.2, pp.509-518, Feb.2012. DOI: 10.1109/TIT.2011.2173709
75. Multichannel Opportunistic Carrier Sensing for Stable Channel Access Control in Cognitive Radio Systems. Leshem, A.; Zehavi, E.; Yaffe, Y. Selected Areas in Communications, IEEE Journal on, vol.30, no.1, pp.82-95, January 2012 doi:10.1109/JSAC.2012.120108. DOI: 10.1109/JSAC.2012.120108
76. Iterative Tomographic Solution of Integer Least Squares Problems With Applications to MIMO Detection. Goldberger, J.; Leshem, A. Selected Topics in Signal Processing, IEEE Journal of, vol.5, no.8, pp.1486-1496, Dec. 2011. DOI: 10.1109/JSTSP.2011.2168383
77. A Gaussian tree approximation algorithm for decoding high order QAM modulations. J. Goldberger and A. Leshem. IEEE Trans. on Information Theory. August 2011. Vol. 57, issue 8. Page(s): 4973 – 4982. DOI: 10.1109/TIT.2011.2159037
78. Likelihood-ratio and Channel Based Access for Energy-Efficient Signal Detection in Wireless Sensor Networks. K. Cohen and A. Leshem. IEEE Journal of Selected Areas in Communication. Special issue on Energy efficient communications. August 2011. Vol. 29, issue 8. Pages. 1671 – 1683. DOI: 10.1109/SAM.2010.5606731
79. Competitive Spectrum Management with Incomplete Information. Y. Noam, A. Leshem and H. Messer. IEEE Trans. on Signal Processing. Dec. 2010, pages 6251-6264. DOI: 10.1109/TSP.2010.2077286
80. Recursive computation of the distributed Karhunen Loeve Transform. A. Amar, A. Leshem and M. Gastpar.IEEE Trans. on Signal Processing. October 2010. Pages: 5320 – 5330. DOI: 10.1109/TSP.2010.2056922

81. A Time-Varying Opportunistic Approach to Lifetime Maximization of Wireless Sensor Networks. K. Cohen and A. Leshem. IEEE Trans. on Signal Processing, October 2010. Pages: 5307 – 5319. DOI: 10.1109/TSP.2010.2052459
82. A low complexity blind estimator of narrowband polynomial phase signals. A. Amar, A. Leshem and A-J. van der Veen, IEEE Trans. on Signal Processing. September 2010.Vol. 58, issue 9. Pages 4674 - 4683. DOI: 10.1109/TSP.2010.2050202
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