Publications of Yuval Emek

(with links to papers)[1]

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Journals

1. Michael Elkin, Yuval Emek, Daniel A. Spielman, and Shang-Hua Teng.
   Lower-Stretch Spanning Trees.
   SIAM Journal on Computing (SICOMP) 38(2):608–628, 2008.
   (Journal version of conference paper 2.)

2. Yuval Emek and David Peleg.
   Approximating Minimum Max-Stretch Spanning Trees on Unweighted Graphs.
   SIAM Journal on Computing (SICOMP) 38(5):1761–1781, 2008.
   (Journal version of conference paper 1.)

3. Yuval Emek, Leszek Gasieniec, Erez Kantor, Andrzej Pelc, David Peleg, and Chang Su.
   Broadcasting Time in UDG Radio Networks with Unknown Topology.
   Distributed Computing (DistComp) 21(5):331–351, 2009.
   (Journal version of conference paper 4.)

4. Yuval Emek and David Peleg.
   A Tight Upper Bound on the Probabilistic Embedding of Series-Parallel Graphs.
   SIAM Journal on Discrete Mathematics (SIDMA) 23(4):1827–1841, 2009.
   (Journal version of conference paper 3.)

5. Yuval Emek, David Peleg, and Liam Roditty.
   A Near-Linear Time Algorithm for Computing Replacement Paths in Planar Directed Graphs.
   ACM Transactions on Algorithms (TALG) 6(4), 2010.
   (Journal version of conference paper 5.)

6. Yuval Emek, Pierre Fraigniaud, Amos korman, and Adi Rosen.
   On the Additive Constant of the k-Server Work Function Algorithm.
   Information Processing Letters (IPL) 110(24):1120–1123, 2010.
   (Journal version of conference paper 10.)

7. Yuval Emek.
   k-Outerplanar Graphs, Planar Duality, and Low Stretch Spanning Trees.
   Algorithmica 61(1):141–160, 2011.
   (Journal version of conference paper 9.)

[1] The links provided here lead to the most updated versions of the corresponding papers.

8. Yuval Emek, Pierre Fraigniaud, Amos korman, and Adi Rosen.
Online Computation with Advice.
Theoretical Computer Science (TCS) 412(24):2642–2656, 2011.
(Journal version of conference paper 7.)

9. Yuval Emek and Amos Korman.
New Bounds for the Controller Problem.
Distributed Computing (DistComp) 24(3):177–186, 2011.
(Journal version of conference paper 11.)

10. Shiri Chechik, Yuval Emek, Boaz Patt-Shamir, and David Peleg.
Sparse Reliable Graph Backbones.
Information and Computation (I&C) 210, pages 31–39, 2012.
(Journal version of conference paper 14.)

11. Chen Avin, Yuval Emek, Erez Kantor, Zvi Lotker, David Peleg, and Liam Roditty.
SINR Diagrams: Convexity and Its Applications in Wireless Networks.
Journal of the ACM (JACM), 59(4):18:1–18:34, 2012.
(Journal version of conference paper 8.)

12. Yuval Emek, Magnus M. Halldorsson, Yishay Mansour, Boaz Patt-Shamir, Jaikumar Radhakrishnan, and Dror Rawitz.
Online Set Packing.
SIAM Journal on Computing (SICOMP) 41(4):728–746, 2012.
(Journal version of conference paper 16.)

13. Noga Alon, Yuval Emek, Michal Feldman, and Moshe Tennenholtz.
Bayesian Ignorance.
Theoretical Computer Science (TCS) 452, pages 1–11, 2012.
(Journal version of conference paper 15.)

14. Yuval Emek and Michal Feldman.
Computing Optimal Contracts in Combinatorial Agencies.
Theoretical Computer Science (TCS) 452, pages 56–74, 2012.
(Journal version of conference paper 12.)

15. Noga Alon, Yuval Emek, Michal Feldman, and Moshe Tennenholtz.
Adversarial Leakage in Games.
SIAM Journal on Discrete Mathematics (SIDMA) 27(1), pages 363–385, 2013.
(Journal version of conference paper 13.)

16. Yuval Emek, Michal Feldman, Iftah Gamzu, Renato Paes Leme, and Moshe Tennenholtz.
Signaling Schemes for Revenue Maximization.
ACM Transactions on Economics and Computation (TEAC) 2(2):5, 2014.
(Journal version of conference paper 22.)

17. Noga Alon, Yuval Emek, Michal Feldman, and Moshe Tennenholtz.
Economical Graph Discovery.
Operations Research (OPRE) 62(6):1236–1246, 2014.
(Journal version of conference paper 18.)

18. Yuval Emek, Tobias Langner, David Stolz, Jara Uitto, and Roger Wattenhofer.
How Many Ants Does It Take To Find the Food?
Theoretical Computer Science (TCS) 608, pages 255–267, 2015.
(Journal version of conference paper 30.)

19. Yuval Emek, Magnus M. Halldorsson, and Adi Rosen.
Space-Constrained Interval Selection.
ACM Transactions on Algorithms (TALG) 12(4):51, 2016.
(Journal version of conference paper 23.)

20. Yuval Emek, Erez Kantor, and David Peleg.
On the Effect of the Deployment Setting on Broadcasting in Euclidean Radio Networks.
Distributed Computing (DistComp) 29(6):409–434, 2016.
(Journal version of conference paper 6.)

21. Yuval Emek and Adi Rosen.
Semi-Streaming Set Cover.
ACM Transactions on Algorithms (TALG) 13(1):6, 2016.
(Journal version of conference paper 26.)

22. Yuval Emek, Yaacov Shapiro, and Yuyi Wang.
Minimum Cost Perfect Matching with Delays for Two Sources.
Theoretical Computer Science (TCS) 754:122–129, 2019.
(Journal version of conference paper 35.)

23. Yakov Babichenko, Yuval Emek, Michal Feldman, Boaz Patt-Shamir, Ron Peretz, and Rann Smorodinsky.
Stable Secretaries.
Algorithmica 81(8):3136–3161, 2019.
(Journal version of conference paper 36.)

24. Yuval Emek and Jara Uitto.
Dynamic Networks of Finite State Machines.
Theoretical Computer Science (TCS) 810:58–71, 2020.
(Journal version of conference paper 33.)

25. Yuval Emek, Shay Kutten, Ron Lavi, and Yangguang Shi.
Approximating Generalized Network Design under (Dis)economies of Scale with Applications to Energy Efficiency.
Journal of the ACM (JACM) 67(1):7:1–7:33, 2020.
(Journal version of conference paper 39.)

26. Sebastian Brandt, Yuval Emek, Jara Uitto, and Roger Wattenhofer.
A Tight Lower Bound for the Capture Time of the Cops and Robbers Game.
Theoretical Computer Science (TCS) 829:143–163, 2020.
(Journal version of conference paper 37.)

27. Yuval Emek, Shay Kutten, Ron Lavi, and Yangguang Shi.
Bayesian Generalized Network Design.
Theoretical Computer Science (TCS), 841:167–185, 2020.
(Journal version of conference paper 45.)

28. Aya Goldshtein, Michal Handel, Ofri Eitan, Afrine Bonstein, Talia Shaler, Simon Collet, Stefan Greif, Rodrigo A. Medellín, Yuval Emek, Amos Korman, and Yossi Yovel.
Reinforcement Learning Enables Resource Partitioning in Foraging Bats.
Current Biology 30:1–7, 2020.

29. Yuval Emek, Ron Lavi, Rad Niazadeh, and Yangguang Shi.
Stateful Posted Pricing with Vanishing Regret via Dynamic Deterministic Markov Decision Processes.
To appear in Mathematics of Operations Research (MOR).
(Journal version of conference paper 52.)

30. Ruben Becker, Yuval Emek, Mohsen Ghaffari, and Christoph Lenzen.
Decentralized Low Stretch Trees via Low Diameter Graph Decompositions.
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(Journal version of conference papers 46 and 49.)

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1. Yuval Emek and David Peleg.
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In Proceedings of the 15$^{\text{th}}$ ACM-SIAM Symposium on Discrete Algorithms (SODA), pages 261–270, 2004.

2. Michael Elkin, Yuval Emek, Daniel A. Spielman, and Shang-Hua Teng.
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In Proceedings of the 37$^{\text{th}}$ ACM Symposium on Theory of Computing (STOC), pages 494–503, 2005.
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3. Yuval Emek and David Peleg.
A Tight Upper Bound on the Probabilistic Embedding of Series-Parallel Graphs.
In Proceedings of the 17$^{\text{th}}$ ACM-SIAM Symposium on Discrete Algorithms (SODA), pages 1045–1053, 2006.

4. Yuval Emek, Leszek Gasieniec, Erez Kantor, Andrzej Pelc, David Peleg, and Chang Su.
Broadcasting in UDG Radio Networks with Unknown Topology.
In Proceedings of the 26th ACM Symposium on Principles of Distributed Computing (PODC), pages 195–204, 2007.
(Invited to PODC 2007's special issue in DistComp.)

5. Yuval Emek, David Peleg, and Liam Roditty.
A Near-Linear Time Algorithm for Computing Replacement Paths in Planar Directed Graphs.
In Proceedings of the 19th ACM-SIAM Symposium on Discrete Algorithms (SODA), pages 428–435, 2008.
(Invited to SODA 2008's special issue in TALG.)

6. Yuval Emek, Erez Kantor, and David Peleg.
On the Effect of the Deployment Setting on Broadcasting in Euclidean Radio Networks.
In Proceedings of the 27th ACM Symposium on Principles of Distributed Computing (PODC), pages 223–232, 2008.

7. Yuval Emek, Pierre Fraigniaud, Amos korman, and Adi Rosen.
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In Proceedings of the 36th International Colloquium on Automata, Languages and Programming (ICALP, track A), pages (1)427–438, 2009.
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8. Chen Avin, Yuval Emek, Erez Kantor, Zvi Lotker, David Peleg, and Liam Roditty.
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9. Yuval Emek.
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In Proceedings of the 17th Annual European Symposium on Algorithms (ESA), pages 203–214, 2009.
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10. Yuval Emek, Pierre Fraigniaud, Amos korman, and Adi Rosen.
On the Additive Constant of the k-Server Work Function Algorithm.
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11. Yuval Emek and Amos Korman.
New Bounds for the Controller Problem.
In Proceedings of the 23rd International Symposium on Distributed Computing (DISC), pages 22–34, 2009.
(Invited to DISC 2009's special issue in DistComp.)

12. Yuval Emek and Michal Feldman.
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In Proceedings of the 5th Workshop on Internet & Network Economics (WINE), pages 268–279, 2009.

13. Noga Alon, Yuval Emek, Michal Feldman, and Moshe Tennenholtz.
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In Proceedings of the 1st Symposium on Innovations in Computer Science (ICS), pages 111–119, 2010.

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15. Noga Alon, Yuval Emek, Michal Feldman, and Moshe Tennenholtz.
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16. Yuval Emek, Magnus M. Halldorsson, Yishay Mansour, Boaz Patt-Shamir, Jaikumar Radhakrishnan, and Dror Rawitz.
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(Invited to PODC 2010's special issue in DistComp.)

17. Yuval Emek and Amos Korman.
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18. Noga Alon, Yuval Emek, Michal Feldman, and Moshe Tennenholtz.
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19. Yuval Emek, Amos Korman, and Yuval Shavitt.
Approximating the Statistics of various Properties in Randomly Weighted Graphs.
In Proceedings of the 22nd ACM-SIAM Symposium on Discrete Algorithms (SODA), pages 1455–1467, 2011.

20. Yuval Emek, Ron Karidi, Moshe Tennenholtz, and Aviv Zohar.
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In Proceedings of the 12th ACM Conference on Electronic Commerce (EC), pages 209–218, 2011.

21. Yuval Emek, Pierre Fraigniaud, Amos Korman, Shay Kutten, and David Peleg.
Notions of Connectivity in Overlay Networks.
In Proccedings of the 19th International Colloquium on Structural Information and Communication Complexity (SIROCCO), pages 25–35, 2012.

22. Yuval Emek, Michal Feldman, Iftah Gamzu, Renato Paes Leme, and Moshe Tennenholtz.
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23. Yuval Emek, Magnus M. Halldorsson, and Adi Rosen.
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In Proceedings of the 39th International Colloquium on Automata, Languages and Programming (ICALP, track A), pages (1)302–313, 2012.

24. Yuval Emek and Roger Wattenhofer.
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In Proceedings of the 32nd ACM Symposium on Principles of Distributed Computing (PODC), pages 137–146, 2013.

25. Yuval Emek and Roger Wattenhofer.
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In Proceedings of the 27th International Symposium on Distributed Computing (DISC), pages 329–343, 2013.

26. Yuval Emek and Adi Rosen.
Semi-Streaming Set Cover.
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27. Yuval Emek, Jochen Seidel, and Roger Wattenhofer.
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In Proceedings of the 41st International Colloquium on Automata, Languages and Programming (ICALP, track B), pages (2)183–195, 2014.

28. Yuval Emek, Tobias Langner, Jara Uitto, and Roger Wattenhofer.
Solving the ANTS problem with Asynchronous Finite State Machines.
In Proceedings of the 41st International Colloquium on Automata, Languages and Programming (ICALP, track C), pages (2)471–482, 2014.

29. Yuval Emek, Christoph Pfister, Jochen Seidel, and Roger Wattenhofer.
Anonymous Networks: Randomization = 2-Hop Coloring.
In Proceedings of the 33rd ACM Symposium on Principles of Distributed Computing (PODC), pages 96–105, 2014.

30. Yuval Emek, Tobias Langner, David Stolz, Jara Uitto, and Roger Wattenhofer.
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In Proceedings of the 21st International Colloquium on Structural Information and Communication Complexity (SIROCCO), pages 263–278, 2014.
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31. Yuval Emek, Tobias Langner, and Roger Wattenhofer.
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In Proceedings of the 23rd Annual European Symposium on Algorithms (ESA), pages 459–470, 2015.

32. Yuval Emek, Shay Kutten, and Roger Wattenhofer.
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34. Lihi Cohen, Yuval Emek, Oren Louidor, and Jara Uitto.
Exploring an Infinite Space with Finite Memory Scouts.
In Proceedings of the 28th ACM-SIAM Symposium on Discrete Algorithms (SODA), pages 207–224, 2017.

35. Yuval Emek, Yaacov Shapiro, and Yuyi Wang.
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In Proceedings of the 10th International Conference on Algorithms and Complexity (CIAC), pages 209–221, 2017.
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36. Yakov Babichenko, Yuval Emek, Michal Feldman, Boaz Patt-Shamir, Ron Peretz, and Rann Smorodinsky.
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37. Sebastian Brandt, Yuval Emek, Jara Uitto, and Roger Wattenhofer.
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In Proceedings of the 44th International Colloquium on Automata, Languages and Programming (ICALP, track A), pages 82:1–82:13, 2017.

38. Shimon Bitton, Yuval Emek, and Shay Kutten.
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Approximating Generalized Network Design under (Dis)economies of Scale with Applications to Energy Efficiency.
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40. Yehuda Afek, Yuval Emek, and Noa Kolikant.
Selecting a Leader in a Network of Finite State Machines.
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41. Yehuda Afek, Yuval Emek, and Noa Kolikant.
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In Proceedings of the 22nd International Conference on Principles of Distributed Systems (OPODIS), pages 22:1–22:16, 2018.

42. Yossi Azar, Yuval Emek, Rob van Stee, and Danny Vainstein.
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In Proceedings of the 31st ACM Symposium on Parallelism in Algorithms and Architectures (SPAA), pages 1–10, 2019.

43. Yuval Emek, Shay Kutten, Ron Lavi, and William K. Moses Jr.
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44. Yuval Emek, Adam Goldbraikh, and Erez Kantor.
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45. Yuval Emek, Shay Kutten, Ron Lavi, and Yangguang Shi.
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47. Shimon Bitton, Yuval Emek, Taisuke Izumi, and Shay Kutten.
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48. Yuval Emek, Noga Harlev, and Taisuke Izumi.
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49. Ruben Becker, Yuval Emek, and Christoph Lenzen.
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In Proceedings of the 11th Conference on Innovations in Theoretical Computer Science (ITCS), pages 50:1–50:29, 2020.

50. Yuval Emek and Yuval Gil.
Twenty-Two New Approximate Proof Labeling Schemes.
In Proceedings of the 34th International Symposium on Distributed Computing (DISC), pages 20:1–20:14, 2020.

51. Xavier Défago, Yuval Emek, Shay Kutten, Toshimitsu Masuzawa, and Yasumasa Tamura.
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In Proceedings of the 34th International Symposium on Distributed Computing (DISC), pages 11:1–11:19, 2020.

52. Yuval Emek, Ron Lavi, Rad Niazadeh, and Yangguang Shi.
Stateful Posted Pricing with Vanishing Regret via Dynamic Deterministic Markov Decision Processes.
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53. Yuval Emek, Shay Kutten, and Yangguang Shi.
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54. Yuval Emek, Shay Kutten, Mordechai Shalom, and Shmuel Zaks.
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In Proceedings of the 47th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM), pages 189–202, 2021.

55. Yuval Emek, Shay Kutten, Mordechai Shalom, and Shmuel Zaks.
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57. Yuval Emek, Yuval Gil, and Shay Kutten.
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In Proceedings of the 36th International Symposium on Distributed Computing (DISC), pages 20:1–20:22, 2022.

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Design of Self-Stabilizing Approximation Algorithms via a Primal-Dual Approach.
In Proceedings of the 26th International Conference on Principles of Distributed Systems (OPODIS), pages 27:1–27:19, 2022.

59. Fabien Dufoulon, Yuval Emek, and Ran Gelles.
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60. Taisuke Izumi, Yuval Emek, Tadashi Wadayama, and Toshimitsu Masuzawa.
Deterministic Fault-Tolerant Connectivity Labeling Scheme.
In Proceedings of the 42nd ACM Symposium on Principles of Distributed Computing (PODC), pages 190–199, 2023.

61. Anne Condon, Yuval Emek, and Noga Harlev.
On the Runtime of Chemical Reaction Networks Beyond Idealized Conditions.
In Proceedings of the 29th International Conference on DNA Computing and Molecular Programming (DNA), pages 3:1–3:22, 2023.

62. Yuval Emek, Yuval Gil, Maciej Pacut, and Stefan Schmid.
Online Algorithms with Randomly Infused Advice.
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Barter Exchange with Bounded Trading Cycles.
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Ph.D. Thesis (Weizmann Institute of Science): Probabilistic Embeddings of Graphs.