GUY KORTSARZ

PROFESSIONAL PREPARATION

Tel Aviv University	Mathematics and Computer Science	B.Sc, 1988
The Weizmann Institute	Computer Science	M.Sc, 1990
The Weizmann Institute	Computer Science	Ph.D, 1994

APPOINTMENTS

1 July 2008- **Professor**, Dept. of Computer Science, Rutgers University, Camden

2007-2008. **Visiting**. IBM Watson center, NY. (Sabbatical)

2001-2007 **Associate Professor**, Dept. of Computer Science, Rutgers University, Camden.

1996-2001. **Senior Lecturer**, Dept. of Computer Science, The Open University, Israel.

GRANTS

Previously supported by NSF award number 0728787.
For 104000 dollars.
Duration: 15/02/2008 to 31/01/2009.

Previously supported by NFS grant award number 0829959.
For 122000 dollars.
Duration: 2/1/2009 to 31/1/2012

Previously supported by NSF grant 1218620
Awarded with Rajiv Gandhi.
For 485000 dollars.
Duration: 9/1/2012 to 6/30/2017.

Additional funds for the same grant: 8400 dollars.
Awarded at 05/13/2013.

Additional fund for the same grant of: 4800 dollars.
Approved at 07/30/2013

Additional fund for the same grant of: 12050 dollars:
Awarded at 04/30/2014:

Currently supported NSF grant number 1540547.
Awarded at 08/06/15
For 50000 dollars.
Duration: September 1, 2015
to August 31 2020.

Currently supported by NSF grant number 1910565.
Awarded with Rajiv Gandhi. For 330607 dollars.
Starting October 1 2019 until September 31 2022.

The total grant money allocated to Kortsarz (so far) is 110565 dollars. Over a million and 100000 dollars.

INTERNS SUPPORTED BY NSF GRANT

May 2010 Spyridon Antonakopoulos from **Columbia university**

May 2013, Hossein Esfandiar from the **University of Maryland**

May 2014, Manish Purohit and Kanthi Sarpatwar from **The university of Maryland**

May 2015. Amey Bhangale from **Rutgers University New Brunswick.**

May 2016. Amey Bhangale from **Rutgers University New Brunswick.**

CONFERENCE PUBLICATIONS

1) Zeev Nutov, Guy Kortsarz and Eli Shalom.
Approximating activation edge-cover and facility location problems.
MFCS, pages 20:1-20:14, 2019.

2) G. Calinescu, G. Kortsarz and Z.Nutov, Improved approximation algorithms for minimum power covering problems, Workshop On Approximation and On-Line algorithms (WAOA) pages 134-148, 2018.

3) M. M Halldorsson, G. Kortsarz, P. Mitra and T. Tonoyan. Spanning Trees With Edge Conflicts and Wireless Connectivity. 2018. ICALP, 158:1-158:15, 2018

4) P. Chalermsook, M. Cygan, G. Kortsarz, B. Laekhanukit, P. Manuarangsi and D. Nanongkai and Luca Trevisan. From Gap-ETH to FPT-Inapproximability: Clique, Dominating Set, and More. *FOCS* pages 743-754, November 2017

5) E. Chlamtac, M. Dinitz, G. Kortsarz and B. Laekhanukit, Approximating Spanners and Directed Steiner Forest: Upper and Lower Bounds. *SODA*, pages 534-553, January 2017.

6) The Densest k-Subhypergraph Problem.
Eden Chlamtáč, Michael Dinitz, C. Konard, Guy Kortsarz, and G. Rabanca *RANDOM-APPROX*, pages 6:1-6:19. August 2016

7) G. Kortsarz and Z. Nutov. Integrality gap LP for the tree augmentation problem. *RANDOM-APPROX*, 13:1-13:16, August 2016.

8) A. Bhangale, R. Gandhi, M Hajiaghayi, R. Khandekar, G Kortsarz. Bi-covering: Covering edges with two small subsets of vertices *ICALP* pages 601-612, June 2016.

9) Hossein Esfandiari and Guy Kortsarz. Low-Risk Mechanisms for the Kidney Exchange Game. *LATIN 2016*, pages 416-428, March, 2016.

10) Hossein Esfandiari and Guy Kortsarz. Low-Risk Mechanisms for the Kidney Exchange Game. *Symposium on Algorithmic game theory*, pages 303,304, 2015.

11) R. Gandhi, M. Halldórsson, C. Konrad and G. Kortsarz and H. Oh, Approximation Broadcast aggregation problem. *ALGOSENSORS* , pages 169-182, 2015.

Remark: This is an undergraduate research paper. Hoon Oh is a third year undergraduate student at Rutgers Camden.

12) Hajiaghayi, Kortsarz MacDavid, Purohit, and Sarpatwar.
Approximating the Connected Max Cut Problem. *ESA 2015*, 693-704.

Remark: This is an undergraduate
research paper. Robert MacDavid was an undergraduate
student in Rutgers Camden when the paper was done.

13) G. Kortsarz and Z. Nutov. Approximation for source location and the star SNDP problem. *Workshop on Graph theoretic concepts in computer science* (WG) 203–218, 2015

14) M, Dinitz, G. Kortsarz and Z. Nutov.
Improved Approximation Algorithm for Steiner k-Forest with Nearly Uniform Weights.
RANDOM-APPROX pages 115–127, 2014.

15) R. Chitnis, H. Esfandiari, M. Hajiaghayi, R, Khandekar, G Kortsarz, and S. Seddighin. A Tight Algorithm for Strongly Connected Steiner Subgraph On Two Terminals With Demands. *Symposium on Parameterized and Exact Computation* (IPEC), pages 159-171, 2014.

16) R. Gandhi and G. Kortsarz, On edge expansion problems and the small set expansion conjecture. *Workshop On Graph Theory* (WG), pages 189-200, 2014.

17) M. Hajiaghayi, R. Khandekar, G, Kortsarz, and Z. Nutov, Fixed cost k-flow problems, *Workshop on Approximation and Online Algorithms* (WAOA), pages 49-60, 2013

18) R Chitnis, M. Hajiaghayi and G Kortsarz. Fixed Parameter and approximation algorithms: a new look. *Symposium on Parameterized and Exact Computation* (IPEC), pages 110-122, 2013. No journal version.

19) M. Hajiaghayi, R. Khandekar, M.Khani and G. Kortsarz, Approximation Algorithms for Movement Repairman. *RANDOM-APPROX*, pages 218-232, 2013.

20) M. Dinitz and G. Kortsarz, Matroid Secretary for Regular and Decomposable Matroids, *SODA* 2013, pages 108-117, January 2013.

21) M. Cygan, G. Kortsarz and Z. Nutov, Steiner Forest Orientation Problems, *ESA*, pages 361-372, August 2012.

22) M. Dinitz G. Kortsarz and R. Raz. Labelcover with large girth and the hardness of basic spanners. *ICALP*, pages 290-301, July 2012.

23) R. Khandekar and G. Kortsarz and V. Mirrokni, On the advantage of overlap in minimizing conductance. *LATIN*, 495-505, April 2012.

24) R. Khandekar and G. Kortsarz and Zeev Nutov. Approximating some network design problem with degree bounds. *RANDOM-APPROX*, 289-301, August 2011.

25) M. Hajiaghayi and R. Khandekar and G. Kortsarz and V. Liaghat, On a local protocol for Concurrent File transfers, *23rd ACM Symposium on Parallelism in Algorithms and Architectures* (SPAA), pages 269-278, June 2011.

26) M. Hajiaghayi and R. Khandekar and G. Kortsarz and J. Mestre, The checkpoint problem, *RANDOM-APPROX*, 219-231, August, 2010.

27) M. Hajiaghayi, R. Khandekar and G. Kortsarz, The Red-Blue Median Problem and its Generalization, *ESA*, 314-325, September, 2010.

28) M. Hajiaghayi and R. Khandekar and G. Kortsarz and Z. Nutov, Prize Collecting Steiner Network Problem and Extensions, *IPCO* 71-84, May, 2010.

29) R. Khandekar and G. Kortsarz and Z. Nutov, The fault tolerance Group Steiner problem, *Foundations of Software Technology and Theoretical Computer Science FSTTCS*, pages 263-274, November, 2009.

30) G. Kortsarz and Z. Nutov, Approximating some network design problems with node costs, *RANDOM-APPROX*, pages 231-343, September, 2009.

31) M. Feldman, G. Kortsarz and Z. Nutov, Improved results for the directed version of the k Steiner forest problem, *SODA*, 922-931, January, 2009.

32) R. Khandekar, G. Kortsarz, V. Mirrokni, M. Salavatipour, Approximation and hardness results for Robust Network design with Exponential Scenarios, *ESA*, 589-600, September 2008.

33) G. Kortsarz, M. Landberg and Z. Nutov. Approximating Maximum Subgraphs Without Short Cycles, *RANDOM-APPROX*, pages 118-131, August 2008.

34) M.Halldórsson, G. Kortsarz and M. Sviridenko. Min Sum Edge Coloring in General Multigraphs via Configuration LP, *IPCO*, pages 359-373, May 2008.

35) G. Kortsarz, V. Mirrokni, Z. Nutov and E. Tsanko, Approximating min-power connectivity problems, *Latin American Theoretical Informatics Symposium* (LATIN), pages 423-435, April 2008.

36) C. Chekuri, M. Hajiaghayi, G. Kortsarz and M. Salavatipour, Approximating non-uniform buy at bulk network design with node costs, *SODA*, pages 1265-1274, January 2007.

37) C. Chekuri, M. Hajiaghayi, G. Kortsarz and M. Salavatipour, Polylogarithmic approximation for non-uniform multicommodity buy at bulk network design, *FOCS*, pages 677-686, October 2006.

38) M. Hajiaghayi, G. Kortsarz and M. Salavatipour, Approximation k shallow-light trees and $k-$Steiner buy at bulk trees, *RANDOM-APPROX*, pages 152-163, August 2006.

39) G. Kortsarz and Z. Nutov, Tight bounds for connectivity augmentation problems, *ICALP*, pages 443-452, July 2006.

40) M. Hajiaghayi, G. Kortsarz, V. Mirrokni and Z. Nutov, Power optimization for connectivity problems, *IPCO*, pages 349-361, May 2006.

41) M. Elkin and G. Kortsarz, Improved broadcast schedule for radio networks, *SODA*, pages 222-231, January, 2005.

42) G. Kortsarz, J. Radhakrishnan and S. Sivasubramanian, Complete partitions of graphs, *SODA*, pages 860-869, January 2005.

43) Y. Kortsarts, G. Kortsarz and Z. Nutov, Approximating directed multicuts, *The second workshop on approximation and online algorithms* (WAOA), pages 61-67, 2004.

44) R. Gandhi, M. Halldórsson, G. Kortsarz and H. Shachnai, Improved bounds for weighted completion sum of dependent jobs, *The second workshop on approximation and online algorithms* (WAOA), pages 68-82, 2004.

45) S. Khuller, G. Kortsarz and K. R. Rohloff, Approximating the minimal sensor selection for supervisory control, *Workshop on Discrete Event Systems* (WODES), pages 85-90, 2004.

46) M. Halldórsson, G. Kortsarz, Multicoloring: problems and techniques, *Mathematical Foundation of computer science* (MFCS), pages 25-41, 2004.

47) M. Elkin and G Kortsarz, Polylog inapproximability for radio broadcast, *RANDOM-APPROX*, pages 105–116, 2004.

48) R. Gandhi, M. Halldórsson, G. Kortsarz and H. Shachnai. Improved results for data migration and open-shop scheduling, *ICALP*, pages 658-669, 2004.

49) J. Chuzhoy, S. Guha, E. Halperin, S. Khanna, G. Kortsarz, and S. Naor, Tight $\log^* n$ lower bound for approximating directed metric $k-$center, *STOC*, pages 21–27, 2004.

50) G. Kortsarz and Z. Nutov, Improved approximation algorithms for the min-cost vertex $k-$connectivity problem via critical sets, *STOC*, pages 138–145, 2004.

51) L.Gaspero, J. Gartner, G. Kortsarz, N. Musliu, A. Schaerf and W. Slany, A hybrid network flow Tabu search heuristic for the minimum shift design problem, *Metahueristics International Conference* (MIC), 2003.

52) G. Kortsarz and S. Shende, Approximating the achromatic number problem on bipartite graphs, *ESA*, pages 385–396, 2003.

53) L. Di Gaspero, J. Gärtner, G. Kortsarz, N. Musliu, A. Schaerf and W. Slany, Theory and practice of shift scheduling, *ESA*, pages 593–604, 2003.

54) M. Elkin and G. Kortsarz, Approximating telephone multicast on directed graphs, *ICALP*, pages 212–223, 2003.

55) R. Gandhi, E. Halperin, S. Khuller, G. Kortsarz and A. Srinivasan, An improved approximation algorithm for vertex cover with hard capacities, *ICALP*, pages 164–175, 2003.

56) E. Halperin, G. Kortsarz, R. Krauthgamer, A. Srinivasan and N. Wang, Integrality ratio for group Steiner trees and directed Steiner trees, *SODA*, pages 275–284, 2003.

57) M. Elkin and G. Kortsarz, A sublogarithmic approximation algorithm for the undirected telephone broadcast problem: a path out of a jungle, *SODA*, pages 76–85, 2003.

58) G. Kortsarz, R. Krauthgamer and J. Lee, On the hardness of approximating vertex connectivity problems, *RANDOM-APPROX*, pages 185–199, 2002.

59) M. Elkin and G. Kortsarz, A Combinatorial logarithmic approximation algorithm for the directed telephone broadcast problem, *STOC*, pages 438–447, 2002.

60) G. Even and G. Kortsarz, An approximation algorithm for the group Steiner problem, *SODA*, pages 49–58, 2002.

61) G. Even, G. Kortsarz and W. Slany, On network design: fixed charge flows and the covering Steiner problem, *Scandinavian Symposium on Algorithms SWAT*, pages 318–329, 2002.

62) M. Halldórsson, G. Kortsarz and H. Shachnai, Scheduling tasks on dedicated processors and interval graphs, *RANDOM-APPROX*, pages 114–126, 2001.

63) G. Even, J. Feldman, G. Kortsarz and Z. Nutov, A 3/2-approximation for augmenting a connected graph into a two-connected graph, *RANDOM-APPROX*, pages 194–205, 2001

64) G. Kortsarz and R. Krauthgamer, On the approximation of the achromatic number, *SODA*, pages 309–318, 2001.

65) U. Feige, M. Halldórsson and G. Kortsarz, Approximating the domatic number, *STOC*, pages 134–143, 2000.

66) D. Handke and G. Kortsarz, The Steiner tree-spanner problem and related tree-covering problems, *Workshop on Graph-Theoretic Concepts in Computer Science WG*, 2000. No Journal Version.

67) G. Kortsarz and Z. Nutov, Approximating small vertex connectivity problems via Set-Covers, *RANDOM-APPROX*, pages 194–205, 2000.

68) M. Halldórsson and G. Kortsarz, Multicoloring planar graphs and partial k-trees, *RANDOM-APPROX*, pages 73–84, 1999.

69) M. Halldórsson, G. Kortsarz, A. Proskurowski, R. Salman, H. Shachnai and J. A. Telle, Sum mulitcoloring trees, *International Computing and Combinatorics Conference* (COCOON), pages 171–180, 1999.

70) A. Bar-Noy, M. Halldórsson, G. Kortsarz, R. Salman and H. Shachnai, Minimum sum mulitcoloring of graphs, *ESA*, pages 390–401, 1999.

71) G. Kortsarz. On the hardness of approximating spanners, *RANDOM-APPROX*, pages 135–146, 1998.

72) A. Bar-Noy and G. Kortsarz. The minimum color-sum of bipartite graphs, *ICALP*, pages 738–748, 1997.

73) G. Kortsarz and D. Peleg. Approximating shallow-light trees, *SODA*, pages 103–110, 1997.

74) J. Bar-Ilan, G. Kortsarz and D. Peleg, On submodular cover problems, *Israeli Symposium on the Theory of Computing and System* (ISTCS), pages 110–118, 1996.

75) G. Kortsarz and D. Peleg. Generating low-degree $2-$spanners, *SODA*, pages 556–563, 1994.

76) G. Kortsarz and D. Peleg, On choosing a dense subgraph, *FOCS*, pages 692–701, 1993.

77) G. Kortsarz and D. Peleg, Generating sparse $2-$spanners, *Scandinavian Workshop on Algorithm Theory* (SWAT), pages 73–82, 1992.

78) G. Kortsarz and D. Peleg, Approximation algorithms for minimum time broadcast, *Israeli Symposium on the Theory of Computing and System* (ISTCS), pages 67–78, 1992.

79) G. Kortsarz and D. Peleg, Traffic light scheduling on the grid, *International Workshop on Distributed Algorithms* (WDAG), pages 238–252, 1992.

NSF GRANT PANELS

Participated in two NSF panels.
One of the Panels was more important: Deciding on career awards.

INVITED PRESENTATIONS: A SAMPLE FROM 2000 FORWARD

1) G. Kortsarz. Approximating the Domatic Number, invited talk, Weekly seminar, Computer Science, Tel Aviv University, 2000.

2) G. Kortsarz, Approximating the Domatic Number problem, invited talk at the the computer Science weekly seminar, University of Pennsylvania, 2001.

3) G. Kortsarz, The achromatic number problem, invited talk, at Dagstuhl seminars, Germany. 2003.

4) G. Kortsarz, Rare approximation ratios, invited talk, at DIMACS, Theoretical Computer Science Seminar, 2006

5) G. Kortsarz, Approximating non-uniform multicommodity buy at bulk, invited talk at the Workshop on approximation algorithms, Montreal, Canada, 2006. Organized by Goemans and Cheriyan.

6) G. Kortsarz, Comparing min-cost and min-power connectivity problems. Invited talk at Conference on Operations Research, Euro 2006, Iceland, 2006

7) G. Kortsarz, Comparing min-cost and min-power connectivity problems, invited talk at INFORMS, Pittsburgh, , 2006

8) G. Kortsarz. Rare approximation ratios. 2007, invited talk. at Bell Labs Computer Science weekly seminar.

9) G. Kortsarz, Approximating Buy at Bulk problems, invited talk, at the IBM Watson Watson Weekly computer Science Seminar, 2007.

10) G. Kortsarz, Approximating the p Directed Steiner Forest problem, invited talk at INFORMS, Washington D.C, 2008.

11) G. Kortsarz, Survey on approximation connectivity algorithms via survey of techniques, invited talk at Parameterized complexity and approximation algorithms.
Seminar At Schloss Dagstuhl, 2009.

12) G. Kortsarz On the Achromatic number problem,
invited talk at Drexel, Weekly Seminar in Math. 2010.

13) G. Kortsarz, Tools for muliticoloring with applications for bounded tree width graphs and planar graphs,
invited talk at Dagstuhl seminars.
Bidimensional Structures: Algorithms, Combinatorics and Logic.
2013.

14) G. Kortsarz, The interesting behavior of the source location problem, invited talk for Maryland CS weekly Seminar. 2014.

15) G. Kortsarz, Optimal time for exact and approximation algorithms, invited talk at "Satisfiability Lower Bounds and Tight Results for Parameterized and Exponential-Time Algorithms," Simons, institute of theory and computing, Berkeley University, November 2-6, 2015.

16) Guy Kortsarz, A survey on approximating spanners. Invited talk at the *DIMACS Workshop on Algorithms for Data Center Networks*, June 5 - 7, 2017.
Organized by B. Schieber, H. Shachnai, and L. Zhang,

17) Guy Kortsarz. On David Peleg from the viewpoint
of his first Ph. D. Student.
Invited talk in workshop at PODC 2017. Organized by Prof Boaz Patt-Shamir and Pro Yuval Emek.

18) Improved approximation for minimum covering problem using Iterative randomized rounding.
Invited talk in: The 9th Workshop on Flexible Network Design
May 22-25, 2018
Organized by Mohammad Taghi Hajiaghayi and Samir Khuller.

SHORT VISITS AND TALKS: A SMALL SAMPLE

1) G. Kortsarz. Augmenting graph connectivity from 1 to 2.
Stanford university, Palo Alto 2003.

2) G. Kortsarz. Augmenting graph connectivity from 1 to 2.
The university of Waterloo, Canada. 2004

3) G. Kortsarz. The directed Multicut problem.
MIT, Boston 2005

4) G. Kortsarz, On the Directed p Steiner Forest problem.
In the weekly Seminar in CS Maryland university, 2006.

5) G. Kortsarz, Rare approximation ratios. Bell Labs. 2006.

6) G. Kortsarz. Approximating min-power connectivity problems.
Microsoft Research, Seattle, 2008.

7) G. Kortsarz. Augmenting connectivity from 1 to 2.
Max Plack institute at Saarbrcken, Germany, 2009.

8)G. Kortsarz. A survey of connectivity problems via survey of techniques.
Warwick University, England, 2011,

9)G. Kortsarz. A survey on approximating spanners.
Liverpool University, England, 2014,

10) G. Kortsarz, What did I learn on cut expansion and density problems?
Johns Hopkins university, 2014.

11) G. Kortsarz, Visited Marek Cygan at Wydzial Matematyki, Informatyki Mechaniki

12) G. Kortsarz, Approximating activation edge-cover and facility location problems. Max Planck institute, at Saarbrucken Germany, 2019.

MEMBERSHIP IN COMMITTEES

RANDOM-APPROX, Princeton, August 2007
RANDOM-APPROX, Barcelona, August 2010
ESA. France, September 2013.

Chapters in books

1) G. Kortsarz and Z. Nutov, Approximating minimum-cost connectivity problems, In: Editor Teofilo F. Gonzales, Handbook on Approximation Algorithms and Metahueristics, Published by Chapman and Hall, CRC, Taylor and Francis Group, Book Chapter, 58 (30 pages) 2007

2) G. Kortsarz, Fixed parameter approximation and hardness. Encyclopedia of Algorithms, Springer 2015, ISBN 978-3-642-27848-8

3) Magnus Halldorsson and Guy Kortsarz. Chromatic sums, multicoloring and scheduling dependent jobs. A book chapter for the Handbook on Approximation Algorithms and Metahueristics, Published by Chapman and Hall, CRC, Taylor and Francis Group.

JOURNAL PUBLICATIONS

1) E. Chlamtac, M. Dinitz, G. Kortsarz and B. Laekhanukit, Approximating Spanners and Directed Steiner Forest: Upper and Lower Bounds.
TALG, to appear, 2019.

2) Gruia Calinescu, Guy Kortsarz and Zeev Nutov
Improved approximation algorithms for minimum power covering problems
2018. *Theoretical Computer Science to appear*, 2019

3) R. Gandhi, M. Halldorsson, C Konrad, G. Kortsarz and O. Hoon.
Radio Aggregation Scheduling.
Theoretical Computer Science, to appear, 2019.
Special issue of papers from Algosensors 2015 and 2016.

4) The Densest k-Subhypergraph Problem.
Eden Chlamtáč, Michael Dinitz, C Konard, Guy Kortsarz and George Rabanca.
SIAM Journal on Discrete Math, 32(2): 1458-1477, 2018

5) A. Bhangale, R. Gandhi, M Hajiaghayi, R. Khandekar, G. Kortsarz. Bic-overing: Covering edges with two small subsets of vertices. SIAM Journal of Discrete Math, 31(4): 2626-2646, 2017

6) Hossein Esfandiar and G. Kortsarz. Risk free Kidney exchange, Discrete Applied math, volume 243, pages 46-53, 2018.

7) G. Kortsarz and Z. Nutov. Integrality gap LP for the tree augmentation problem, Discrete Applied Math. Volume 239, April 2018, Pages 94-105.

8) The tree with maximum profit on the leaves problem and the connected max-cut problem. R. Gandhi, M .Hajiaghayi, G. Kortsarz M Purohit, and K. Sarpatwar, IPL, 129: 31-34, January 2018.

9) M. Dinitz, G. Kortsarz and Z. Nutov. Approximating the Steiner k-forest problem, with nearly uniform capacity, *Transaction on Algorithms*, 13(3): 40:1-40:16, 2017.

10) G. Kortsarz and Z. Nutov. Approximation source location problems and the star SNDP problem. *Theoretical Computer Science*, 77(4):1216-1239, 2017

11) R. Chitnis, H. Esfandiari, M. Hajiaghayi, R. Khandekar, G. Kortsarz, and Seddighin A Tight Algorithm for Strongly Connected Steiner Subgraph On Two Terminals With Demands. *Algorithmica*, 77(4): 1216-1239 (2017)

12) M. Hajiaghayi, R. Khandekar, G, Kortsarz, and Z. Nutov, Fixed cost k-flow problems, *Theoretical computer science* 58(1): 4-18 (2016). Special Issue of papers selected from WAOA 2013.

13) G. Kortsarz and Z. Nutov. A simplified algorithm for the tree augmentation problem. *Transaction on algorithms (TALG)* 12(2): 25 (2016)

14) M. Dinitz G. Kortsarz and R. Raz. Labelcover with large girth and the hardness of basic spanners. *TALG*, 12(2):23, 2016

15) M. Hajiaghayi, R. Khandekar, M. R. Khani and G. Kortsarz, Approximation Algorithms for Movement Repairman. *TALG*, 12(4): 54, 2016.

16) R. Gandhi and G. Kortsarz. On edge expansion problems and the small set expansion conjecture. *Discrete Applied Mathematics (DAM)* 194: 93-101 (2015)

17) R. Khandekar and G. Kortsarz and V. Mirrokni, On the advantage of overlap in minimizing conductance. *Algorithmica* 69(4):844-863, (2014).

18) M. Hajiaghayi and R. Khandekar and G. Kortsarz and V. Liaghat, On a local protocol for Concurrent File transfers. *Theory Comput. Syst.*
Special issue of papers selected from SPAA (2011). 55(3): 613-636 (2014)

19) M. Dinitz and G. Kortsarz, Matroid Secretary for Regular and Decomposable Matroids. *SIAM J. Comput. (SICOMP)* 43(5): 1807-1830 (2014)

20) R. Khandekar and G. Kortsarz and V. Mirrokni and M. Salavatipour, Two stage Robust Network design with Exponential Scenarios, *Algorithmica* 65(2): 391-408 January, (2013)

21) G. Kortsarz R. Khandekar and Zeev Nutov. Approximating some network design problem with degree constrains. *JCSS*, 79(5)725-736, (2013).

22) M. Cygan, G. Kortsarz and Z. Nutov, Steiner Forest Orientation Problems, *SIAM journal on Discrete Math (SJDM)*, Vol. 27, Issue 3, pages 1503–1513, (2013).

23) Rajiv Gandhi, Magns M. Halldrsson, Guy Kortsarz, Hadas Shachnai. Corrigendum: Improved results for data migration and open shop scheduling. *TALG* 9(4): 34 (2013)

Remark: M. Sviridenko found a mistake in paper 31. But we could both, correct the mistake, and improve the ratio. See the corrected draft in my homepage.

24) M. Hajiaghayi and R. Khandekar and G. Kortsarz, Local search for the Red-Blue Median problem. *Algorithmica*, 63(4):795-814, June, (2012). Special issue of papers selected from *ESA 2010*.

25) M. Feldman and G. Kortsarz and Z. Nutov, Improved results for the directed version of the k Steiner forest problem, *JCSS,* 78(1): 279-292, January, (2012).

26) M. Hajiaghayi and R. Khandekar and G. Kortsarz and Z. Nutov, Prize Collecting Steiner Network Problem and Extensions, *TALG*, 9(1): 2, (2012).

27) R. Khandekar and G. Kortsarz and Z. Nutov, Approximating fault-tolerant group-Steiner problems *TCS*, 416(27):55-64 January, (2012).

28) M. Hajiaghayi and R. Khandekar and G. Kortsarz and J. Mestre, The checkpoint problem, *TCS*, 452:88-99, July (2012)

29) G. Kortsarz, V. Mirrokni, Z. Nutov and E. Tsanko, Approximating Minimum-Power Degree and Connectivity Problems, *Algorithmica*, 60(4):735-742, May, (2011).

30) G. Even, G. Kortsarz and Z. Nutov, A 1.5-approximation for augmenting a connected graph into a two-connected graph, *IPL* 111(6): 296-300, (2011).

Remark: This paper has a mistaken definition. A corrected, self contained version (the journal version of the APPROX paper) appeared in TALG in 2016.

31) M. Halldórsson and G. Kortsarz and M. Sviridenko. Min Sum Edge Coloring in General Multigraphs via Configuration LP, *TALG,* Vol 7, number 2, March, (2011).

32) G. Kortsarz and Z. Nutov, Approximating some network design problems with node costs, *TCS*, 412(35):4482-4492, August, (2011)

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M. Hajiaghayi, R. Khandekar and G. Kortsarz. FPT-hardness for clique and set cover with super exponential time in k.

Remark: This is the first paper ever to give super exponential time, super constant hardness, for Set Cover and Clique under the ETH.