

Publication:

[International Journal Papers] (*corresponding author)

1. Yi-Hua Yang, Chung-Shou Liao^{*}, Xin Han, Louxin Zhang. *Online Buffer Management for Transmitting Packets with Processing Cycles*, Theoretical Computer Science, Vol. 723, (2018), pp. 73-83.
2. Cheng-Yu Ma, Yi-Ping Phoebe Chen, Bonnie Berger^{*}, Chung-Shou Liao^{*}. *Identification of Protein Complexes by Integrating Multiple Alignment of Protein Interaction Networks*, Bioinformatics, Vol. 33(11), (2017), pp. 1681-1688.
3. Chung-Shou Liao, Shang-Hung Lu, and Zuo-Jun Max Shen^{*}. *The Electric Vehicle Touring Problem*, Transportation Research Part B: Methodological, Vol. 86, (2016), pp. 163-180. (This paper wins 2017 Yuan-Ze Hsu Scientific Paper Award.)
4. Chung-Shou Liao^{*}, Chih-Wei Liang, and Sheung-Hung Poon. *Approximation Algorithms on Consistent Dynamic Map Labeling*, Theoretical Computer Science, Vol. 640(9), (2016), pp. 84-93.
5. Chung-Shou Liao^{*}. *Power domination with bounded time constraints*, Journal of Combinatorial Optimization, Vol. 31(2), (2016), pp. 725-742.
6. Chung-Shou Liao^{*}, Tsung-Jung Hsieh, Jian-Hong Liu, Xian-Chang Guo, and Chia-Chi Chu. *Hybrid Search for the Optimal PMU Placement Problem on a Power Grid*, European Journal of Operational Research, Vol. 243(3), (2015), pp. 985-994.
7. Chung-Shou Liao^{*}, Hung-Yu Huang and Amy J.C. Trappey. *Evaluating the Renewable Energy Industry Using the Hidden Markov Model: A Case Study on Wind Power and Photovoltaic in Taiwan*, International Journal of Electronic Business Management, Vol. 13, (2015), pp.32-44.
8. Po-Jung Huang, Chi-Ching Lee, Bertrand Chin-Ming Tan, Yuan-Ming Yeh, Kuo-Yang Huang, Ruei-Chi Gan, Ting-Wen Chen, Cheng-Yang Lee, Sheng-Ting Yang, Chung-Shou Liao, Hsuan Liu, and Petrus Tang^{*}. *Vanno: A Visualization-aided Variant Annotation Tool*, Human Mutation, 36(2), (2015), pp. 167-174. (This is joint work with Chang Gung hospital.)
9. Chung-Shou Liao^{*} and Yamming Huang. *Generalized Canadian Traveller Problems*, Journal of Combinatorial Optimization, Vol.29(4), (2015), pp.701-712.
10. Chung-Shou Liao^{*}, Tsung-Jung Hsieh, Yu-Syuan Huang and Chen-Fu Chien. *Similarity Searching for Defective Wafer Bin Maps in Semiconductor Manufacturing*, IEEE Trans. on Automation Science and Engineering, Vol. 11(3) (2014), pp. 953-960.
11. Chung-Shou Liao^{*} and Yamming Huang. *The Covering Canadian Traveller Problem*, Theoretical Computer Science, Vol. 530(17) (2014), pp. 80–88.

12. Chung-Shou Liao and D. T. Lee*. *Power domination in circular-arc graphs*, *Algorithmica*, Vol. 65(2), (2013) pp. 443-466.
13. Leonid Chindelevitch, Cheng-Yu Ma, Chung-Shou Liao*, and Bonnie Berger*. *Optimizing a Global Alignment of Protein Interaction Networks*, *Bioinformatics*, Vol. 29(21), (2013) pp. 2765-2773.
14. Chung-Shou Liao* and Chia-Hong Hsu. *New Lower Bounds for the Three-dimensional Orthogonal Bin Packing Problem*, *European Journal of Operational Research*, Vol. 225(2), (2013) pp. 244-252.
15. Cheng-Yu Ma, Shu-Hsi Lin, Chi-Ching Lee, Chuan Yi Tang, Bonnie Berger and Chung-Shou Liao*. *Reconstruction of phyletic trees by global alignment of multiple metabolic networks*, *BMC Bioinformatics*, Vol. 14(S2):S12, (2013) pp. 1-9.
16. Chung-Shou Liao* and Louxin Zhang. *Approximating the spanning k-tree forest problem*, *International Journal of Foundations of Computer Science*, Vol. 23(7), (2012) pp. 1543-1554.
17. Daniel Park, Rohit Singh, Michael Baym, Chung-Shou Liao, and Bonnie Berger*. *IsoBase: a database of functionally related proteins across PPI networks*, *Nucleic Acids Research*, Vol. 39 (2011) D295-D300. (The first three authors were graduate students; ACOlab initiated this study and built its prototype.)
18. Mong-Jen Kao, Chung-Shou Liao*, and D. T. Lee. *Capacitated domination problem*, *Algorithmica*, Vol. 60(2) (2011) pp. 274-300.
19. Chung-Shou Liao, Kanghao Lu, Michael Baym, Rohit Singh, and Bonnie Berger*. *IsoRankN: Spectral methods for global alignment of multiple protein networks*, *Bioinformatics*, Vol 25 No. 12 (2009) pp. i253-i258.
20. Yu-Shin Chen, D. T. Lee and Chung-Shou Liao*. *Labeling points on a single line*, *International Journal of Computational Geometry & Applications (IJCGA)*, Vol. 15, No. 3 (2005) pp. 261-277.
21. Chung-Shou Liao and G. J. Chang*. *k-Tuple domination in graphs*, *Inform. Process. Letters*, Vol. 87, (2003) pp. 45-50.
22. Chung-Shou Liao and G. J. Chang*. *Algorithmic aspect of k-tuple domination in graphs*, *Taiwanese Journal of Math.* Vol 6(3), (2002) pp.415-420.

[Papers under Review] (*: corresponding author)

1. Ming-Hao Tung, Yi-Ping Phoebe Chen, Chung-Shou Liao*. *A Fast and Accurate Density Peak Clustering Algorithm via Precise Center Selection*, submitted to *IEEE Trans. on Knowledge and Data Engineering*, 2017.

2. Xian-Chang Guo, Chung-Shou Liao^{*}, Chia-Chi Chu, *PMU Placements with Observability Propagation Constrains on Power Grids*, submitted to IEEE Trans. on Smart Grids, 2017.
3. Hao-Ting Wei, Sung-Hsien Hsieh, Wen-Liang Hwang, Chung-Shou Liao^{*}, Chun-Shien Lu. *Link Delay Estimation Using Sparse Recovery for Dynamic Network Tomography*, submitted to IEEE Trans. Signal Processing Letters, 2017.
4. Yamming Huang, Chung-Shou Liao^{*}, Erik Demaine, Kunihiko Sadakane. *Approximating the Canadian Traveller Problem with Online Randomization*, submitted to ACM Trans. on Algorithms, 2017.

[International Conference Papers]

1. Hao-Ting Wei and Chung-Shou Liao. *Dynamic Algorithms for Capacitated Vertex Cover*, in Proc. 10th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2017), Hong Kong.
2. Chien-Chih Lin and Chung-Shou Liao. *Approximating Model-based Compressive Sensing via Random Walks*, in Proc. 10th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2017), Hong Kong.
3. Xian-Chang Guo, Chung-Shou Liao, and Chia-Chi Chu. *Optimal PMU Placements Under Propagation Depth Constraints by Mixed Integer Linear Programming*, in Proc. the IEEE International Conference on Smart Grid Communications (SmartGridComm 2016), Sydney, Australia.
4. Chien-Chih Lin, Hao-Ting Wei, and Chung-Shou Liao. *Development of Robust Design Using Compressed Data*, in Proc. the 22nd ISSAT International Conference on Reliability and Quality in Design (ISSAT RQD 2016), Los Angeles, USA.
5. Xian-Chang Guo, Chung-Shou Liao, and Chia-Chi Chu. *Distributed Algorithm for PMU Placement Under N-1 Line Outage Conditions*, in Proc. the IEEE PES Asia-Pacific Power and Energy Engineering Conference (IEEE PES APPEEC 2015), pp. 1-5, Brisbane, Australia.
6. Chun-Hsiang Lin and Chung-Shou Liao. *The Online Traveling Salesman Problem Revisited*, in Proc. 8th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2015), Hiroshima, Japan.
7. Erik Demaine, Yamming Huang, Chung-Shou Liao, and Kunihiko Sadakane. *Canadians Should Travel Randomly*, in Proc. the 41st International Colloquium on Automata, Languages, and Programming (ICALP 2014), Copenhagen, Denmark. (Acceptance Rate: 23%)
8. Chung-Shou Liao, Chih-Wei Liang, and Sheung-Hung Poon. *Approximation Algorithms on Consistent Dynamic Map Labeling*, in Proc. 8th International Workshop on Frontiers in Algorithmics (FAW 2014), Zhangjiajie, China, LNCS 8497, pp. 170-181.

9. Xian-Chang Guo, Chung-Shou Liao, and Chia-Chi Chu. *Multi-objective Power Management on Smart Grid*, in Proc. the 18th IEEE International Conference on Computer Supported Cooperative Work Design (CSCWD 2014), Taiwan.
10. Chung-Shou Liao, Hung-Yu Huang, Sheng-Ting Yang, and Amy J. C. Trappey. *Managing Knowledge Assets for the Development of the Renewable Energy Industry*, in Proc. 8th World Congress on Engineering Asset Management (WCEAM 2013), Hong Kong.
11. Chung-Shou Liao, Tsung-Jung Hsieh, Xian-Chang Guo, Jian-Hong Liu, and Chia-Chi Chu. *Applying Power Domination with Hybrid Search to Optimal PMU Placement Problems*, in Proc. IEEE Power & Energy Society General Meeting (2013), Vancouver, Canada.
12. Shang-Hung Lu and Chung-Shou Liao. *The Electric Vehicle Touring Problem*, in Proc. 6th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2013), Matsushima, Japan.
13. Chi-Ching Lee, Po-Jung Huang, Sheng-Ting Yang, Chung-Shou Liao and Petrus Tang. *iCircos: Integrated web service of Circos*, in Proc. 12th International Conference on Bioinformatics (InCoB 2013), Taicang, China.
14. Hung-Yu Huang, Chung-Shou Liao, and Amy J. C. Trappey. *Evaluating the Development of the Renewable Energy Industry*, in Proc. Institute of industrial Engineers Asian Conference (IIE Asian 2013), Taipei, Taiwan.
15. Shu-Hua Wang, Shang-Hung Lu, Wei-Yu Kao, Shau-Jie Lin, I-Shuan Wu, and Chung-Shou Liao. *Approximating the Electric Vehicle Touring Problem: Theory and Applications*, in Proc. 9th International Conference on Optimization: Techniques and Applications (ICOTA 9 2013), Taipei, Taiwan.
16. Yamming Huang and Chung-Shou Liao. *The Canadian Traveller Problem Revisited*, in Proc. 23rd International Symposium on Algorithms and Computation (ISAAC 2012), Taipei, Taiwan, LNCS 7676, pp.352-361. (Acceptance Rate: 39%)
17. Cheng-Yu Ma, Shu-Hsi Lin, Chi-Ching Lee, Chuan Yi Tang, Bonnie Berger, Chung-Shou Liao. *Reconstruction of phyletic trees by global alignment of multiple metabolic networks*, in Proc. 11th Asia Pacific Bioinformatics Conference (APBC 2012), Vancouver, Canada. (Acceptance Rate: 38%)
18. Tsung-Jung Hsieh, Yu-Syuan Huang, Chung-Shou Liao, and Chen-Fu Chien. *A New Morphology-based Approach for Similarity Searching on Wafer Bin Maps in Semiconductor Manufacturing*, in Proc. 16th IEEE International Conference on Computer Supported Cooperative Work Design (CSCWD 2012), Wuhan, China.
19. Chia-Hong Hsu and Chung-Shou Liao. *New lower bounds for the three-dimensional orthogonal bin packing problem*, in Proc. 23rd Canadian Conference on Computational Geometry (CCCG 2011), Toronto,

Canada, pp. 381-386.

20. Leonid Chindelevitch, Chung-Shou Liao, and Bonnie Berger. *Local optimization for global alignment of protein interaction networks*, Pacific Symposium on Biocomputing (PSB 2010), Hawaii, U.S.A., 15, pp.123-132.

21. Chung-Shou Liao, Kanghao Lu, Michael Baym, Rohit Singh, and Bonnie Berger. *IsoRankN: Spectral methods for global alignment of multiple protein networks*, in Proc. 17th International Conference on Intelligent Systems for Molecular Biology (ISMB 2009), Stockholm, Sweden. (Acceptance Rate: 18%)

22. Chung-Shou Liao and Louxin Zhang. *Approximating the spanning forest problem*, in Proc. 3rd International Frontiers of Algorithmics Workshop (FAW 2009), Hefei, China, LNCS 5598, pp.293-301. (Acceptance Rate: 36%)

23. Mong-Jen Kao, Chung-Shou Liao. *Capacitated domination problem*, in Proc. 18th International Symposium on Algorithms and Computation (ISAAC 2007), Sendai, Japan, LNCS 4835, pp. 256-267. (Acceptance Rate: 36%)

24. Kuen-Lin Yu, Chung-Shou Liao and D. T. Lee. *Maximizing the number of independent labels in the plane*, in Proc. 1st International Frontiers of Algorithmics Workshop (FAW 2007), Lanzhou, China, LNCS 4613, pp. 136-147. (Acceptance Rate: 24%)

25. Chung-Shou Liao and D. T. Lee, *Power domination problem in graphs*, in Proc. 11th International Computing and Combinatorics Conference (COCOON 2005) Kunming, China, LNCS 3595, pp. 818-828. (Acceptance Rate: 27%)

26. D. T. Lee, Chung-Shou Liao, and Wei-Bung Wang. *Time-based Voronoi Diagram*, in Proc. International Symposium on Voronoi Diagrams in Science and Engineering (ISVD 2004), University of Tokyo, Hongo, Tokyo, Japan.

[Books]

Matthew Realff, Valerie Thomas, Chung-Shou Liao and I-Hsuan Hong. Energy Assessment and Management: Special Issue, International Journal of Electronic Business Management, Volume 13, 2015.

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