Curriculum Vitae

Chung-Shou Liao 廖崇碩

Professor

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There is nothing more practical than a good theory. (Kurt Lewin,1952)

Education:

National Taiwan University, Taipei, Taiwan   2004 - 2009

Doctor of Philosophy, Computer Science and Information Engineering

Employment:

Dept. of Industrial Engineering, National Tsing Hua University, Hsinchu, Taiwan

Professor   2018-present

Dept. of Industrial Engineering, National Tsing Hua University, Hsinchu, Taiwan

Associate Professor   2014 - 2018

Assistant Professor   2010 - 2014

Institute of Information Science, **Academia Sinica**, Taiwan

Research Assistant & Postdoctoral Fellow   2002 - 2009

Research Interests:

Combinatorial optimization, network biology, dynamic/online algorithms, graph-theoretic algorithms, and computational geometry

Selected Honors and Awards:

1. Senior Member, ACM and IEEE, 2020
2. Young Scholar Creativity Award, Found. Advancement Outstanding Scholarship, 2018
3. Fulbright Senior Research Scholar Grant, 2018 & 2019
4. Yuan-Ze Hsu Scientific Paper Award, 2017
5. Outstanding Teaching Award, NTHU, 2017
6. Exploration Research Award, Pan Wen Yuan Foundation, 2017
7. NSC Dr. Ta-You Wu Memorial Award, 2016
   － the highest honor for outstanding young scholars in Taiwan
8. Sayling Wen's Award for International Collaborative Research Grants, 2015
9. K.-T. Li Young Researcher Award, IICM (ACM Taiwan), 2014

10. CIIE Outstanding Young Industrial Engineer Award, 2014
11. NSC Outstanding Young Scholar Grants, 2013~2016, 2016~2019
12. Academia Excellence Research Rewards, NTHU, 2013, 2014, 2016~2019
13. Outstanding Teaching Award, College of Engineering, NTHU, 2012 & 2016
14. Sayling Wen's Award for Young Outstanding Researcher in Service Science, 2012
15. Best Paper Award, 29th, 30th, 31st, 32nd Workshop on Combinatorial Mathematics and Computational Theory, 2012, 2013, 2014, 2015.
16. Best Doctoral Thesis Award, IICM, 2009.
17. NSC Graduate Students Study Abroad Program, 2007 (NSC-096-2917-I-002-114)
18. Best Master Thesis Award, Workshop on Combinatorial Mathematics, 2001.
19. The 1st Rank Student Award, Graduate Institute of Applied Math, NCTU, 2001.

Teaching:
[Undergraduate Courses]
Operations Research, Discrete Math, Algorithms, Data Structure, Programming Design and Applications, Seminar on Innovation and Entrepreneurship
[Graduate Courses]
Combinatorial Optimization, Advanced Algorithms, Seminar on Energy Management

Professional Activities:
[Conference Steering Committee]
International Symposium on Algorithms and Computation (since 2019)
[Board Member]
Asian Association for Algorithms and Computation (since 2016)
[Conference Program Chair]
The 29th International Symposium on Algorithms and Computation (ISAAC 2018)
The 9th Annual Meeting, Asian Association for Algorithms and Computation (AAAC 2016)
[Secretary General]
Operations Research Society of Taiwan (since 2020)
Association for Algorithms and Computation Theory, Taiwan (2017 to 2020)
[Journal Editorship]
Associate Editor, Journal of Combinatorial Optimization (SCI)
Managing Editor, International Journal of Operations Research
Senior Editor, Journal of Industrial and Production Engineering

[Conference Program Committee]
Int'l Computing and Combinatorics Conference (COCOON 2021), Int'l Workshop on Computational Network Biology (CNB-MAC 2019), Int'l Symposium on Algorithms and

Computation (ISAAC 2017, 2018, 2021), Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2016-2021), QR2MSE & WCEAM 2016, Int'l Symposium on Semiconductor Manufacturing Intelligence (ISMI 2014, 2015), IEEE Int'l Conf. on Computer Supported Cooperative Work in Design (CSCWD 2014), Int'l Conf. on Information Communication Technology (ICT-EurAsia 2013), Int'l Conf. on Computational and Systems Biology (ICCSB 2010 to 2012), Int'l Conf. on Contemporary Computing (IC3 2010)

[Journal External Reviewer]
– Algorithmica, Discrete Applied Math., Theoretical Computer Science, Int'l Journal of Foundations of Computer Science, Int'l Journal of Computational Geometry & Applications, Discrete Math., Inform. Processing Letters, Journal of Combinatorial Optimization, Discrete Optimization, Taiwanese Journal of Mathematics, Int'l Journal of Combinatorics;
– European Journal of Operational Research, Omega, Transportation Research Part B: Methodological, Transportation Research Part E: Logistics and Transportation Review, Applied Mathematical Modelling, IBM Journal of Research and Development;
– Bioinformatics, PLOS Computational Biology, BMC Bioinformatics, PLOS ONE, IEEE Trans. on Computational Biology and Bioinformatics;
– IEEE Trans. Knowledge and Data Engineering, IEEE Trans. Industrial Informatics, IEEE Trans. Computers, IEEE Access, IEEE Trans. on Power Systems, IEEE Trans. on Power Delivery, IEEE Trans. on Smart Grid;

[Visit Experience]

Dept. of CSAIL, **Massachusetts Institute of Technology**, USA   2019 Jan-Aug
Fulbright Visiting Professor, at Prof. Bonnie Berger & Erik Demaine's Lab
  ■ Online Algorithms and Network Alignment

Dept. Math Informatics, the University of Tokyo, Tokyo, Japan   2017 Summer
Visiting Associate Professor, at Prof. Kunihiko Sadakane's Lab
  ■ Dynamic Algorithms and Data Structure

ITCSC, Chinese University of Hong Kong,   2017 Spring
Visiting Associate Professor, at Prof. Shengyu Zhang's Lab
  ■ Algorithms and Computation

Dept. IE & OR, University of California, Berkeley, USA   2016 Summer
Visiting Associate Professor, at Prof. Zuo-Jun Max Shen's Lab
  ■ Algorithms for Electric Vehicle Routing

Dept. Applied Math, University of California, San Diego, USA   2016 Summer
Visiting Associate Professor, at Prof. Fan Chung Graham's Lab
  ■ Online Routing Algorithms with Randomness

School of Informatics, Kyoto University, Kyoto, Japan   2015 Spring

Visiting Associate Professor, at Prof. Kazuo Iwama's Lab

- ■ Online Routing Algorithms with Randomness

Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany   2014 Summer

Visiting Associate Professor, at Prof. Dorothea Wagner's Lab

- ■ Algorithms for Large-scale Transportation Networks

University of Lugano (USI), Lugano, Switzerland   2014 Summer

Visiting Associate Professor, at Prof. Evanthia Papadopoulou's Lab

- ■ Computational Geometry and Voronoi Diagram with Highways

National Institute of Informatics (NII), Tokyo, Japan   2013 Spring

Visiting Assistant Professor, at Prof. Kunihiko Sadakane's Lab

- ■ Algorithms and Data Structure

National Info. Comm. Tech. (NICTA), Australia   2012 Winter

Visiting Assistant Professor, at Prof. Fang Chen's Lab

- ■ Intelligent Transportation Systems

Dept. of CSE, La Trobe University, Australia   2012 Winter

Visiting Assistant Professor, at Prof. Phoebe Chen's Lab

- ■ Algorithms and Bioinformatics

School of CS, University of Waterloo, Canada   2011 Summer

Visiting Assistant Professor, at Prof. Ming Li's Lab

- ■ Computational Complexity and Bioinformatics

Dept. of CSAIL, **Massachusetts Institute of Technology**, USA   2008 - 2009

Visiting Scholar, at Prof. Bonnie Berger's Lab

- ■ Systems Biology: Protein Interaction Network Alignment

Dept. of Math, National University of Singapore, Singapore   2008 Spring

Visiting Scholar, at Prof. Louxin Zhang's Lab

- ■ Bioinformatics: Genomic Sequence Alignment

Dept. of ECE, Carnegie Mellon University, USA   2007 Fall

Visiting Scholar, at Prof. Tsuhan Chen's Lab

- ■ Machine Learning: Probabilistic Graphical Model Design and Analysis

[Invited Talks]

[Overseas]

2017-May-04. Institute of Theoretical Computer Science and Communications (ITCSC), Chinese University of Hong Kong. *The Electric Vehicle Touring Problem*

2016-Jul-25. Dept. Applied Mathematics, UC San Diego, USA. *Approximating the Canadian Traveller Problem with Randomness*

2015-May-11. School of Informatics, Kyoto University, Japan. *Online Route Planning – the*

Canadian Traveller Problem

2014-Jul-22. Dept.Informatics, University of Lugano, Switzerland. *Online Route Planning – the Canadian Traveller Problem Revisited*

2014-Jul-15. Inst. Informatics, Karlsruhe Institute of Technology, Germany. *Online Route Planning – the Canadian Traveller Problem Revisited*

2013-Feb-13. School IT, The University of Sydney, Australia. *Global Alignment of Multiple Biological Networks with Applications* (Basser Seminar Series)

2010-Sep-24. Dept. Math, National University of Singapore. *Global Alignment of Multiple Protein Networks*

[Domestic]

2020-Dec-21. Dept. IEM, National Chiao Tung University. *Clustering for Unsupervised Learning: from Manufacturing to Diverse Data*

2020-Nov-25. Edge AI Workshop by Gloria. *Clustering for Unsupervised Learning: from Manufacturing to Diverse Data*

2020-Aug-21. National Center for High-performance Computing, *From Network Alignment to Social Network Mining*

2019-Dec-20. Dept. Business Administration, National Taiwan University. *The Electric Vehicle Touring Problem*

2018-Jun-20. National Center for High-performance Computing, *Biological Network Alignment with Applications*

2018-Jun-08. AlgoSeminar, Institute of Statistical Science, Academia Sinica, *Online Route Planning – the Canadian Traveller Problem Revisited*

2018-Apr-09. Dept. EE, National Taiwan University, *The Electric Vehicle Touring Problem*

2018-Feb-05. International Conference on Discrete Math and Its Applications, Institute of Math., Academia Sinica. *The Electric Vehicle Touring Problem*

2017-Oct-02. Dept. Math Sciences, National Chengchi University. *The Electric Vehicle Touring Problem*

2017-Sep-29. Workshop for Forum on Service Science Research, *Online Routing with Applications to EVs*

2017-Jan-13. Annual Forum, Service Science Society of Taiwan. *Discover Valuable Information across Multiple Interaction Networks*

2015-Dec-04. Dept. IEM, Yuan Ze University. *Online Route Planning – the Canadian Traveller Problem*

2015-Dec-02. Dept. IEEM, National Tsing Hua University. *Online Algorithms – An Introduction*

2015-Jun-27. Int'l Conference on Graph Theory and Combinatorics. Dept. Math, National Sun Yat-sen University. *Electric Vehicle Touring*

2015-Jun-10. Dept. CS, National Tsing Hua University. *Online Route Planning - the Canadian Traveller Problem*

2014-Dec-19. NTU INFORMS Seminar, National Taiwan University. *Online Route Planning on Road Networks*

2014-Nov-06. Dept. IM, National Taiwan University of Science and Technology. *Online Route Planning – the Canadian Traveller Problem Revisited*

2014-Oct-22. Inst. IE, National Taiwan University. *Online Route Planning - the Canadian Traveller Problem Revisited*

2013-Dec-20. Dept. CS, National Chung Hsing University. *Online Route Planning*

2013-Nov-22. Dept. MM, National Taiwan Ocean University. *Online Route Planning*

2013-Apr-29. Inst. LM, National Dong Hwa University. *Online Route Planning*

2012-Jun-15. Dept, CS, National Tsing Hua University. *The Three-dimensional Orthogonal Bin Packing Problem*

2012-Apr-23. Dept. IEM, National Chiao Tung University. *Exploring the Three-dimensional Orthogonal Bin Packing Problem*

2010-Nov-03. Inst. IE, National Taiwan University. *Location Problems in Large-scale Networks with Applications*

2010-Jun-14. Dept. IEM, National Chiao Tung University. *Considering Optimization Problems from a Combinatorial Point of View*

2009-Nov-04. Dept. Math, Fu Jen University. *Power Domination in Graphs*

2009-Sep-29. Dept. Applied Math, National Chiao Tung University. *Power Domination in Circular-arc Graphs*

Publication:

[International Journal Papers] (*corresponding author)

1. Xian-Chang Guo, <u>Chung-Shou Liao</u>*, Chia-Chi Chu*. *Probabilistic Optimal PMU Placements Under Limited Observability Propagations*, IEEE Systems Journal, pp. 1-10. Published Online, Jan., 2021. DOI: 10.1109/JSYST.2020.3048970

2. Erik D. Demaine, Yamming Huang, <u>Chung-Shou Liao</u>* and Kunihiko Sadakane. *Approximating the Canadian Traveller Problem with Online Randomization*, Algorithmica, Vol. 83(5), (2021), pp. 1524-1543. DOI:10.1007/s00453-020-00792-6. (This paper wins 2020 Best Journal Paper Award of AACT (Association for Algorithms and Computation Theory, Taiwan).)

3. Cheng-Yu Ma and <u>Chung-Shou Liao</u>*. *A Review of Protein–protein Interaction Network Alignment: From Pathway Comparison to Global Alignment*, Computational and Structural

Biotechnology Journal, Vol. 18, (2020), pp. 2647-2656.

4. Xian-Chang Guo, <u>Chung-Shou Liao</u>, Chia-Chi Chu[*], *Enhanced Optimal PMU Placements With Limited Observability Propagations*, IEEE Access, (published online, 2019), Vol.8, (2020), pp. 22515-22524.

5. Yi-Hua Yang, <u>Chung-Shou Liao</u>[*], Xin Han, Louxin Zhang. *Online Buffer Management for Transmitting Packets with Processing Cycles*, Theoretical Computer Science, Vol. 723, (2018), pp. 73-83.

6. Cheng-Yu Ma, Yi-Ping Phoebe Chen, Bonnie Berger[*], <u>Chung-Shou Liao</u>[*]. *Identification of Protein Complexes by Integrating Multiple Alignment of Protein Interaction Networks*, Bioinformatics, Vol. 33(11), (2017), pp. 1681-1688.

7. <u>Chung-Shou Liao</u>, 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.)

8. <u>Chung-Shou Liao</u>[*], Chih-Wei Liang, and Sheung-Hung Poon. *Approximation Algorithms on Consistent Dynamic Map Labeling*, Theoretical Computer Science, Vol. 640(9), (2016), pp. 84-93.

9. <u>Chung-Shou Liao</u>[*]. *Power domination with bounded time constraints*, Journal of Combinatorial Optimization, Vol. 31(2), (2016), pp. 725-742.

10. <u>Chung-Shou Liao</u>[*], 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, Vo1. 243(3), (2015), pp. 985-994.

11. <u>Chung-Shou Liao</u>[*], 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.

12. 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, <u>Sheng-Ting Yang</u>, <u>Chung-Shou Liao</u>, 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.)

13. Chung-Shou Liao[*] and Yamming Huang. *Generalized Canadian Traveller Problems*, Journal of Combinatorial Optimization, Vol. 29(4), (2015), pp.701-712.

14. 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.

15. Chung-Shou Liao[*] and Yamming Huang. *The Covering Canadian Traveller Problem*, Theoretical Computer Science, Vol. 530(17) (2014), pp. 80–88.

16. Chung-Shou Liao and D. T. Lee[*]. *Power domination in circular-arc graphs*, Algorithmica, Vol. 65(2), (2013) pp. 443-466.

17. 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.

18. 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.

19. 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.

20. 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.

21. 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.)

22. Mong-Jen Kao, Chung-Shou Liao*, and D. T. Lee. *Capacitated domination problem*, Algorithmica, Vol. 60(2) (2011) pp. 274-300.

23. 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.

24. 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.

25. Chung-Shou Liao and G. J. Chang*. *k-Tuple domination in graphs*, Inform. Process. Letters, Vol. 87, (2003) pp. 45-50.

26. 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*, IEEE Trans. on Knowledge and Data Engineering, under review, 2020.

2. 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, under review, 2020.

3. Hao-Ting Wei, Wing-Kai Hon, Paul Horn, Chung-Shou Liao* and Kunihiko Sadakane. *An O(1)-Approximation Algorithm for Dynamic Weighted Vertex Cover with Soft Capacity*, Algorithmica, minor revision, 2020.

[International Conference Papers]

1. Chang-Wei Sung, Xinghao Yang, Chung-Shou Liao and Wei Liu. *IntRoute: An Integer Programmingbased Approach for Best Bus Route Discovery*, in Proc. the 26th International Conference on Database Systems for Advanced Applications (DASFFAA 2021), Taipei, Taiwan.

2. Xian-Chang Guo, Chung-Shou Liao, Chia-Chi Chu. *Decentralized PMU Placements in a Dynamic Programming Approach*, in Proc. 54th IEEE Industry Applications Society Annual Meeting (IAS 2019), Baltimore, Maryland, USA.

3. Chen-Yu Liu and <u>Chung-Shou Liao</u>. *Dynamic Algorithms for Density-based Clustering via Tree Structure*, in Proc. 12th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2019), Seoul, Korea.

4. Pei-Chuan Chen and <u>Chung-Shou Liao</u>. *Do Randomized Approaches Work for Online TSP on the Real Line*, in Proc. 12th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2019), Seoul, Korea.

5. Ya-Chun Liang and <u>Chung-Shou Liao</u>. *Fully Dynamic Model of Index-Based Structural Graph Clustering*, in Proc. 12th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2019), Seoul, Korea.

6. Hao-Ting Wei, Wing-Kai Hon, Paul Horn, <u>Chung-Shou Liao</u> and Kunihiko Sadakane. *An O(1)-Approximation Algorithm for Dynamic Weighted Vertex Cover with Soft Capacity*, in Proc. 21st International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2018), Princeton University, New Jersey.

7. Guan-Chung Chen and <u>Chung-Shou Liao</u>. *Dynamic Algorithms for Large-scale Network Alignment*, in Proc. 11th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2018), Beijing, China.

8. Kuo-kai Lee, Wing-Kai Hon, <u>Chung-Shou Liao</u> and Kunihiko Sadakane. A Sublinear time Dynamic Algorithm for Searching, in Proc. 11th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2018), Beijing, China.

9. Sheng-Yin Chen and <u>Chung-Shou Liao</u>. *Route Planning for the Last-mile Delivery*, in Proc. 11th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2018), Beijing, China.

10. Chien-Chih Lin and <u>Chung-Shou Liao</u>. *Approximating Model-based Compressive Sensing via Random Walks*, in Proc. 10th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2017), Hong Kong.

11. Hao-Ting Wei and <u>Chung-Shou Liao</u>. *Dynamic Algorithms for Capacitated Vertex Cover*, in Proc. 10th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2017), Hong Kong.

12. Xian-Chang Guo, <u>Chung-Shou Liao</u>, and Chia-Chi Chu. *Optimal PMU Placements*

*Under Propagation Depth Constraints by Mixed Integer Linear Programmin*g, in Proc. the IEEE International Conference on Smart Grid Communications (SmartGridComm 2016), Sydney, Australia.

13. Chien-Chih Lin, Hao-Ting Wei, and <u>Chung-Shou Liao</u>. *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.

14. I-Hsuan Wu and <u>Chung-Shou Liao</u>. *Online Dynamic Power Management*, in Proc. 9th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2016), Taipei, Taiwan.

15. Shao-Chieh Lin and <u>Chung-Shou Liao</u>. *Fast Route Planning with Geographical Information*, in Proc. 9th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2016), Taipei, Taiwan.

16. Yi-Hua Yang and <u>Chung-Shou Liao</u>. Online Buffer Management for Packets with Constant Density, in Proc. 9th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2016), Taipei, Taiwan.

17. Xian-Chang Guo, <u>Chung-Shou Liao</u>, 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.

18. Shao Chieh Lin and <u>Chung-Shou Liao</u>. *Dynamic Routing in Time-dependent Traffic Networks*, in Proc. International conference on Operations Research (OR 2015), Vienna, Austria.

19. Chun-Hsiang Lin and <u>Chung-Shou Liao</u>. *The Online Traveling Salesman Problem Revisited*, in Proc. 8th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2015), Hiroshima, Japan.
20. Chi-Fen Chang, Ping-Ting Lin, <u>Chung-Shou Liao</u>. *The Online Bin Packing Problem Revisited*, in Proc. International Conference on Operations Research (OR 2014), Aachen, Germany.

21. Erik Demaine, <u>Yamming Huang</u>, <u>Chung-Shou Liao</u>, 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%)

22. <u>Chung-Shou Liao</u>, 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.

23. Xian-Chang Guo, <u>Chung-Shou Liao</u>, 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.

24. <u>Chung-Shou Liao</u>, 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.

25. <u>Chung-Shou Liao</u>, 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.

26. Shang-Hung Lu and <u>Chung-Shou Liao</u>. *The Electric Vehicle Touring Problem*, in Proc. 6th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2013), Matsushima, Japan.

27. Chi-Ching Lee, Po-Jung Huang, Sheng-Ting Yang, <u>Chung-Shou Liao</u> and Petrus Tang. *iCircos: Integrated web service of Circos*, in Proc. 12th International Conference on Bioinformatics (InCoB 2013), Taicang, China.

28. Hung-Yu Huang, <u>Chung-Shou Liao</u>, 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.

29. Shu-Hua Wang, Shang-Hung Lu, Wei-Yu Kao, Shau-Jie Lin, I-Shuan Wu, and <u>Chung-Shou Liao</u>. *Approximating the Electric Vehicle Touring Problem: Theory and Applications*, in Proc. 9th International Conference on Optimization: Techniques and Applications (ICOTA 9 2013), Taipei, Taiwan.

30. Yamming Huang and <u>Chung-Shou Liao</u>. *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%)

31. Cheng-Yu Ma, Shu-Hsi Lin, Chi-Ching Lee, Chuan Yi Tang, Bonnie Berger, <u>Chung-Shou Liao</u>. *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%)

32. Tsung-Jung Hsieh, Yu-Syuan Huang, <u>Chung-Shou Liao</u>, 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.

33. Chia-Hong Hsu and <u>Chung-Shou Liao</u>. *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.

34. Leonid Chindelevitch, <u>Chung-Shou Liao</u>, 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.

35. <u>Chung-Shou Liao</u>, 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%)

36. <u>Chung-Shou Liao</u> 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. (Accptance Rate: 36%)

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

38. Kuen-Lin Yu, <u>Chung-Shou Liao</u> 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%)

39. <u>Chung-Shou Liao</u> 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%)

40. D. T. Lee, <u>Chung-Shou Liao</u>, 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, <u>Chung-Shou Liao</u> and I-Hsuan Hong. Energy Assessment and Management: Special Issue, International Journal of Electronic Business Management, Volume 13, 2015.

Updated in January, 2021