

# 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 and Work Experience:

**National Taiwan University**, Taipei, Taiwan 2004 - 2009

Doctor of Philosophy, Computer Science and Information Engineering

Ph.D. Thesis: Graph-theoretic domination and related problems with applications. Advisor: Dr. D.T. Lee

**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, at Prof. D.T. Lee's Lab 2002 - 2009

## Research Interests:

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

## Selected Honors and Awards:

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

9. CIIE Outstanding Young Industrial Engineer Award, 2014
10. NSC Outstanding Young Scholar Grants, 2013~2016, 2016~2019
11. Academia Excellence Research Rewards, NTHU, 2013, 2014, 2016, 2017
12. Outstanding Teaching Award, College of Engineering, NTHU, 2012 & 2016
13. Sayling Wen's Award for Young Outstanding Researcher in Service Science, 2012
14. Best Paper Award, 29<sup>th</sup>, 30<sup>th</sup>, 31<sup>st</sup>, 32<sup>nd</sup> Workshop on Combinatorial Mathematics and Computational Theory, 2012, 2013, 2014, 2015.
15. Best Doctoral Thesis Award, IICM, 2009.
16. NSC Graduate Students Study Abroad Program, 2007 (NSC-096-2917-I-002-114)
17. Best Master Thesis Award, Workshop on Combinatorial Mathematics, 2001.
18. The 1<sup>st</sup> 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 Program Chair]**

The 29<sup>th</sup> International Symposium on Algorithms and Computation (ISAAC 2018)

The 9<sup>th</sup> Annual Meeting, Asian Association for Algorithms and Computation (AAAC 2016)

### **[Board Member]**

Asian Association for Algorithms and Computation (since 2016)

### **[Secretary General]**

Association for Algorithms and Computation Theory, Taiwan (since 2017)

### **[Journal Editorship]**

Associate Editor, Journal of Combinatorial Optimization (SCI)

Managing Editor, International Journal of Operations Research

Executive Editor, Journal of Industrial and Production Engineering

### **[Conference Program Committee]**

Int'l Symposium on Algorithms and Computation (ISAAC 2017, 2018), Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2016 to 2018), 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 Referee]**

- 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;
- Bioinformatics, PLOS Computational Biology, BMC Bioinformatics, PLOS ONE, IEEE Trans. on Computational Biology and Bioinformatics;
- IEEE Trans. on Computers, IEEE Trans. on Industrial Informatics, IEEE Trans. on Power Systems, IEEE Trans. on Power Delivery, IEEE Trans. on Smart Grid;

### **[Visit Experience]**

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| <b>Dept. Math Informatics, the University of Tokyo, Tokyo, Japan</b>       | 2017 Summer |
| Visiting Associate Professor, at Prof. Kuniyuki Sadakane's Lab             |             |
| ■ <a href="#">Dynamic Algorithms and Data Structure</a>                    |             |
| <b>ITCSC, Chinese University of Hong Kong,</b>                             | 2017 Spring |
| Visiting Associate Professor, at Prof. Shengyu Zhang's Lab                 |             |
| ■ <a href="#">Algorithms and Computation</a>                               |             |
| <b>Dept. IE &amp; OR, University of California, Berkeley, USA</b>          | 2016 Summer |
| Visiting Associate Professor, at Prof. Zuo-Jun Max Shen's Lab              |             |
| ■ <a href="#">Algorithms for Electric Vehicle Routing</a>                  |             |
| <b>Dept. Applied Math, University of California, San Diego, USA</b>        | 2016 Summer |
| Visiting Associate Professor, at Prof. Fan Chung Graham's Lab              |             |
| ■ <a href="#">Online Routing Algorithms with Randomness</a>                |             |
| <b>School of Informatics, Kyoto University, Kyoto, Japan</b>               | 2015 Spring |
| Visiting Associate Professor, at Prof. Kazuo Iwama's Lab                   |             |
| ■ <a href="#">Online Routing Algorithms with Randomness</a>                |             |
| <b>Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</b>         | 2014 Summer |
| Visiting Associate Professor, at Prof. Dorothea Wagner's Lab               |             |
| ■ <a href="#">Algorithms for Large-scale Transportation Networks</a>       |             |
| <b>University of Lugano (USI), Lugano, Switzerland</b>                     | 2014 Summer |
| Visiting Associate Professor, at Prof. Evanthia Papadopoulou's Lab         |             |
| ■ <a href="#">Computational Geometry and Voronoi Diagram with Highways</a> |             |

- 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]**

- 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. Yi-Hua Yang, Chung-Shou Liao<sup>\*</sup>, 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<sup>\*</sup>, Chung-Shou Liao<sup>\*</sup>. *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<sup>\*</sup>. *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<sup>\*</sup>, 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<sup>\*</sup>. *Power domination with bounded time constraints*, Journal of Combinatorial Optimization, Vol. 31(2), (2016), pp. 725-742.
6. Chung-Shou Liao<sup>\*</sup>, 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<sup>\*</sup>, 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 Power Systems, 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, Wing-Kai Hon, Paul Horn, Chung-Shou Liao 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.

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

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

4. Kuo-kai Lee, Wing-Kai Hon, Chung-Shou Liao and Kunihiro Sadakane. *A Sublinear-time Dynamic Algorithm for Searching Problems*, in Proc. 11th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2018), Beijing, China.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. Erik Demaine, Yamming Huang, Chung-Shou Liao, and Kunihiro Sadakane. *Canadians Should Travel Randomly*, in Proc. the 41st International Colloquium on Automata, Languages, and Programming (ICALP 2014), Copenhagen, Denmark. (Acceptance Rate: 23%)

12. 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.

13. 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.

14. 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.

15. 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.

16. 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.

17. 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.

18. 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.

19. 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.

20. 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%)

21. 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%)

22. 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.

23. 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.

24. 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.

25. 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%)

26. 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%)

27. 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%)

28. 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%)

29. 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%)

30. 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 Realf, 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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