

Dr. Sheng-Lung Peng



Associate Professor of
Department of Computer Science
and Information Engineering,
National Dong Hwa University,
Hualien, Taiwan

Education:

Doctor of Philosophy in Computer Science, National Tsing Hua University, Taiwan, 1999.

Thesis: A study of graph searching on special graphs

Advisors: Chuan Yi Tang / Ming-Tat Ko

Master of Science in Computer Science and Information Engineering, National Chung Cheng University, Taiwan, 1992.

Thesis: Efficient algorithms for domatic partition problem on interval graphs and their extensions

Advisor: Mao-Hsiang Chang

Bachelor of Science in Mathematics, National Tsing Hua University, Taiwan, 1988.

Employment:

2014-present Convenor, East Region of Service Science Society of Taiwan

2013-present Secretary General, Association of Algorithms and Computation Theory, Taiwan

2013-present Secretary General, Taiwan Association of Cloud Computing, Taiwan

2013-present Director of the ACM-ICPC Contest Council for Taiwan

2011-2013 Vice Secretary General, Taiwan Association of Cloud Computing, Taiwan

2008-present Associate Professor, Department of Computer Science and Information Engineering, National Dong Hwa University, Taiwan

2003-2007 Curriculum Director, Office of Academic Affairs, National Dong Hwa University, Taiwan

1999-2008 Assistant Professor, Department of Computer Science and Information Engineering, National Dong Hwa University, Taiwan

Professional: (2009-present)

1. Guest editor of the special issue for NCS 2013 in Journal of Internet Technology, May 2015. (SCI)
2. Guest editor of the special issue for ICS 2012 in Journal of Internet Technology, Vol. 5, No. 4, July 2014. (SCI)
3. Guest editor of the special issue for ICS 2012 in Journal of Information Science and Engineering, Vol. 29, No. 6, November 2013. (SCI)
4. Guest editor of the special issue for ICS 2012 in Journal of Computers, Vol. 24, No. 4, October 2013. (EI)
5. Organizing co-chair and program committee member of the 13th International Workshop on Digital-Forensics and Watermarking, 1-4 October 2014, Taipei, Taiwan
6. Program co-chair of the International Workshop on Advanced Technologies of Cloud Computing in conjunction with 43rd ICPP, 9-12 September 2014, Minneapolis, MN, USA
7. Publicity chair of the Fourth International Symposium on Cloud and Service Computing, 1-2 September 2014
8. Program co-chair of the International Workshop on Theories and Applications of Graphs in conjunction with 18th ICSEC, July 30 - August 1, 2014, Thailand
9. Program co-chair of the 31st Workshop on Combinatorial Mathematics and Computation Theory, Taipei, Taiwan, 25-26 April 2014
10. Workshop co-chair of the Workshop on Parallel, Distributed, and Cloud Computing of National Computer Symposium, Taichung, Taiwan, 13-14 December 2013
11. Program co-chair of the International Workshop on Advanced Technologies of Cloud Computing (in conjunction with the 42nd ICPP), Ecole Normale Supérieure de Lyon, Lyon, France, 4 October 2013
12. Publication chair of the 6th FTRA International Conference on Human-centric Computing, Taipei, Taiwan, 23-25 August 2013
13. Program chair of the 30th Workshop on Combinatorial Mathematics and Computation Theory, Hualien, Taiwan, 26-27 April 2013
14. Program committee member of the Services and Applications Track of IEEE Wireless Communications and Networking Conference, Shanghai, China, 7-10 April 2013
15. Program committee member of the IEEE International Symposium on Mobile Cloud, Computing, and Service Engineering, Hotel Sofitel, San Francisco Bay, USA, 26-28 March 2013

16. Program co-chair of International Computer Symposium, Hualien, Taiwan, 12-14 December 2012
17. Workshop co-chair of the Workshop on Information Literacy, eLearning, and Social Media of International Computer Symposium, Hualien, Taiwan, 12-14 December 2012
18. Program committee of the 29th Workshop on Combinatorial Mathematics and Computation Theory, Taipei, Taiwan, 27-28 April 2012
19. Guest editor of a special issue of the Soft Computing Journal on Bio-inspired computing for Hybrid Information Technology, Vol. 16, No. 3, 2012. (Springer, SCI)
20. Guest editor of the special issue on Ubiquitous RFID Computing of the International Journal of Ad Hoc and Ubiquitous Computing, Vol. 9, No. 2, 2012. (Inderscience, SCI)
21. Program committee of the 2011 National Computer Symposium on Algorithms and Bioinformatics Workshop
22. Guest editor of the special issue on Security-Enriched Urban Computing and Smart Grid in Journal of Information Technology (SCI)
23. Volume editor of Communications in Computer and Information Science 223, Springer
24. Program co-chair of the 2nd International Conference on Security-Enriched Urban Computing and Smart Grid 2011
25. Program committee of the 2011 International Computer Science and Engineering Conference
26. Program committee of the 28th Workshop on Combinatorial Mathematics and Computation Theory, 2011
27. Keynote speaker of the 1st International Computer Science and Engineering Conference 2010
28. Program co-chair of track 10: Bioinformatics and Bio-Inspired Computing of the 5th International Conference on Future Information Technology 2010
29. Program committee of the 5th International Conference on Grid and Pervasive Computing 2010
30. Program committee of the eLearning Forum Asia 2010
31. Program committee of the 27th Workshop on Combinatorial Mathematics and Computation Theory, 2010
32. Program committee of the 2009 National Computer Symposium for Workshop on Algorithms and Bioinformatics, 2009
33. Program committee of the 26th Workshop on Combinatorial Mathematics and Computation Theory, 2009

Research Interests:

Designing and analyzing algorithms for Combinatorics, Bioinformatics, Data Mining, and Networks.

Journal and Conference Publications: (2009-present)

1. C.-N. Yang, Z.-Y. Lin, and S.-L. Peng, Reducing code length of second-order spectral-null code, to appear in IEEE Transactions on Computers. (SCI)
2. Ruei-Yuan Chang, Sheng-Lung Peng, Guanling Lee, and Chia-Jung Chang, Comparing Group Characteristics to Explain Community Structures in Social Media Networks, to appear in Journal of Internet Technology. (SCI)
3. Yi-Chun Chen, Guanling Lee, Sheng-Lung Peng, and I Jan Wang, Supporting Content-based Music Retrieval in Structured Peer-to-peer Overlays, to appear in Journal of Internet Technology. (SCI)
4. S.-L. Peng and Y.-W. Tsay, Adjusting Protein Graphs based on Graph Entropy, BMC Bioinformatics 2014, 15 (Suppl 15):S6. (SCI)
5. S.-L. Peng and Y.-W. Tsay, Using bipartite matching in graph spectra for protein structural similarity, Proceedings of BMEI 2013, 497-502, 2013. (EI)
6. G. Lee, C.-J. Chang, and S.-L. Peng, Exploring community structures by comparing group characteristics, HumanCom 2013, Lecture Notes in Electrical Engineering 260 (2013) 143-148. (EI)
7. Y.-S. Chang, S.-C. Lo, and S.-L. Peng, Emergency broadcast in VANET by considering human satisfaction, HumanCom 2013, Lecture Notes in Electrical Engineering 260 (2013) 149-156. (EI)
8. I Jan Wang, G. Lee, and S.-L. Peng, Supporting content-based music retrieval in structured peer-to-peer overlays, Proceedings of the 26th IPPR Conference on Computer Vision, Graphics, and Image Processing, August 18-20, 2013.
9. S.-L. Peng and Y.-W. Tsay, Assessment of protein-graph remodeling via conformational graph entropy, ICIC 2013, Communications in Computer and Information Science 375 (2013) 43-48. (EI)
10. R.-Y. Chang, M.-L. Chen, and S.-L. Peng, On the signed domination number of Torus graphs, Proceedings of the 30th Workshop on Combinatorial Mathematics and Computation Theory, 160-162, April 26-27, 2013.
11. Y.-S. Huang, S.-L. Peng, and R.-Y. Wu, An improving algorithm for the node-to-set disjoint paths problem on Bi-rotator graphs, Proceedings of the 30th Workshop on Combinatorial Mathematics and Computation Theory, 239-245, April 26-27, 2013.
12. S.-L. Peng and Y.-W. Tsay, On the usage of graph spectra in protein structural similarity, Journal of Computers 23 (2012) 95-102. (EI) (A preliminary version

appears in Proceedings of the 2011 International Computer Science and Engineering Conference, 209-214, September 7-9, 2011, Thailand. (Best paper award))

13. Van Bang Le and S.-L. Peng, Characterizing and recognizing probe block graphs, *Smart Innovation, Systems and Technologies* 20 (2012) 7-14, Springer.
14. G. Lee, S.-L. Peng, Y.-C. Chen, and J.-S. Huang, An efficient search mechanism for supporting partial filename queries in structured peer-to-peer overlay, *Peer-to-Peer Networking and Applications* 5 (2012) 340-349. (SCI)
15. H.-S. Chen, G. Lee, and S.-L. Peng, On the gene team mining problem, *Proceedings of the 9th International Conference on Fuzzy Systems and Knowledge Discovery*, 1134-1137, May 29-31, 2012. (EI)
16. G. Lee, S.-L. Peng, S.-W. Kuo, and Y.-C. Chen, Mining frequent maximal cliques efficiently by global view graph, *Proceedings of the 9th International Conference on Fuzzy Systems and Knowledge Discovery*, 1374-1378, May 29-31, 2012. (EI)
17. R.-Y. Chang, C.-H. Hsu, and S.-L. Peng, The longest path problem on permutation graphs, *Proceedings of the 29th Workshop on Combinatorial Mathematics and Computation Theory*, 294-297, April 27-28, 2012.
18. S.-L. Peng, T.-C. Sheng, and Y.-W. Tsay, Volatility on stock exchanges and exchange rates based on pairwised alignment, *Proceedings of the 29th Workshop on Combinatorial Mathematics and Computation Theory*, 235-238, April 27-28, 2012.
19. M.-S. Chang, L.-J. Hung, T. Kloks, and S.-L. Peng, On the threshold-width of graphs, *Journal of Graph Algorithms and Applications* 15 (2011) 253-268.
20. C.-H. Hsu, S.-L. Peng, Y.-W. Tsay, An improved algorithm for protein structural comparison based on graph theoretical approach, *Chiang Mai Journal of Science* 38 (2011) 71-81. (SCI)
21. M.-S. Chang, L.-J. Hung, T. Kloks, and S.-L. Peng, Block-graph width, *Theoretical Computer Science* 412 (2011) 2496-2502. (Extended abstract appeared in TAMC 2009, *Lecture Notes in Computer Science*, 5532 (2009), 150-157.)
22. G. Lee, Y.-C. Chen, S.-L. Peng, and J.-H. Lin, Solving the sensitive itemset hiding problem whilst minimizing side effects on a sanitized database, *SUComS 2011, Communications in Computer and Information Science* 223 (2011) 104-113. (EI)
23. S.-L. Peng and Y.-W. Tsay, A fast algorithm for protein structural comparison, *Proceedings of the 28th Workshop on Combinatorial Mathematics and Computation Theory*, 59-66, May 27-28, 2011.
24. R.-Y. Chang and S.-L. Peng, Minimum edge ranking spanning tree problem on interval graphs, *Proceedings of the 28th Workshop on Combinatorial Mathematics and Computation Theory*, 200-203, May 27-28, 2011.

25. S.-L. Peng, Protein structural comparison based on graph theory, Proceedings of the 2010 International Computer Science and Engineering Conference, 12-16, November 17-19, 2010, Thailand.
26. S.-L. Peng and Y.-W. Tsay, Measuring protein structural similarity by maximum common edge subgraphs, ICIC 2010, Lecture Notes in Computer Science 6216 (2010) 100-107. (EI)
27. C.-S. Liu, S.-L. Peng, and C.Y. Tang, Weak Roman domination on block graphs, Proceedings of the 27th Workshop on Combinatorial Mathematics and Computation Theory, 86-89, 2010.
28. R.-Y. Chang and S.-L. Peng, A linear-time algorithm for broadcast domination problem on interval graphs, Proceedings of the 27th Workshop on Combinatorial Mathematics and Computation Theory, 184-188, 2010.
29. S.-H. Chen, K.-I Lin, C.Y. Tang, S.-L. Peng, Y.-C. Chuang, Y.-R. Lin, J.-P. Wang, and C.-S. Lin, Optical detection of human papillomavirus type 16 and type 18 by the sequence sandwich hybridization with oligonucleotide-functionalized Au nanoparticles, IEEE Transactions on NanoBioscience 8 (2009) 120-131. (SCI)
30. G. Lee, S.-L. Peng, and Y.-T. Lin, Proportional Fault-tolerant Data Mining with Applications to Bioinformatics, Special Issue of Knowledge Discovery and Management in Biomedical Information Systems with the Journal of Information Systems Frontiers 11 (2009) 461-469. (SCI)
31. D. B. Chandler, M.-S. Chang, T. Kloks, J. Liu, and S.-L. Peng, On probe permutation graphs, Discrete Applied Mathematics 157 (2009) 2611-2619, (Extended abstract appeared in TAMC 2006, Lecture Notes in Computer Science, 3959 (2006), 494-506.)
32. S.-L. Peng and Y.-W. Tsay, Enhancement of Coronaviridae pathotyping using length polymorphism, NCS 2009, Proceedings of Workshop on Algorithms and Bioinformatics, 58-65.
33. S.-L. Peng, Y.-W. Tsay, C.-S. Lin, and C.Y. Tang, CAPS genomic subtyping on Orthomyxoviridae, ICIC 2009, Lecture Notes in Computer Science 5754 (2009), 130-137. (EI)
34. S.-L. Peng and Y.-W. Tsay, Verification of Pathotyping by Quasispecies model, ICIC 2009, Lecture Notes in Computer Science 5754 (2009), 138-145. (EI)
35. R.-Y. Chang, G. Lee, and S.-L. Peng, Minimum vertex ranking spanning tree problem on permutation graphs, TAMC 2009, Lecture Notes in Computer Science 5532 (2009), 158-167. (EI)
36. S.-L. Peng, G.-D. Chen, H.-Y. Tsou, I.-T. Li, and Y.-F. Li, Constructing optimal rank-decomposition trees of Halin graphs, Proceedings of the 26th Workshop on Combinatorial Mathematics and Computation Theory, 102-107, 2009.

