

國立東華大學教師個人基本資料表

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E-mail：slpeng@mail.ndhu.edu.tw

最高學歷/起迄：國立清華大學資訊工程研究所博士(1999.08)

現職/起迄：國立東華大學資訊工程學系教授 (2015.08)

到任年月份(東華)：1999年8月

研究領域：圖形理論 / 演算法設計分析 / 計算生物學

彭勝龍

Peng, Sheng-Lung



研究

近五年研究成果(2011.8~2016.7)

注意事項:

- (一) 請詳列個人申請截止日前五年內(此段期間曾懷孕及生產者,得延長至七年內,但須檢附相關證明文件)發表之學術性著作,包括:期刊論文、專書及專書論文、研討會論文、技術報告及其他等,並請依各類著作之重要性自行排列先後順序。
- (二) 各類著作請按發表時間先後順序填寫。各項著作請務必依作者姓名(按原出版之次序,通訊作者請加註*)、出版年、月份、題目、期刊名稱(專書出版社)起迄頁數之順序填寫。
- (三) 若期刊屬於 SCI、EI、SSCI、TSSCI、EconLit 或 A&HCI 等時,請註明。

一、期刊論文：

1. I.-J. Wang, G. Lee*, **S.-L. Peng**, Y.-C. Chen, Supporting Content-based Music Retrieval in Structured Peer-to-peer Overlays, to appear in Journal of Internet Technology. (SCI) (A preliminary version appeared in Proceedings of the 26th IPPR Conference on Computer Vision, Graphics, and Image Processing, August 18-20, 2013.)
2. R.-Y. Chang, **S.-L. Peng***, G. Lee, C.-J. Chang, Comparing group characteristics to explain community structures in social media networks, Journal of Internet Technology 16 (2015) 957-962. (SCI) (A preliminary version appears in HumanCom 2013, *Lecture Notes in Electrical Engineering* 260 (2013) 143-148.)
3. C.-C. Wei, S.-Y. Hsieh*, C.-W. Lee, and **S.-L. Peng**, An improved approximation algorithm for the partial-terminal Steiner tree problem with edge cost 1 or 2, Journal of Discrete Algorithms 35 (2015) 62-71.
4. Van Bang Le* and **S.-L. Peng**, Characterizing and recognizing probe block graphs, Theoretical Computer Science 568 (2015) 97-102. (SCI) (A preliminary version appears in Proceedings of ICS 2012, 7-14, Springer.)
5. C.-N. Yang*, Z.-Y. Lin **S.-L. Peng**, Reducing code length of second-order spectral-null code, IEEE Transactions on Computers 64 (2015) 492-503. (SCI)
6. **S.-L. Peng*** and Y.-W. Tsay, Adjusting protein graphs based on graph entropy, BMC

- Bioinformatics 2014, 15 (Suppl 15):S6. (SCI) (A partial result appears in “Assessment of protein-graph remodeling via conformational graph entropy, ICIC 2013, *Communications in Computer and Information Science* 375 (2013) 43-48.”)
7. **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))
 8. 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)
 9. R.-S. Chang, T.-h. Kim, C.-L. Wang, and **S.-L. Peng**, Guest editor of special issue on wireless sensor networks, *Int. J. Ad Hoc and Ubiquitous Computing*, Vol. 9, No. 2, 67-68, 2012.
 10. 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.
 11. 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)
 12. 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. (EI))

二、研討會論文：(若刊登於期刊則不再列出)

1. **S.-L. Peng***, Y.-H. Chen, R.-S. Chang and J.-M. Chang, An Energy-aware Random Multi-path Routing Protocol for MANETs, Proceedings of the 5th International Symposium on Cloud and Service Computing, 1092-1097, 2015.
2. R.-Y. Wu, J.-M. Chang*, **S.-L. Peng** and S.-C. Chang, Ranking Left-weight Sequences of Binary Trees in Gray-code Order, Proceedings of the 19th International Computer Science and Engineering Conference, Postproceedings, November, 2015.
3. Van Bang Le and **S.-L. Peng***, On the Complete Width and Edge Clique Cover Problems, Proceedings of the 21st International Computing and Combinatorics Conference (COCOON 2015), LNCS 9198, 537-547, 2015.
4. A.-L. Dong and **S.-L. Peng***, A Unified Approach for the Longest Path Problem on Some Tree-like Graphs, 5th Global Innovation and Knowledge Academy Conference (GIKA 2015), LNBIP 222, 131-136, Valencia, Spain, July 14-16, 2015.
5. C.-F. Lin, S.-L. Peng*, M.-F. Wu, A Variant of the Sum Coloring Problem on Trees, Proceedings of the 32nd Workshop on Combinatorial Mathematics and Computation Theory, 101-104, May 1-2, 2015.
6. **S.-L. Peng*** and Y.-T. Li, On the Minimum Hub Set Problem, Proceedings of IEEE 17th International Conference on Computational Science, 1134-1137, December 19-21, 2014.
7. Van Bang Le, **S.-L. Peng***, Good Characterization and Linear Time Recognition for 2-probe Graphs, Proceedings of the International Computer Symposium (ICS) 2014, Vol. 1, 20-29, December 12-14, 2014.
8. T.-W. Chang, O. Navratil, **S.-L. Peng***, The End-to-end Longest Path Problem on a Mesh with a Missing Vertex, Proceedings of the International Computer Symposium (ICS) 2014, Vol. 1, 57-64, December 12-14, 2014.

9. Y.-C. Chang*, **S.-L. Peng**, Y.-H. Liao, R.-S. Chang, Green Computing: An SLA-based Energy-aware Methodology for Data Center, Proceedings of the International Computer Symposium (ICS) 2014, Vol. 2, 608-617, December 12-14, 2014.
10. C.-F. Lin, S.-H. Lin, **S.-L. Peng***, R.-S. Chang, A Cloud-based Mobile Healthcare System, Proceedings of the International Computer Symposium (ICS) 2014, Vol. 3, 508-517, December 12-14, 2014.
11. Y.-C. Chang*, **S.-L. Peng**, R.-S. Chang, H. Hermanto, A Cloud Server Selection System – Recommendation, Modeling and Evaluation, Proceedings of the Fourth International Symposium on Cloud and Service Computing, LNCS 8662, 376-385, September 1-2, 2014.
12. **S.-L. Peng***, Y.-C. Chang, Y.-H. Kuo and R.-S. Chang, A Locality-aware Scheduling for Improving MapReduce Performance, Proceedings of the 8th Cross-Strait Conference on Information Science and Technology, 345-352, August 22-24, 2014.
13. **S.-L. Peng***, C.-F. Lin and Y.-W. Kuo, A Practical Algorithm for Graph Sketching Problem, Proceedings of the 8th Cross-Strait Conference on Information Science and Technology, 554-558, August 22-24, 2014.
14. J.-M. Chang*, J.-S. Yang and **S.-L. Peng**, On the Complexity of Graph Clustering with Bounded Diameter, Proceedings of the 18th International Computer Science and Engineering Conference, 18-22, July 30 – August 1, 2014.
15. **S.-L. Peng***, R.-Y. Chang, and G. Lee, Minimum Edge Ranking Spanning Tree Problem on Block Graphs, Proceedings of the 18th International Computer Science and Engineering Conference, 1-6, July 30 – August 1, 2014.
16. **S.-L. Peng***, Y.-L. Tang, G. Lee, and W.-C. Liao, On the gene group problem, Proceedings of the IEEE International Symposium on Bioelectronics and Bioinformatics (IEEE ISBB 2014), 3042-3045, April 11-14, 2014.
17. C.-C. Wei, C.-W. Lee, S.-Y. Hsieh*, **S.-L. Peng**, Improved Approximation Algorithm for the (1,2)-Partial-Terminal Steiner Tree Problem, Proceedings of the 31st Workshop on Combinatorial Mathematics and Computation Theory, 62-65, April 25-26, 2014.
18. R.-Y. Chang, **S.-L. Peng***, C.-Y. Wang, On the Robustest Spanning Tree Problem, Proceedings of the 31st Workshop on Combinatorial Mathematics and Computation Theory, 306-309, April 25-26, 2014.
19. **S.-L. Peng*** and Y.-W. Tsay, Using bipartite matching in graph spectra for protein structural similarity, Proceedings of the IEEE 6th International Conference on Biomedical Engineering and Informatics (BMEI), 497-502, December 16-18, 2013. (EI)
20. 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, August 22-24. (EI)
21. 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.
22. 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.
23. 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)
24. 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)
25. 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.
26. **S.-L. Peng***, T.-C. Sheng, and Y.-W. Tsay, Volatility on stock exchanges and exchange rates based on pairwise alignment, Proceedings of the 29th Workshop on Combinatorial Mathematics and Computation Theory, 235-238, April 27-28, 2012.
27. 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)
28. **S.-L. Peng*** and Y.-W. Tsay, On the usage of graph spectra in protein structural similarity, Proceedings of the 2011 International Computer Science and Engineering Conference, 209-214, September 7-9, 2011, Thailand. (Best paper award)
29. **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.
30. 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.

三、五年內之研究計畫：

| 起迄年月 | 研究計畫名稱 | 主持人/共同主持人 | 計畫經費 | 補助單位 |
|---------------|--|-----------|-------------|------|
| 104.08~105.07 | 最小圖形搜尋生成樹問題之研究 MOST 104-2221-E-259-006 | 主持人 | 706,000 元 | 科技部 |
| 104.08~105.07 | 植基於移動式技術和物聯網架構之緊急救護系統 - 緊急救難應用系統 MOST 104-2221-E-141-007 | 共同主持人 | 844,000 元 | 科技部 |
| 103.08~104.07 | 最長點對點路徑問題之研究 MOST103-2221-E-259-030 | 主持人 | 564,000 元 | 科技部 |
| 103.08~104.07 | 人性化老人生活與照護之智慧居家空間研究暨子計畫一：智慧型醫療照護雲端系統之建置研究 MOST103-2221-E-141-006 | 共同主持人 | 1,097,000 元 | 科技部 |
| 103.02~104.01 | 大專校院資訊軟體人才培育推廣計畫『互動多媒體』軟體創作跨校資源中心 | 協同主持人 | 1,200,000 元 | 教育部 |
| 102.08~103.07 | 巨量資料的圖形素描及匹配演算法之研究 NSC102-2221-E-259-018 | 主持人 | 715,000 元 | 國科會 |
| 102.02~103.01 | 大專校院資訊軟體人才培育推廣計畫『互動多媒體』軟體創作跨校資源中心 | 協同主持人 | 1,600,000 元 | 教育部 |
| 101.08~102.07 | 巨量資料的圖形取樣和素描演算法及其應用(I) NSC101-2221-E-259-004 | 主持人 | 653,000 元 | 國科會 |

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|---------------|---|-------|-------------|-----|
| 101.02~102.01 | 大專校院資訊軟體人才培育推廣計畫『互動多媒體』軟體創作跨校資源中心 | 協同主持人 | 1,500,000 元 | 教育部 |
| 100.08~101.07 | 以使用者為導向的社群網路建構與分析-子計畫三:值基於圖形理論的使用者導向社群網路分析之研究(I) NSC100-2221-E259-012 | 主持人 | 536,000 元 | 國科會 |
| 99.10~101.01 | 大專校院資訊軟體人才培育推廣計畫『互動多媒體』軟體創作跨校資源中心 | 協同主持人 | 1,350,000 元 | 教育部 |
| 99.08~100.07 | 最小邊等級生成樹問題之研究 NSC 99-2221-E-259-015 | 主持人 | 658,000 元 | 國科會 |
| 99.01~99.12 | 99-B1-5 認識生物資訊演算法於流感病毒之檢測與辨識 | 主持人 | 168,000 元 | 教育部 |
| 97.08~100.07 | RFID 數位家庭中網路技術與應用之整合及個人化服務平台之建置--子計畫四:數位家庭資料探勘服務 NSC 97-2221-E-259-015-MY3 | 共同主持人 | 594,000 元 | 國科會 |



教學

四、五年內開授課程：

| 學年度 | 課程名稱(必/選) | 選修人數 |
|--------|------------------|------|
| 104(上) | 計算機概論(支援光電) | 50 |
| | 圖形理論(選) | 48 |
| 103(下) | 演算法(必, 資工應數併班) | 63 |
| | 演算法(必, 國際班) | 10 |
| | 演算法實驗(必) | 44 |
| | 演算法實驗(國際班) | 6 |
| 103(上) | 計算生物學(研選) | 57 |
| 102(下) | 演算法(必, 資工應數併班) | 71 |
| | 演算法(必, 國際班) | 8 |
| | 演算法實驗(必, 與國際班併班) | 57 |
| 102(上) | 計算理論(研選) | 62 |
| | 資訊分享管理技術(研選, 合開) | 49 |
| 101(下) | 演算法(必, 資工應數併班) | 71 |
| | 演算法(必, 國際班) | 8 |
| | 計算生物學(研選) | 71 |
| 101(上) | 計算機概論(必) | 51 |
| | 高等圖形理論(研選) | 83 |
| | 情境感知導覽技術(研選, 合開) | 49 |
| 100(下) | 演算法(必, 資工應數併班) | 80 |
| | 高等資料結構(研選) | 76 |

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|--------|------------------|-----|
| 100(上) | 計算機概論(必) | 55 |
| | 生物資訊演算法(選) | 12 |
| | 高等演算法(研選) | 107 |
| | 旅遊導向服務技術(研選, 合開) | 66 |

五、五年內指導研究生狀況：

| 學年度 | 碩士班(人) | 博士班(人) | 畢業人數 | |
|-----|--------|--------|------|----|
| | | | 碩士 | 博士 |
| 104 | 7 | 1 | 4 | 0 |
| 103 | 8 | 1 | 4 | 1 |
| 102 | 9 | 1 | 4 | 0 |
| 101 | 6 | 2 | 3 | 1 |
| 100 | 6 | 2 | 2 | 0 |



服務

六、五年內校內校、院、系(所、科及中心)各級公共事務參與：

| 年月 | 校/院/系級 | 項目 |
|-------------|--------|-----------------------------------|
| 104/8~105/7 | 校級 | 校務會議代表 |
| 104/8~105/7 | 院級 | 院務會議代表 |
| 104/8~105/7 | 系級 | 教師評審委員、所務委員、國際事務委員、資源規劃委員、認證與評鑑委員 |
| 103/8~104/7 | 系級 | 教評會委員、所務委員、課程暨學程規劃委員、資源規劃委員 |
| 102/8~103/7 | 系級 | 教評會委員、教育委員、課程暨學程規劃委員、學術交流與產學合作委員 |
| 101/8~102/7 | 校級 | 校務會議代表 |
| 101/8~102/7 | 院級 | 招生暨獎學金委員 |
| 101/8~102/7 | 系級 | 教評會委員、教育委員、資源規劃委員、經費稽核委員 |
| 100/8~101/7 | 校級 | 校務會議代表 |
| 100/8~101/7 | 院級 | 招生暨獎學金委員 |
| 100/8~101/7 | 系級 | 教評會委員、教育委員、資源規劃委員、經費稽核委員 |

七、五年內專業學術服務工作項目：

| 年月 | 校內/校外 | 項目 |
|---------|-------|--|
| 2015.12 | 校外 | Publicity chair of the Fourth International Symposium on Cloud and Service Computing, 19-21 December 2015 |
| 2015.07 | 校外 | Program committee member of the Cross-Strait Conference on Network Fault-Tolerance and Fault-Diagnosis, 22-26 July 2015 |
| 2015.07 | 校外 | Program chair of the Second International Conference on Trustworthy Systems and Their Applications (TSA 2015), 7-8 July 2015 |

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| 2015.05 | 校外 | Workshop co-chair of the 32 nd Workshop on Combinatorial Mathematics and Computation Theory, Taichung, Taiwan, 1-2 May 2015 |
| 2015.03 | 校外 | TPC member of IEEE WCNC 2015 - Track 4- Services Applications and Business |
| 2014.12 | 校外 | Chair of the Workshop on Algorithms and Computation Theory of International Computer Symposium, Taichung, Taiwan, 12-14 December 2014 |
| 2014.12 | 校外 | TPC chair of Discrete Structures Track, The First Sullivan Global Online Conference on Information and Computer Technology (CICT 2014), 1-4 December 2014 |
| 2014.10 | 校外 | Organizing chair and program committee member of the 13th International Workshop on Digital-Forensics and Watermarking, 1-4 October 2014, Taipei, Taiwan |
| 2014.09 | 校外 | Publicity chair of the Fourth International Symposium on Cloud and Service Computing, 1-2 September 2014 |
| 2014.08 | 校外 | Program co-chair of the International Workshop on Theories and Applications of Graphs in conjunction with 18th ICSEC, July 30 - August 1, 2014, Thailand |
| 2014.07 | 校外 | Guest editors of a special issue of Journal of Internet Technology for ICS 2012, Vol. 15, No. 4, July 2014. (SCI) |
| 2014.04 | 校外 | Program chair of the 31 st Workshop on Combinatorial Mathematics and Computation Theory, Taipei, Taiwan, 25-26 April 2014 |
| 2013.12 | 校外 | Workshop co-chair of the Workshop on Parallel, Distributed, and Cloud Computing of National Computer Symposium, Taichung, Taiwan, 13-14 December 2013 |
| 2013.11 | 校外 | Guest editors of a special issue of Journal of Information Science and Engineering for ICS 2012, Vol. 29, No. 6, November 2013. (SCI) |
| 2013.10 | 校外 | Program co-chair of the International Workshop on Advanced Technologies of Cloud Computing (in conjunction with the 42 nd ICPP), Ecole Normale Supérieure de Lyon, Lyon, France, 4 October 2013 |
| 2013.10 | 校外 | Guest editors of a special issue of Journal of Computers for ICS 2012, Vol. 24, No. 4, October 2013. (EI) |
| 2013.08 | 校外 | Publication chair of the 6 th FTRA International Conference on Human-centric Computing, Taipei, Taiwan, 23-25 August 2013 |
| 2013.04 | 校外 | Program chair of the 30 th Workshop on Combinatorial Mathematics and Computation Theory, Hualien, Taiwan, 26-27 April 2013 |
| 2013.04 | 校外 | Program committee member of Services and Applications Track of IEEE Wireless Communications and Networking Conference, Shanghai, China, 7-10 April 2013 |
| 2013.03 | 校外 | Program committee of the IEEE International Symposium on Mobile Cloud, Computing, and Service Engineering, Hotel Sofitel, San Francisco Bay, USA, 26-28 March 2013 |
| 2012.12 | 校外 | Program co-chair of International Computer Symposium, Hualien, Taiwan, 12-14 December 2012 |
| 2012.12 | 校外 | Workshop co-chair of the Workshop on Information Literacy, eLearning, and Social Media of International Computer Symposium, Hualien, Taiwan, 12-14 December 2012 |
| 2012.04 | 校外 | Program committee of the 29 th Workshop on Combinatorial Mathematics and Computation Theory, Taipei, Taiwan, 27-28 April 2012 |
| 2012.03 | 校外 | 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) |

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| 2012.02 | 校外 | 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) |
| 2011.12 | 校外 | Program committee of the 2011 National Computer Symposium on Algorithms and Bioinformatics Workshop |
| 2012.03 | 校外 | Guest editor of the special issue on Security-Enriched Urban Computing and Smart Grid in Journal of Information Technology, Vol. 13, No. 2, 2012. (SCI) |
| 2011.9 | 校外 | Volume editor of Communications in Computer and Information Science 223, Springer |
| 2011.9 | 校外 | Program co-chair of the 2 nd International Conference on Security-Enriched Urban Computing and Smart Grid 2011 |
| 2011.9 | 校外 | Program committee of the 2011 International Computer Science and Engineering Conference |



教學與研究獎勵

八、五年內之教學與研究獎勵事蹟：

| 學年度 | 校內/校外 | 項目 |
|-----|-------|-------------------|
| 100 | 校內 | 專任教師學術研究績效獎勵(4 點) |

以上資料屬實。填表人簽名： 彭勝龍 (電子檔免填)，填表日期：105/01/03。