

Publication

Edited books/proceedings:

1. S. Hong, H. Nagamochi and T. Fukunaga, Proceedings of **ISAAC 2008** (International Symposium on Algorithms and Computation), Lecture Notes in Computer Science, Springer, 2008.
2. S. Hong, T. Nishizeki and W. Quan, Proceedings of **GD 2007** (International Symposium on Graph Drawing), Lecture Notes in Computer Science, Springer, 4875, 2008.
3. S. Hong and K. Ma, Proceedings of **APVIS 2007** (Asia Pacific Symposium on Visualisation), IEEE, 2007.
4. S. Hong, Proceedings of **APVIS 2005** (Asia Pacific Symposium on Information Visualisation), Vol. 45, CRPIT, 2005.
5. S. Hong, Proceedings of **AWOCA 2004** (Australasian Workshop on Combinatorial Algorithms), 2004.

Guest Editorial (journal):

1. S. Hong and H. Nagamochi, Guest editor, **Algorithmica**, Special Issue from ISAAC 2008, to appear.
2. S. Hong and H. Nagamochi, Guest editor, **IJCGA** (International Journal on Computational Geometry and Applications), Special Issue from ISAAC 2008, to appear.
3. S. Hong and T. Nishizeki, Guest editor, **JGAA** (Journal of Graph Algorithms and Applications), Special Issue from GD 2007, 13(3), 2009.
4. S. Hong, Guest editor, **JGAA** (Journal of Graph Algorithms and Applications), Issue from APVIS 2007, 12(3), 2008.
5. S. Hong and H-C. Yen, Guest editor, **IJFCS** (International Journal of Foundations of Computer Science), Special issue on Graph Drawing, 17(5), 2006.

Book Chapters

1. P. Eades and S. Hong, "Chapter 5: Detection and Display of Symmetries", **Handbook of Graph Drawing and Visualisation**, R. Tamassia (editor), CRC Press, to appear.
2. A. Ahmed, X. Fu, S. Hong, Q. Nguyen and K. Xu, "Visual Analysis of History of World Cup: A Dynamic Network with Dynamic Hierarchy and Geographic Clustering", **Visual Information Communication** (Proceedings of **VINCI'09**), Springer, pp. 25-39, 2010.
3. P. Eades, C. Gutwenger, S. Hong and P. Mutzel, "Graph Drawing Algorithms", Chapter 9 of the **Handbook on Algorithms and Theory of Computation** (Ed. M. Atallah), CRC Press, 2009.
4. P. Eades, S. Hong, K. Nesbitt and M. Takatsuka, "Visualization", Chapter 20 of **Handbook of Innovative Computing**, A. Zomaya et al. (editor), Springer Verlag, pp. 633-655, 2005.
5. P. Eades and S. Hong, "Chapter 46: Drawing Graphs", **Handbook of Data Structures and Applications**, D. Mehta and S. Sahni (editors), 46:1-22, CRC Press, 2004.

Journal Article

1. S. Hong and H. Nagamochi, "Graph-theoretic Characterization of Non-convex Polyhedra", **Algorithmica**, Accepted with minor revision.
2. S. Hong and H. Nagamochi, "A Linear Time Algorithm for Constructing a Star-shaped Drawing of Planar Graphs with the Minimum Number of Concave Corners", **Algorithmica**, to appear.
3. U. Brandes, C. Erten, A. Estrella-Balderrama, J. Fowler, F. Frati, M. Geyer, C. Gutwenger, S. Hong, M. Kaufmann, S. Kobourov, G. Liotta, P. Mutzel, A. Symvonis,

- “Colored Simultaneous Geometric Embeddings and Universal Pointsets”, *Algorithmica*, Springer, Volume 60, Number 3, pp. 569-592, 2011.
4. D. Fung, M. Wilkins, D. Hart and S. Hong, "Using the Clustered Circular Layout as an Informative Method for Visualizing Protein-protein Interaction Networks", *Proteomics*, Volume 10, Issue 14, No. 14, July 2010, pp. 2723-2727, 2010.
 5. S. Hong and H. Nagamochi, "Approximation Algorithms for Crossing Minimisation in Radial Layouts", *Algorithmica*, Springer, Volume 58, Number 2, pp. 478-497, 2010.
 6. S. Hong and H. Nagamochi, "Linear time algorithm for Symmetric Convex Drawings of Planar Graphs", to appear *Algorithmica*, Springer, Volume 58, Number 2, pp. 433-460, 2010.
 7. S. Hong and H. Nagamochi, "Convex Drawings of Hierarchical Planar Graphs and Clustered Planar Graphs", *Journal of Discrete Algorithm*, Elsevier, 8(3), pp. 282-295, 2010.
 8. L. Grilli, S. Hong, G. Liotta, H. Meijer and S. Wismath, "Matched Drawability of Graph Pairs and of Graph Triples", *Computational Geometry: Theory and Applications*, Volume 43, Issues 6-7, August 2010, pp. 611-634, 2010, Elsevier.
 9. S. Hong and H. Nagamochi, "An Algorithm for Constructing Star-shaped Drawing of Planar Graphs", *Computational Geometry: Theory and Applications*, Volume 43, Issue 2, February 2010, pp. 191-206, 2010, Elsevier.
 10. C. Bachmaier, H. Buchner, M. Forster and S. Hong, "Crossing minimization in Extended Level Drawings of Graphs", *Discrete Applied Mathematics*, 158(3), pp. 159-179, 2010, Elsevier.
 11. S. Hong and H. Nagamochi, "New Approximation to the Radial Crossing Minimisation", *Journal of Graph Algorithms and Applications*, Vol. 13, no. 2, 179-196, 2009.
 12. W. Huang, S. Hong and P. Eades, "Measuring Effectiveness of Graph Visualizations: A Cognitive Load Perspective", *Information Visualisation*, Vol. 8, Issue 3, 139-152, 2009.
 13. X. Shen, A. Vande Moere, P. Eades and S. Hong, "Issues for the Evaluation of Ambient Displays", *IJACI (International Journal of Ambient Computing and Intelligence)*, Vol 1, Issue 2, 2009.
 14. D. Fung, S. Hong, D. Koschützki, F. Schreiber and K. Xu, "2.5D Visualisation of Overlapping Biological Networks", *Journal of Integrative Bioinformatics*, 5(1), 2008.
 15. S. Hong and H. Nagamochi, "Convex Drawings of Graphs with Non-convex Boundary Constraints", *Discrete Applied Mathematics*, 156(12), pp. 2368-2380, Elsevier, 2008.
 16. C. Buchheim and S. Hong, "Testing Planarity of Symmetries in Linear Time", *Algorithmica*, 52(4), pp. 448-465, Springer, 2008.
 17. S. Hong, N. Nikolov, and A. Tarassov, "A 2.5D Hierarchical Drawing of Directed Graphs", *Journal of Graph Algorithms and Applications*, Vol. 11, no. 2, pp. 371-396, 2007.
 18. W. Huang S. Hong and P. Eades, "Effects of Sociogram Drawing Conventions and Edge Crossings in Social Network Visualization", *Journal of Graph Algorithms and Applications*, Vol. 11, no. 2, pp. 397-429, 2007.
 19. D. Abelson, S. Hong and D. E. Taylor, "Geometric Automorphism Groups of Graphs", *Discrete Applied Mathematics*, 155(17), pp. 2211-2226, 2007, Elsevier.
 20. S. Hong, B. McKay and P. Eades, "A Linear Time Algorithm for Constructing Maximally Symmetric Straight-line Drawings of Triconnected Planar Graphs", *Discrete and Computational Geometry*, 36 (2), pp. 283-311, 2006, Springer.
 21. S. Hong, D. Merrick and H. Nascimento, "The Metro Map Layout Problem", *Journal of Visual Language and Computing*, 17(3), pp. 203-224, 2006, Elsevier.
 22. S. Hong and P. Eades, "Drawing Planar Graphs Symmetrically III: Oneconnected Graphs", *Algorithmica*, 44 (1), pp. 67-100, 2006, Springer.
 23. S. Hong and P. Eades, "Drawing Planar Graphs Symmetrically II: Biconnected Graphs", *Algorithmica*, 42(2), pp. 159-197, 2005, Springer.

24. C. Buchheim and S. Hong, "Crossing Minimization for Symmetries", *Theory of Computing Systems*, 38 (3), pp. 293-311, 2005 (*Invited paper from ISAAC 2002*), Springer.
25. S. Hong, P. Eades and J. Hillman, "Linkless Symmetric Drawings of Series Parallel Digraphs", *Computational Geometry: Theory and Applications*, 29(3), pp. 191-222, 2004, Elsevier.
26. S. Hong and P. Eades, "Drawing Trees Symmetrically in Three Dimensions", *Algorithmica*, 36(2), pp. 153-178, 2003, Springer.
27. S. Hong, P. Eades and S. Lee, "Drawing Series Parallel Digraphs Symmetrically", *Computational Geometry: Theory and Applications*, Vol. 17, pp. 165-188, 2000, Elsevier.
28. Y. Lee, S. Hong and S. Lee, "Symmetry Analysis on Interconnection Networks and its Drawing System", *Journal of Korea Information Science Society (A)*, Vol 26, No. 11, 1999.
29. S. Hong and S. Lee, "An Algorithm for Detecting Geometric Symmetry in a Planar Graph", *Journal of Korea Information Science Society (A)*, Vol 26, No. 1, 1999.
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31. M. Cho, S. Hong, J. Lee and S. Lee, "Algorithms for Drawing 6-Planar Graphs in Triangular Grids", *Journal of Korea Information Science Society (A)*, Vol 24, No 2, 1997.
32. E. Oh, S. Hong and S. Lee, "Algorithms for Embedding Mesh of Trees into Star Graphs," *Journal of Korea Information Science Society (A)*, Vol 23, No 8, 1996.

Submitted Journal Papers

1. S. Hong and H. Nagamochi, "Star-shaped Drawings of Plane Graphs with a Cost Function on Concave Corners", revision submitted.
2. E. Di Giacomo, W. Didimo, P. Eades, S. Hong, G. Liotta, "Bounds on the Crossing Resolution of Complete Geometric Graphs, submitted.
3. W. Huang, P. Eades, S. Hong and C. Lin, "Improving Effectiveness of Graph Drawing Algorithms by Making Compromises between Aesthetics", submitted.

Refereed International Conference papers

1. A. Lubiw, M. Kaufmann, S. Hong, G. Liotta, Giuseppe, W. Didimo, F. Frati, G. Di Battista, "Large Angle Crossing Drawings of Planar Graphs in Subquadratic Area", Proceedings of XIV Spanish Meeting on Computational Geometry 2011, to appear.
2. S. Janowski, B. Kormeier, K. Hippe, Q. Nguyen, S. Hong, Seok-Hee; R. Hofestädt, J. Stoye, B. Kaltschmidt and C. Kaltschmidt, "Reconstruction and analysis of biological networks based on large scale data from the NF- κ B pathway", Proceedings of **IB 2011** (International Symposium on Integrative Bioinformatics 2011), to appear.
3. Q. Nguyen, P. Eades, S. Hong and W. Huang, "Large Crossing Angles in Circular Layouts", Proceedings of **Graph Drawing 2010**, LNCS, pp. 397-399, 2011.
4. W. Huang, P. Eades, S. Hong and C. Lin, "Improving Effectiveness of Graph Drawing Algorithms by Making Compromises between Aesthetics", Proceedings of **VL/HCC 2010**, pp. 176-183, IEEE, 2010.
5. K. Haraguchi, S. Hong and H. Nagamochi, "Effectiveness of Sample Poset Based Visual Classifier for Data Sets Conceptualized by the Number of Attributes", Proceedings of **WAAC 2010** (Japan-Korea Workshop on Algorithms and Computations), 2010.
6. K. Haraguchi, S. Hong and H. Nagamochi, "Multiclass Visual Classifier Based on Bipartite Graph Representation of Decision Tables", Proceedings of Learning and Intelligent Optimization (**LION 2010**), LNCS 6073, pp. 169-183, Springer, 2010.

7. K. Xu, R. Williams, S. Hong, Q. Liu and J. Zhang, "Semi-Bipartite Graph Visualization for Gene Ontology Networks", Proceedings of **Graph Drawing** 2009, LNCS, Springer, pp. 244-255, Springer, 2010
8. P. Eades, S. Hong and S. Poon, "On Rectilinear Drawing of Graphs", Proceedings of **Graph Drawing** 2009, LNCS, Springer, pp. 232-243, Springer, 2010.
9. S. Hong and H. Nagamochi, "Upward Star-shaped Polyhedral Graphs", Proceedings of International Symposium on Algorithms and Computation (**ISAAC** 2009), Lecture Notes in Computer Science, Springer, pp. 913-922, 2009.
10. K. Haraguchi, S. Hong and H. Nagamochi, "Visualization can improve multiple decision table classifiers," Proceedings of Modeling Decisions for Artificial Intelligence (**MDAI** 2009), IEEE, pp. 41-52, 2009.
11. K. Haraguchi, S. Hong and H. Nagamochi, "Bipartite Graph Representation of Multiple Decision Table Classifiers", Proceedings of Stochastic Algorithms: Foundations and Applications (**SAGA** 2009), Lecture Notes in Computer Science 5792, pp. 46-60, Springer, 2009.
12. K. Haraguchi, S. Hong and H. Nagamochi, "Visualized Multiple Decision Table Classifiers without Discretization", Proceedings of the 4th Korea-Japan Workshop on Operations Research in Service Science, pp. 19-28, 2009.
13. S. Hong and H. Nagamochi, "Toward Characterisation of Vertex-Edge Graphs of Three-Dimensional Nonconvex Polyhedra", Proceedings of **JH** 2009 (Japanese-Hungarian Workshop on Discrete Mathematics and Its Applications), pp. 256-273, 2009.
14. D. Fung, S. Hong, D. Koschützki, F. Schreiber and K. Xu, "Visual Analysis of Overlapping Biological Networks", Proceedings of International Conference on Information Visualisation (**IV** 2009), IEEE Computer Society 2009, pp. 337-342, 2009.
15. W. Huang, P. Eades and S. Hong, "A Graph Reading Behaviour: Geodesic Path Tendency", Proceedings of IEEE Pacific Visualization Symposium (**PacificVis** 2009), IEEE, 137-144, 2009.
16. L. Grilli, S. Hong, G. Liotta, H. Meijer and S. Wismath, "Matched Drawability of Graph Pairs and of Graph Triples", Proceedings of Workshop on Algorithms and Computation, **WALCOM** 2009, pp. 322-333, LNCS 5431, Springer, 2009.
17. S. Hong, "MultiPlane Framework for Visualisation and Analysis of Large and Complex Networks", Proceedings of 2008 **RIMS Workshop** on Acceleration and Visualisation of Computation for Enumeration Problems, pp. 1-11, 2009.
18. K. Haraguchi, S. Hong and H. Nagamochi, "Classification by Ordering Data Samples", Proceedings of 2008 **RIMS Workshop** on Acceleration and Visualisation of Computation for Enumeration Problems, pp. 20-34, 2009.
19. T. Imamichi, J. Gim, Y. Arahori, S. Hong and H. Nagamochi, "Removing Overlaps in Label Layouts using a Multi-sphere Scheme", Proceedings of **Graph Drawing** 2008, pp. 296-301, LNCS, Springer 2009.
20. S. Hong and M. Mader, "Generalizing the Shift Method for Rectangular Shaped Vertices with Visibility Constraints", Proceedings of **Graph Drawing** 2008, pp. 278-283, LNCS, Springer 2009.
21. S. Hong and H. Nagamochi, "Star-shaped Drawing of Planar Graphs with Fixed Embedding and Concave Corner Constraints", Proceedings of **COCOON** 2008, LNCS, Springer, pp. 405-414, 2008.
22. L. Grilli, S. Hong, A. Symvonis and C. Wormser, "Locally Delaunay Realizability of Regular Series-Parallel Graphs", Proceedings of **CGA** (International Workshop on Computational Geometry and Applications) 2008, IEEE, pp. 461-467, 2008.

23. D. Fung, S. Hong, D. Hart, K. Xu, Visualizing the Gene Ontology-Annotated Clusters of Co-expressed Genes: A Two-Design Study, Proceedings of **IV** (Information Visualisation) 2008, IEEE, pp. 9-14, 2008.
24. S. Hong and H. Nagamochi, "Approximating Crossing Minimization in Radial Layouts", Proceedings of **LATIN** 2008 (Latin American Theoretical Informatics Symposium), LNCS 4957, pp. 461-472, 2008.
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26. W. Huang, S. Hong and P. Eades, "A Cognitive Approach to the Evaluation of Graph Visualizations", Proceedings of **BELIV**'08 workshop, ACM, 3, 2008.
27. X. Shen, A. Vande Moere, P. Eades and S. Hong, "An Evaluation of *Fisherman* in a Partial-Attention Environment, Proceedings of **BELIV**'08 workshop, ACM, 10, 2008.
28. S. Hong and H. Nagamochi, "Star-shaped Drawings of Planar Graphs", Proceedings of **IWOCA** 2007 (International Workshop on Combinatorial Algorithm), pp. 78-92, College Publications, 2008.
29. Q. Nguyen and S. Hong. "Centrality-Based Planarisation and Thickness", Proceedings of **WAAC** 2007 (Korea-Japan Workshop on Algorithms and Computations), 2007.
30. S. Hong and H. Nagamochi, "Convex Drawings of Clustered Planar Graphs", Proceedings of **WAAC** 2007 (Korea-Japan Workshop on Algorithms and Computations), pp. 32-39, 2007.
31. S. Hong and H. Nagamochi, "A Linear Time Algorithm for Symmetric Convex Drawings of Triconnected Planar Graphs", Proceedings of Kyoto **CGGT** 2007 (Kyoto International Conference on Computational Geometry and Graph Theory), 2007.
32. U. Brandes, C. Erten, J. Fowler, F. Frati, M. Geyer, C. Gutwenger, S. Hong, M. Kaufmann, S. G. Kobourov, G. Liotta, P. Mutzel, A. Symvonis, "Colored Simultaneous Geometric Embeddings", Proceedings of **COCOON** 2007 (Computing and Combinatorics), Lecture Notes in Computer Science 4598, pp. 254-263, 2007.
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41. T. Dwyer, S. Hong, D. Koschuetzki, F. Schreiber and K. Xu, "Visual Analysis of Network Centralities", Proceedings of Asia Pacific Symposium on Information Visualisation (**APVIS** 2006), pp. 189-197, 2006.
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49. S. Hong, "Network Analysis and Visualisation", Proceedings of **Graph Drawing** 2005, pp. 524-527, Lecture Notes in Computer Science 3843, 2005.
50. W. Li, W. S. Hong and P. Eades, "Navigating Software Architecture", Proceedings of IEEE Symposium on Visual Languages and Human-Centric Computing (**VL/HCC'05**), pp. 225-232, IEEE, 2005.
51. W. Li, S. Hong and P. Eades, "A Framework for Visualising Large Graphs", Proceedings of International Conference Information Visualisation (**IV05**), pp. 528-535, IEEE, 2005.
52. Ahmed, T. Dwyer, S. Hong, C. Murray, L. Song and Wu, "Visualisation and Analysis of Large and Complex Scale-free Networks", Proc. of **EuroVis** 2005 (EUROGRAPHICS-IEEE VGTC Symposium on Visualization), pp. 1-8, IEEE, 2005.
53. K. Sugiyama, R. Osawa and S. Hong, "The Puzzle Generators and Symmetric Puzzle Layout", Proceedings of **APVIS** (Asia Pacific Symposium on Information Visualisation) 2005, pp. 93-102, Vol. 45, CRPIT, 2005.
54. S. Hong and N. Nikolov, "Layered Drawings of Directed Graphs in Three Dimensions", Proceedings of **APVIS** (Asia Pacific Symposium on Information Visualisation) 2005, pp. 65-70, Vol. 45, CRPIT, 2005.
55. S. Hong and T. Murtagh, "*Visualization of Large and Complex Networks Using PolyPlane*", Proceedings of **Graph Drawing** 2004, Lecture Notes in Computer Science 3383, pp. 471-482, Springer, 2004.
56. S. Hong and P. Eades, "*A Linear Time Algorithm for Constructing Maximally Symmetric Straight line Drawings of Planar Graphs*", Proceedings of **Graph Drawing** 2004, Lecture Notes in Computer Science 3383, pp. 307-317, Springer, 2004.
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61. S. Hong and P. Eades, "Drawing Disconnected Graphs Symmetrically", Proceedings of **WAAC** (Japan-Korea Workshop on Algorithms and Computation) 2003, pp. 276-288, 2003.
62. S. Hong, "The Rectilinear Crossing Minimization Problem", Proceedings of **AWOCA** (Australasian Workshop on Combinatorial Algorithms) 2003, pp. 46-56, 2003.
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77. S. Hong and S. Lee, "The Flip Distance Problem of Triangulations," Proceedings of the Japan-Korea Joint Workshop on Algorithms and Computation, **WAAC 97**, pp.9-15, 1997.
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Refereed Conference Poster papers/ Conference Abstracts

1. S. Hong, "Recent Advances in Straight-line Graph Drawing: Extending Fary's Theorem, Steinitz's Theorem and Tutte's Barycenter Theorem", Proceedings of **AAAC 2011** (Asian Association for Algorithms and Computation), 2011.
2. S. Hong, N. Katoh, S. Poon and S. Tanigawa, "On the Edge Crossing Properties of Euclidean Minimum Weight Laman Graphs", Proceedings of **AAAC 2011** (Asian Association for Algorithms and Computation), 2011.
3. V. Batagelj, K. Borner, U. Brandes, S. Hong et al., Sunbelt 2011 Vizards Session, "Visualization and Analysis of Airline Traffic", Proceedings of **Sunbelt 2011**, US.
4. S. Hong, "Drawing Graphs with Large Crossing Angles", Proceedings of **AAAC 2010** (Asian Association for Algorithms and Computation), 2010.
5. K. Haraguchi, S. Hong and H. Nagamochi, "Visual Analysis of Hierarchical Data using 2.5D Drawing with Minimum Occlusion", IEEE Pacific Visualization Symposium 2008 (**PacificVis 2008**), March 5-7 Kyoto, Japan, 2008. (**Best Post Award**)
6. J. Gim, Y. Arahori, T. Imamichi, S. Hong and H. Nagamochi, "Overlap Removal in Label Layouts by a Multi-sphere Scheme", IEEE Pacific Visualization Symposium 2008 (**PacificVis 2008**), March 5-7 Kyoto, Japan, 2008.
7. V. Batagelj, K. Borner, U. Brandes, S. Hong et al., Sunbelt 2008 Vizards Session, "Visualization and Analysis of WoS (Web of Science)", Proceedings of **Sunbelt 2008**, US.
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10. Batagelj et al, Sunbelt 2007 Vizards Session, "Visualization and Analysis of Wiki", Proceedings of **Sunbelt 2007**, Greece.
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