

ANTONIOS SYMVONIS

Curriculum Vitae
May 2013

Personal details

Date of Birth: 9 July 1964
Marital status: Married, one child
Citizenship: Greek, Australian

Contact address

Department of Mathematics
School of Applied Mathematics and Physical Sciences
National Technical University of Athens
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Research interests

Theoretical aspects of Computer Science, focusing on algorithms and their complexity (graph drawing, packet routing, parallel computation, graph theory, computational geometry). Data protection and security. Security visualization. Software development.

Academic appointments

August 2011 – today	<i>Hellenic Data Protection Authority</i> Board Member
July 2010 – today	<i>Professor</i> Department of Mathematics, National Technical University of Athens.
May 2003 – July 2010	<i>Associate Professor,</i> Department of Mathematics, National Technical University of Athens.
June 2000 – May 2003	<i>Associate Professor,</i> Department of Mathematics, University of Ioannina. <i>Research Associate,</i> Department of Computer Science, University of Sydney.
January 1997 – June 2000:	<i>Senior Lecturer,</i> Department of Computer Science, University of Sydney.
January 1998 – December 1998:	<i>Visiting Associate Professor,</i> Department of Computer Science, Dartmouth College, USA.

September 1991 – December 1996: **Lecturer,**
Department of Computer Science, University of Sydney.

September 1987 – August 1991: **Teaching/research assistant,**
Department of Computer Science, University of Texas at Dallas.

Education

- **Ph.D. in Computer Science**, University of Texas at Dallas, August 1991.
Dissertation title: “Packet Routing Problems and High Resolution Graph Layouts”.
Supervisor: Prof. F. Makedon
- **M.Sc. in Computer Science**, University of Texas at Dallas, May 1989.
- **Diploma of Computer Engineering and Informatics**, Polytechnic School, University of Patras, Greece, June 1987.

Research Funding

1. ***ILearnRW: Integrated Intelligent LEARNING Environment for Reading and Writing***.
European Union Seventh Framework program (FP7). ICT-2011.8.1 Technology-enhanced learning.
Scientific project coordinator. In collaboration with Prof. Kollias (NTUA).
2012-2015: €339,680 (Total budget: €1,800,000).
2. ***Graph Drawing with Emphasis in Security Applications***
Ministry of Education, Lifelong Learning and Religious Affairs, Program “Heraclitus II”
2011-2013: € 12,600
3. ***Graph Theory Problem Solving with Emphasis in their Drawings.***
Ministry of Education, Lifelong Learning and Religious Affairs, Program “Heraclitus II”
2011-2012: € 22,500
4. ***Label Placement Algorithms under the Boundary Labeling Model***
PEBE 2008--National Technical University of Athens research grant
2008-2009: € 12,600
5. ***AGENT-DYSL: Accommodative intelliGENT educational environments for DYSLexic learners.***
European Union Sixth Framework program, Information Society Technologies, eInclusion.
Scientific project coordinator. In collaboration with Prof. Kollias (NTUA).
2006-2009: €418,160 (Total budget: €2,000,000).
6. ***Labeling placement algorithms with applications to graph drawing and cartography.***
General Secretariat for Research and Technology, Ministry of Development. PENED program.
2005-2008: €46,500
7. ***Optimal graph drawing algorithms***
Ministry of National Education and Religious Affairs, Program Pythagoras.
2004-2006: €50,000
8. ***Design and Analysis of Simple Packet routing algorithms***
General Secretariat for Research and Technology, Ministry of Development. Greek-German Collaboration program.
2003-2004: €15,407
9. ***Design and analysis of simple greedy dynamic on-line routing algorithms***
Australian Research Council.

- 1999: \$73,000,
 2000: \$74,000, (approved; funding was suspended due to resignation from University of Sydney)
 2001: \$63,000 (approved; funding was suspended due to resignation from University of Sydney)
10. **Combinatorial Algorithmic support for multimedia distribution**
 Australian Research Council
 2000: \$13,000
11. **Three-dimensional orthogonal graph drawings**
 Australian Research Council
 2000: \$20,000
12. **Transposition-based Routing Algorithms**
 Australian Research Council
 1995: \$15,000,
 1996: \$15,000,
 1997: \$15,000
13. **Parallel Heuristics**
 University of Sydney Research Grant Scheme
 1993:\$4,000.
14. **Graph Optimization Problems: High Resolution Layouts and Grid Searching**
 University of Sydney Research Grant Scheme
 1992: \$6,000

Journal publications

- j-1. **Monotone Drawings of Graphs with Fixed Embedding**
 P. Angelini, W. Didimo, S. Kobourov, T. Mchedlidze, V. Roselli, A. Symvonis, S. Wismath
Algorithmica 2013, DOI: 10.1007/s00453-013-9790-3. Published online: 3 May 2013.
- j-2. **On upward point set embeddability**
 M. Kauffmann, T. Mchedlidze, A. Symvonis.
Computational Geometry: Theory and Applications, 46(6): 774-804 (2013).
- j-3. **Geometric RAC Simultaneous Drawings of Graphs**
 E. N. Argyriou, M. A. Bekos, M. Kauffmann, A. Symvonis.
Journal of Graph Algorithms and Applications, Volume 17, No. 1, pp. 11-34, 2013.
- j-4. **Maximizing the Total Resolution of Graphs**
 E. N. Argyriou, M. A. Bekos, A. Symvonis.
The Computer Journal 2012, DOI: 10.1093/comjnl/bxs088.
- j-5. **The Straight-Line RAC Drawing Problem is NP-Hard**
 E. N. Argyriou, M. A. Bekos, A. Symvonis.
Journal of Graph Algorithms and Applications, Volume 16, No. 2, pp. 569-597, 2012.
- j-6. **Drawing trees in a streaming model**
 C. Binucci, U. Brandes, G. Di Battista, W. Didimo, M. Gaertler, P. Palladino, M. Patrignani, A. Symvonis, K. A. Zweig.
Information Processing Letters, Volume 112, No. 11, pp. 418-422, 2012.
- j-7. **Making assistive reading tools user friendly: a new platform for Greek dyslexic students empowered by automatic speech recognition**
 T. Athanaselis, S. Bakamidis, I. Dologlou, E. N. Argyriou, A. Symvonis.

- Multimedia Tools and Applications* 2012, DOI: 10.1007/s11042-012-1073-5.
- j-8. ***Crossing Optimal Acyclic HP-Completion for Outerplanar st-Digraphs***
T. Mchedlidze, A. Symvonis.
Journal of Graph Algorithms and Applications, Volume 15, No. 3, pp. 373-415, 2011.
- j-9. ***Colored Simultaneous Geometric Embeddings and Universal Pointsets***
U.Brandes, C. Erten, A. Estrella-Balderrama, J. J. Fowler, F. Frati, M. Geyer, C. Gutwenger, S. Hong, M. Kaufmann, S. G. Kobourov, G. Liotta, P. Mutzel, A. Symvonis.
Algorithmica, Volume 60, No. 3, pp. 569-592, 2011.
- j-10. ***On the Perspectives Opened by Right Angle Crossing Drawings***
P. Angelini, L. Cittadini, G. Di Battista, W. Didimo, F. Frati, M. Kaufmann, A. Symvonis.
Journal of Graph Algorithms and Applications, Volume 15, No. 1, pp. 53-78, 2011.
- j-11. ***On Metro-Line Crossing Minimization***
E. Argyriou, M. Bekos, M. Kaufmann, A. Symvonis.
Journal of Graph Algorithms and Applications, Volume 14, No. 1, pp. 75-96, 2010.
- j-12. ***Boundary Labeling with Octilinear Leaders***
M. Bekos, M. Kaufmann, M. Nollenberg, A. Symvonis.
Algorithmica, Volume 57, No. 3, pp. 436-461, 2010.
- j-13. ***Area-Feature Boundary Labeling***
M. Bekos, M. Kaufmann, K. Potina, A. Symvonis.
The Computer Journal, Volume 53, No. 6, pp. 827-841, 2010.
- j-14. ***Efficient Labeling of Collinear Sites***
M. Bekos, M. Kaufmann, K. Potika, A. Symvonis.
Journal of Graph Algorithms and Applications, Volume 12, No. 3, pp. 357-380, 2008.
- j-15. ***Boundary Labeling: Models and Efficient Algorithms for Rectangular Maps***
M. Bekos, M. Kaufmann, A. Symvonis, A. Wolff.
Computational Geometry: Theory and Applications, Volume 36, No. 3, pp. 215-236, 2007.
- j-16. ***Video-on-Demand Based on Delayed-Multicast: Algorithmic Support***
N. Glinos, D. Hoang, C. Nguyen, A. Symvonis.
The Computer Journal, Volume 47, No. 5, pp. 545-559, 2004.
- j-17. ***Dimension-Exchange Algorithms for Token Distribution on Tree-Connected Architectures***
M. Houle, A. Symvonis, D. Wood.
Journal of Parallel and Distributed Computing, Volume 64, No. 5, pp. 591-605, 2004.
- j-18. ***Lower Bounds for One-to-one Packet Routing on Trees using Hot-Potato Algorithms***
A. Roberts, A. Symvonis, D. Wood.
The Computer Journal, Volume 45, No. 4, pp. 423-435, 2002.
- j-19. ***On the Routing Number of Complete d-ary Trees***
A. Roberts, A. Symvonis.
International Journal of Foundations of Computer Science, Volume 12, No. 4, pp. 411-434, 2001.
- j-20. ***Potential-function-based Analysis of an off-line Heap Construction Algorithm***
A. Roberts, A. Symvonis.
Journal for Universal Computer Science, Volume 6, No. 2, pp. 240-255, 2000.

- j-21. ***Three-Dimensional Orthogonal Graph Drawing Algorithms***
P. Eades, A. Symvonis, S. Whitesides.
Discrete Applied Mathematics, Volume 103, No. 1-3, pp. 55-87, 2000.
- j-22. ***A Note on Deflection Worm Routing on Meshes.***
A. Symvonis.
Information Processing Letters, Volume 71, No. 5-6, pp. 235-239, 1999.
- j-23. ***On-line Matching Routing on Trees***
A. Roberts, A. Symvonis.
Theoretical Computer Science. Volume 220, No. 2, pp. 469-488, 1999.
- j-24. ***A Note on Parallel Algorithms for Optimal h-v Drawings of Binary Trees***
T. Metaxas, G. Pantziou, A. Symvonis.
Computational Geometry: Theory and Applications, Volume 9, No. 3, pp. 145-158, 1998.
- j-25. ***Many-to-Many Routing on Trees via Matchings***
G. Pantziou, A. Roberts, A. Symvonis.
Theoretical Computer Science, Volume 185, No. 2, pp. 347-377, 1997.
- j-26. ***Heuristic Methods for Permutation Routing on Meshes and Tori***
F. Makedon, A. Symvonis.
Computer Systems: Science and Engineering, Volume 12, No. 6, pp. 373-380, 1997.
- j-27. ***A General Method for Deflection Worm Routing on Meshes Based on Packet Routing Algorithms***
A. Roberts, A. Symvonis.
IEEE Transactions on Parallel and Distributed Systems, Volume 8, No. 8, pp. 781-789, 1997.
- j-28. ***An Empirical Study of Off-Line Permutation Packet Routing on 2-Dimensional Meshes Based on the Multistage Routing Method***
A. Symvonis, J. Tidswell.
IEEE Transactions on Computers, Volume 45, No. 5, pp. 619-625, May 1996.
- j-29. ***Routing on Trees***
A. Symvonis.
Information Processing Letters, Volume 57, No. 4, pp. 215-223, 1996.
- j-30. ***Flit-Serial Packet Routing on Meshes and Tori***
F. Makedon, A. Symvonis.
Mathematical Systems Theory, Volume 29, No. 4, pp. 311-330, 1996.
- j-31. ***Optimal Stable Merging***
A. Symvonis.
The Computer Journal, Volume 38, No. 8, pp. 681-690, 1995.
- j-32. ***Optimal Algorithms for Multipacket Routing Problems on Rings***
F. Makedon, A. Symvonis.
Journal of Parallel and Distributed Computing, Volume 22, No. 1, pp. 37-43, 1994.
- j-33. ***Searching a Solid Pseudo 3-Sided Solid Orthoconvex Grid***
A. Symvonis, S. Tragoudas.
International Journal of Foundations of Computer Science, Volume 4, No. 4, pp. 325-353, 1993.
- j-34. ***Drawing Graphs in the Plane with High Resolution***
M. Formann, T. Hagerup, J. Haralambides, M. Kaufmann, F. T. Leighton, A. Symvonis, E. Welzl,

G. Woeginger.
SIAM Journal on Computing, Volume 22, No. 5, pp. 1035-1052, 1993.

- j-35. ***Optimal Algorithms for the Many-to-One Routing Problem on 2-Dimensional Meshes***
F. Makedon, A. Symvonis.
Journal of Microprocessors and Microsystems, Volume 17, No. 6, pp. 361-367, 1993.
- j-36. ***An Efficient Heuristic for Permutation Packet Routing on Meshes with Low Buffer Requirements***
F. Makedon, A. Symvonis.
IEEE Transactions on Parallel and Distributed Systems, Volume 4, No. 3, pp. 270-277, 1993.

Conference publications

- c-1. ***Occupational Fraud Detection through Visualization***
E.N. Argyriou, A. Sotiraki, A. Symvonis
Proc. IEEE Intelligence and Security Informatics 2013 (ISI 2013), Seattle, USA, June 4-7, 2013. To appear.
- c-2. ***Smooth Orthogonal Layouts***
M. A. Bekos, S. Kobourov, M. Kaufmann, A. Symvonis.
Proc. 20th International Symposium on Graph Drawing (GD 2012), Redmond, Washington, USA, September 19-21, 2012. LNCS 7704, pp. 150-161, 2012.
- c-3. ***Detecting Periodicity in Serial Data through Visualization***
E. N. Argyriou, A. Symvonis.
Proc. 8th International Symposium on Visual Computing (ISVC 2012), Rethymnon, Crete, Greece, July 16-18, 2012, LNCS 7432, pp. 295-304, 2012.
- c-4. ***Geometric RAC Simultaneous Drawings of Graphs***
E. N. Argyriou, M. A. Bekos, M. Kaufmann, A. Symvonis.
Proc. 18th International Computing and Combinatorics Conference (COCOON 2012), Sydney, Australia, August 20-22, 2012. LNCS 7433, pp. 287-298, 2012.
- c-5. ***Upward point-set embeddability for convex point sets is in P***
M. Kaufmann, T. Mchedlidze, A. Symvonis.
Proc. 19th International Symposium on Graph Drawing (GD 2011), Eindhoven, Holland, September 21-23, 2011. LNCS 7034, pp. 403-414, 2012.
- c-6. ***Monotone Drawings of Graphs with Fixed Embedding***
P. Angelini, W. Didimo, S. Kobourov, T. Mchedlidze, V. Roselli, A. Symvonis, S. Wismath.
Proc. 19th International Symposium on Graph Drawing (GD 2011), Eindhoven, Holland, September 21-23, 2011. LNCS 7034, pp. 379-390, 2012.
- c-7. ***Combining Problems on RAC Drawings and Simultaneous Graph Drawings***
E. N. Argyriou, M. A. Bekos, M. Kaufmann, A. Symvonis.
Proc. 19th International Symposium on Graph Drawing (GD 2011), Eindhoven, Holland, September 21-23, 2011. LNCS 7034, pp. 433-434, 2012.
- c-8. ***The Straight-Line RAC Drawing Problem is NP-Hard***
E. N. Argyriou, M. A. Bekos, A. Symvonis.

Proc. 37th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2011), Nový Smokovec, Slovakia, January 22-28, 2011. LNCS 6543, pp. 74-85, 2011.

- c-9. ***Incorporating Speech Recognition Engine into an Intelligent Assistive Reading System for Dyslexic Students***
T. Athanaselis, S. Bakamidis, I. Dologlou, E. N. Argyriou, A. Symvonis.
Proc. Annual Conference of the International Speech Communication Association (INTERSPEECH 2011), Florence, Italy, August 28-31, 2011, pp. 2993-2996, 2011.
- c-10. ***Upward Point-Set Embeddability***
M. Geyer, M. Kaufmann, T. Mchedlidze, A. Symvonis.
Proc. 37th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2011), Nový Smokovec, Slovakia, January 22-28, 2011. LNCS 6543, 272-283, 2011.
- c-11. ***Combining Traditional Map Labeling with Boundary Labeling***
M. A. Bekos, M. Kaufmann, D. Papadopoulos, A. Symvonis.
Proc. 37th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2011), Nový Smokovec, Slovakia, January 22-28, 2011. LNCS 6543, pp. 111-122, 2011.
- c-12. ***Upward Geometric Graph Embeddings into Point Sets***
P. Angelini, F. Frati, M. Geyer, M. Kaufmann, T. Mchedlidze, A. Symvonis.
Proc. 18th International Symposium on Graph Drawing (GD 2010), Konstanz, Germany, September 21-24, 2010. LNCS 6502, pp. 25-37, 2011.
- c-13. ***Maximizing the Total Resolution of Graphs***
E. N. Argyriou, M. A. Bekos, M. Kaufmann, A. Symvonis.
Proc. 18th International Symposium on Graph Drawing (GD 2010), Konstanz, Germany, September 21-24, 2010. LNCS 6502, pp. 62-67, 2011.
- c-14. ***Unilateral Orientation of Mixed Graphs***
T. Mchedlidze, A. Symvonis.
Proc. 36th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2010) Spindleruv Mlyn, Czech Republic,), January 23-29, 2010. LNCS 5901, pp. 588-599, 2010.
- c-15. ***Crossing-Free Acyclic Hamiltonian Path Completion for Planar st-Digraphs***
T. Mchedlidze, A. Symvonis.
20th International Symposium on Algorithms and Computation (ISAAC 2009), Hawaii, USA, December 16-18, 2009. LNCS 5878, pp. 882-891, 2009.
- c-16. ***On the Perspectives Opened by Right Angle Crossing Drawings***
P. Angelini, L. Cittadini, G. Di Battista, W. Didimo, F. Frati, M. Kaufmann A. Symvonis.
Proc. 17th International Symposium on Graph Drawing (GD 2009), Chicago, Illinois, USA, September 22 - 25, 2009. LNCS 5849, pp. 21-32, 2010.
- c-17. ***Drawing Trees in a Streaming Model***
C. Binucci, U. Brandes, G. Di Battista, W. Didimo, M. Gaertler, P. Palladino, M. Patrignani, A. Symvonis, K. Zweig.
Proc. 17th International Symposium on Graph Drawing (GD 2009), Chicago, Illinois, USA, September 22 - 25, 2009. LNCS 5849, pp. 292-303, 2010.
- c-18. ***On rho-Constrained Upward Topological Book Embeddings***
T. Mchedlidze, A. Symvonis.
Proc. 17th International Symposium on Graph Drawing (GD 2009), Chicago, Illinois, USA, September 22 - 25, 2009. LNCS 5849, pp. 411-412, 2010.

- c-19. **Crossing-optimal acyclic HP-completion for outerplanar st-digraphs**
T. Mchedlidze, A. Symvonis.
15th International Computing and Combinatorics Conference (COCOON 2009), Niagara Falls, New York, USA, July 2009. LNCS 5609, pp. 76-85, 2009.
- c-20. **Crossing-Optimal Acyclic Hamiltonian Path Completion and its Application to Upward Topological Book Embeddings**
T. Mchedlidze, A. Symvonis.
Third Annual Workshop on Algorithms and Computation (WALCOM 2009), Kolkata, India, February 2009. LNCS 5431, pp. 250-261, 2009.
- c-21. **Two Polynomial Time Algorithms for the Metro-Line Crossing Minimization Problem**
E. Argyriou, M. Bekos, M. Kaufmann, A. Symvonis.
Proc. 16th International Symposium on Graph Drawing (GD 2008), Crete, Greece, September 2008. In I.G. Tollis, M. Patrigranni (Eds), LNCS 5417, pp. 336-347, 2009.
- c-22. **Spine Crossing Minimization in Upward Topological Book Embeddings**
T. Mchedlidze, A. Symvonis.
Proc. 16th International Symposium on Graph Drawing (GD 2008), Crete, Greece, September 2008. In I.G. Tollis, M. Patrigranni (Eds), LNCS 5417, pp. 445-446, 2009.
- c-23. **Locally Delaunay Realizability of Regular Series-Parallel Graphs**
L.Grilli, S.H. Hong, A. Symvonis, C. Wormser.
8th Annual International Workshop on Computational Geometry and Applications (CGA 2008), Perugia, Italy, June 2008, pp. 461-467.
- c-24. **Boundary Labeling with Octilinear Leaders**
M. A. Bekos, M. Kaufmann, M. Nöllenburg, A. Symvonis.
12th Scandinavian Workshop on Algorithmic Theory (SWAT 2008), Gothenburg, July 2008. LNCS 5124, pp. 234-245, 2008.
- c-25. **Adaptive Reading Assistance for the Inclusion of Students with Dyslexia: The AGENT-DYSL approach**
P. Tzouveli, A. Schmidt, M.Schneider, A. Symvonis, S. Kollias.
8th IEEE International Conference on Advanced Learning Technologies (ICALT 2008), Santander, Cantabria, Spain, July 1st-5th, 2008.
- c-26. **Colored Simultaneous Geometric Embeddings**
U.Brandes, C. Erten, J. Fowler, F. Frati, M. Geyer, C. Gutwenger, S. Hong, M. Kaufmann, S. Kobourov, G. Liotta, P. Mutzel, A. Symvonis.
Proc. 13th Annual International Computing and Combinatorics Conferenc,(COCOON 2007), Banff, Alberta, Canada, July 2007. LNCS 4598, pp. 254-263, 2007.
- c-27. **Computing Upward Topological Book Embeddings of Upward Planar Digraphs**
F. Giordano, G. Liotta, T. Mchedlidze, A. Symvonis.
Proc. 18th International Symposium on Algorithms and Computation (ISAAC 2007), Sendai, Japan, December 17-19, 2007. LNCS 4835, pp. 172-183, 2007.
- c-28. **Line Crossing Minimization on Metro Maps**
M. A. Bekos, M. Kaufmann, K. Potika, A. Symvonis.
Proc. 15th International Symposium on Graph Drawing (GD 2007), Sydney, Australia, September 23-26, 2007. LNCS 4875, pp. 231-242, 2007.
- c-29. **AGENT-DYSL: A Novel Intelligent Reading System for Dyslexic Learners**
M. Athanasaki, M. Avramouli, K. Karpouzis, S. Kollias, K. Ntalianis, A. Schmidt, A. Symvonis, F.

Valcarcel.

eChallenges 2007, Hague, Holland, October 24-26, 2007. In: Miriam Cunningham and Paul Cunningham (eds.): *Expanding the Knowledge Economy: Issues, Applications, Case Studies. Proceedings of E-Challenges 2007*, IOS Press, 2007.

- c-30. **Analysis of the Greek Web-Space**
T. Mchedlidze, A. Symvonis, M. Tzagarakis.
Proc. 11th Panhellenic Conference on Informatics (PCI 2007), Patra, Greece, 2007, pp. 651-660.
- c-31. **Labeling collinear sites**
M. A. Bekos, M. Kaufmann, A. Symvonis.
Proc. Asia Pacific Symposium on Information Visualisation (APVIS 2007), Sydney, Australia, 2006. IEEE, pp. 45-51, 2007.
- c-32. **Multi-Stack Boundary Labeling Problems**
M. A. Bekos, M. Kaufmann, K. Potika, A. Symvonis.
Proc. 26th Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2006), Kolkata, India, 2006. In S. Arun-Kumar and N. Garg (Eds), LNCS 4337, pp. 81-92, 2006.
- c-33. **Polygons Labelling of Minimum Leader Length**
M. A. Bekos, M. Kaufmann, K. Potika, A. Symvonis.
Proc. Asia Pacific Symposium on Information Visualisation (APVIS 2006), Tokyo, Japan, 2006. In Misue Kazuo, Sugiyama Kozo and Tanaka Jiro (Eds), CRPIT 60, pp. 15-21, 2006.
- c-34. **Boundary labelling of optimal total leader length**
M. A. Bekos, M. Kaufmann, K. Potika, A. Symvonis.
Proc. 10th Panhellenic Conference on Informatics (PCI 2005), Volos, Greece, 2005. In P. Bozanis and E.N. Houstis (Eds.), LNCS 3746, pp. 80-89, 2005.
- c-35. **BLer: A Boundary Labeller for Technical Drawings**
M. A. Bekos, A. Symvonis.
Proc. 13th International Symposium on Graph Drawing (GD 2005), Limerick, Ireland, September 2005. In Patrick Healy, Nikola S. Nikolov (Eds.) LNCS 3843, pp. 503-504, 2005.
- c-36. **Boundary Labeling: Models and Efficient Algorithms for Rectangular Maps**
M. A. Bekos, M. Kaufmann, A. Symvonis, A. Wolff.
Proc. 12th International Symposium on Graph Drawing (GD 2004), New York, USA, September 2004. In Janos Pach (Ed.), LNCS 3383, pp. 49-59, 2004.
- c-37. **Cost-based Optimization for Video-on-Demand using Delayed-Multicast**
C. Nguyen, D. Hoang, A. Symvonis.
The IASTED International Conference on Communication Systems and Networks, Marbella, Spain, September 2004.
- c-38. **Multi-level Caching with Delayed-Multicast for Video-on-Demand**
D. Hoang, C. Nguyen, A. Symvonis.
Proc. 7th IASTED International Conference on Internet and Multimedia Systems and Applications (IMSA 2003), Hawaii, U.S.A, August 2003, pp. 699-705.
- c-39. **Resource Allocation for Video-on-Demand with "Delayed-Multicast" Protocol**
D. Hoang, C. Nguyen, A. Symvonis.
Proc. IEEE Global Telecommunications Conference 2002 (GlobeCom 2002), IEEE, Taipei, Taiwan, November 2002. IEEE, pp. 1789-1793, 2002.

- c-40. **Algorithmic support for Video-on-Demand Based on the Delayed-Multicast Protocol**
N. Glinos, D. Hoang, C. Nguyen, A. Symvonis.
9th International Colloquium on Structural Information and Communication Complexity, (SIROCCO 2002), Carleton Scientific, Andros, Greece, June 2002, pp. 133-148.
- c-41. **Dimension-Exchange Algorithms for Load Balancing on Trees**
M. Houle, A. Symvonis, D. Wood.
9th International Colloquium on Structural Information and Communication Complexity, (SIROCCO 2002), Carleton Scientific, Andros, Greece, June 2002, pp. 181-196.
- c-42. **Refinements of Three-Dimensional Orthogonal Graph Drawings**
B. Lynn, A. Symvonis, D. Wood.
Graph Drawing 2000, Williamsburg Virginia, USA, September 2000. LNCS 1984, pp. 308-320, 2001.
- c-43. **Scheduled-Multicast with Application in Multimedia Networks**
H. El-Gindy, C. Nguyen, A. Symvonis.
8th IEEE International Conference On Networks (ICON 2000), Singapore, October 2000, pp. 191-198 .
- c-44. **Lower Bounds for Hot-Potato Permutation Routing on Trees**
D. Wood, A. Roberts, A. Symvonis.
7th International Colloquium on Structural Information and Communication Complexity, (SIROCCO 2000), Carleton Scientific, L'Aquila, Italy, June 2000, pp. 281-295.
- c-45. **On-line Matching Routing on Trees**
A. Roberts, A. Symvonis.
LATIN'98 Theoretical Informatics, Campinas, Brazil, April 1998. LNCS 1380, pp. 282-291, 1998.
- c-46. **Two Algorithms for Three Dimensional Orthogonal Graph Drawings**
P. Eades, A. Symvonis, S. Whitesides.
Graph Drawing 1996, Berkeley, California, USA, September 1996. LNCS 1190, pp. 139-154, 1997.
- c-47. **Dynamic Tree Routing under the Matching-with-Consumption Model**
G. Pantziou, A. Roberts, A. Symvonis.
7th International Symposium on Algorithms and Computation (ISAAC 1996), Osaka, Japan, December 1996. LNCS 1178, pp. 275-284, 1996.
- c-48. **On the Hot-Potato Permutation Routing Algorithm of Borodin, Rabani and Schieber**
R.T. Plunkett, A. Symvonis.
Computing: The Australasian Theory Symposium (CATS 1996), Melbourne, Australia, January 1996. (Published as *Australian Computer Science Communications*, Volume 18, No. 3, pp. 118-125.)
- c-49. **Routing on Trees via Matchings**
A. Roberts, A. Symvonis, L. Zhang.
4th Workshop on Algorithms and Data Structures (WADS 1995), Kingston, Ontario, Canada, August 1995. LNCS 955, pp. 251-262, 1995.
- c-50. **On Deflection Worm Routing on Meshes**
A. Roberts, A. Symvonis.
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- c-51. ***Parallel h-v Drawings of Binary Trees***
T. Metaxas, G. Pantziou, A. Symvonis.
5th International Symposium on Algorithms and Computation (ISAAC 1994), Beijing, China, August 25-27, 1994. LNCS 834, pp. 487-495, 1994.
- c-52. ***Optimal Algorithms for Packet Routing on Tree***
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6th International Conference on Computing and Information (ICCI 1994), Peterborough, Ontario, Canada, May 26-28, 1994, pp. 144-161. (Published at a special issue of the *Journal of Computing and Information*, Volume 1, No. 1.)
- c-53. ***Optimal Stable Merging***
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- c-54. ***Routing on Trees***
A. Symvonis.
17th Annual Computer Science Conference (ACSC-17), Christchurch, New Zealand, January 1994, pp. 297-308.
- c-55. ***Heuristic Methods for Permutation Routing on Meshes and Tori***
W.T. Chan, F. Makedon, A. Symvonis.
16th Australian Computer Science Conference (ACSC-16), Brisbane, February 1993, pp. 219-227.
- c-56. ***Searching a Solid Pseudo 3-Sided Solid Orthoconvex Grid***
A. Symvonis, Tragoudas.
3rd Annual International Symposium on Algorithms and Computation (ISAAC 1992), Japan, December 1992. LNCS 650, pp. 188-197, 1992.
- c-57. ***A New approach to Off-Line Packet Routing. Case Study: 2-Dimensional Meshes***
A. Symvonis, J. Tidswell.
1992 DAGS/PC Symposium, Dartmouth Institute for Advanced Graduate Studies in Parallel Computation, Hanover, NH, USA, June 1992, pp. 84-93.
- c-58. ***Multipacket Routing on Rings***
F. Makedon, A. Symvonis.
1st International Conference of the Austrian Center for Parallel Computation, Salzburg, Austria, September 1991, pp. 226-237.
- c-59. ***Many-to-One Packet Routing for the Mesh***
F. Makedon, A. Symvonis.
19th Annual ACM Computer Science Conference, San Antonio, Texas, March 1991, pp. 280-288.
- c-60. ***Drawing Graphs in the Plane with High Resolution***
M. Formann, T. Hagerup, J. Haralambides, M. Kaufmann, F. T. Leighton, A. Symvonis, E. Welzl, G. Woeginger.
31st IEEE Symposium on Foundations of Computer Science (FOCS 1990), St. Louis, Missouri, October 1990, pp. 86-95.
- c-61. ***Straight Line Mesh and Hypercube Layouts on the Plane***
J. Haralambides, A. Symvonis.
ISMM International Conference on Parallel and Distributed Computing and Systems, New York, October 1990, pp. 2-6.

- c-62. ***On Bit-Serial Routing for the Mesh and the Torus***
 F. Makedon, A. Symvonis.
3rd Symposium on the Frontiers of Massively Parallel Computation, College Park, Maryland,
 October 1990, pp. 294-302.
- c-63. ***Fast Parallel Communication on Mesh Connected Machines with Low Buffer Requirements***
 F. Makedon, A. Symvonis.
1990 IEEE International Conference on Computer Design (ICCD 1990), Cambridge, Massachusetts,
 September 1990, pp. 78-81.

Submitted for publication

- s-1. ***Computing Upward Topological Book Embeddings of Upward Planar Digraphs***
 F. Giordano, B. Liotta, T. Mchedlidze, A. Symvonis, S. Whitesides.
 Submitted for journal publication.

Professional service

Editorship

- ***Journal of Graph Algorithms and Applications.***
 Member of the Editorial Board.
- ***Journal of Discrete Mathematics.***
 Member of the Editorial Board.
- ***Journal for Universal Computer Science.***
 Electronic Journal. Member of the Board of Foundation Editors.
- ***AWOCA '96 - Proceedings of the Seventh Australian Workshop on Combinatorial Algorithms,***
 Magnetic Island, July 1996, Australia (Editor). Technical Report TR 508, Basser Dept of
 Computer Science, University of Sydney.

Journal refereeing

- Algorithmica
- Australian Computer Journal
- Computational Geometry: Theory and Applications
- Computer Systems Science and Engineering
- IEEE Transactions on Computers
- IEEE Transactions on Communications
- IEEE Transactions on Parallel and Distributed Systems
- Information and Computation
- International Journal of Foundations of Computer Science
- Journal for Universal Computer Science
- Journal of ACM
- Journal of Algorithms

- Journal of Combinatorial Optimization
- Journal of Graph Algorithms and Applications
- Journal of Parallel and Distributed Computing
- Mathematical Reviews
- Mathematical Systems Theory
- Networks
- SIAM Journal on Computing
- SIAM Journal on Discrete Mathematics
- Software Practice and Experience
- The Computer Journal
- Theoretical Computer Science

Program Committees

- *GD2014, 22nd International Symposium on Graph Drawing*,
September 2014, Würzburg, Germany. PC co-Chair.
- *IISA2013, 4th International Conference on Information, Intelligence, Systems and Applications*,
July 2013, Piraeus, Greece. Co-Chair of Special Session on *Data Protection and Security*.
- *GD2013, 21st International Symposium on Graph Drawing*,
September 2013, Bordeaux (Talence), France.
- *GD2010, 18th International Symposium on Graph Drawing*,
September 2010, Konstanz, Germany.
- *ACSC2010, 33rd Australasian Computer Science Conference*,
January 2010, Brisbane, Australia.
- *ACSC2009, 32nd Australasian Computer Science Conference*,
January 2009, Wellington, New Zealand.
- *GD2008, 16th International Symposium on Graph Drawing*,
September 2008, Heraklion, Greece.
- *PCI2005, 10th Panhellenic Conference on Informatics*,
November 2005, Volos, Greece.
- *SIROCCO 2003, 10th International Colloquium on Structural Information and Communication Complexity*,
Umeå University, June 2003, Sweden.
- *PART-99, Fifth Australasian Conference on Parallel and Real-Time Systems*
November 1999, Melbourne, Australia.
- *ISAAC'99, International Symposium on Algorithms and Computation*
December 1999, Madras, India
- *PART-98, Fourth Australasian Conference on Parallel and Real-Time Systems*
September 1998, Perth, Australia.
- *CATS'98, Computing: The Australasian Theory Symposium*
February 1998, Perth, Australia.
- *PART-97, Fourth Australasian Conference on Parallel and Real-Time Systems*
September 1997, Newcastle, Australia.

- **AWOCA'97, Australasian Workshop on Combinatorial Algorithms**
July 1997, Brisbane, Australia.
- **ED-MEDIA'97, World Conference on Educational Multimedia and Hypermedia**
June 1997, Calgary, Canada.
- **CATS'97, Computing: The Australasian Theory Symposium**
February 1997, Sydney, Australia.
- **PART-96, Third Australasian Conference on Parallel and Real-Time Systems**
September 1996, Brisbane, Australia.
- **ED-MEDIA'96, World Conference on Educational Multimedia and Hypermedia**
June 1996, Boston, USA.
- **AWOCA'96, Australasian Workshop on Combinatorial Algorithms**
July 1996, Magnetic Island, Australia.
- **CATS'96, Computing: The Australasian Theory Symposium**
January 1996, Melbourne, Australia.

Teaching experience

- **Graph Drawing** (graduate course)
NTUA (2005-2012).
- **Object Oriented Programming** (graduate course, supervision)
NTUA (2006-2011).
- **Introduction to programming** (Java)
NTUA (2003-2013),
University of Ioannina (2001, 2002).
- **Design and Development of Computer applications** (Programming in Java)
NTUA (2004-2013).
- **Data Structures**
NTUA (2004-2013),
University of Sydney (1994-1997).
- **Algorithms and Complexity**
E.M.P. (2005-2013),
University of Ioannina (2001, 2003),
University of Sydney (1992-1995, 1999),
Dartmouth College(1998).
- **Object Oriented Programming** (Java)
University of Ioannina (2002).
- **Data Bases**
University of Ioannina (2000, 2002),
University of Sydney (1999).
- **Theory of Computation**
University of Ioannina (2000, graduate course),
University of Sydney (1996-1997).
- **Concepts in Computing**
Dartmouth College (1998).
- **Data Compression with Applications to Multimedia Systems** (graduate course),
University of Sydney (1997).

- **Large Programming Project**
University of Sydney (1996).
- **Introduction to Parallel Processing** (graduate course)
University of Sydney (1992-1994).
- **Formal Programming**
University of Sydney (1992-1993).
- **Discrete Mathematics**
University of Texas at Dallas (1990).

Ph.D./MS student supervision

1. **Eymorfia Argyriou**, Ph.D. candidate (2008--...)
Tentative Title: «Graph Drawing with emphasis on Computer Security Applications. Supervisor.
– MS (2006-2008), Thesis Title: Planarity testing algorithms. Supervisor.
2. **Tamara Mchedlidze**, Ph.D. (2008--2012)
Title: Graph theory problems with emphasis on graph drawing. Supervisor.
– MS (2006-2008), Thesis Title: Upward point embeddings. Supervisor.
3. **Michael Bekos** Ph.D. (2004--2008)
Title: Map Labelling Algorithms with Application in Graph Drawing and Cartography. Supervisor.
– MS (2002-2004), Thesis Title:Map labeling. Supervisor
4. **Chi Nguyen**, Ph.D. (1999-- 2003)
Title: Resource allocation algorithms. Supervisor.
5. **A. Roberts**, Ph.D. (1993-1998)
Title: Packet routing algorithms; Supervisor.
Best Australian Ph.D. Dissertation Award, 1998.
6. **D. Abuaiadh**, Ph.D. (1991-1995); Associate supervisor.
7. **G. Bailey**, MSc (1993-1995); Associate supervisor.
8. **R. Plunkett**; Associate supervisor.
9. **T. Weidong Cai**; Associate supervisor.
10. **C. Bai**; Associate supervisor.
11. **N. Sheppard**; Associate supervisor.