

IOANNIS "YANNI" G. TOLLIS
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CONTACT INFORMATION

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<https://scholar.google.gr/citations?user=KmWfVqoAAAAJ&hl=en>

BRIEF BIOGRAPHY

Dr. Ioannis (Yanni) G. Tollis is a Professor at Computer Science Department (CSD), University of Crete (UOC). He is the Director of the UOC Center for Information and Communication Technologies, and of the Data Processing Laboratory. He was also affiliated with the Institute of Computer Science at FORTH (ICS-FORTH 2003-Sep. 2015), where he was the head of the Biomedical Informatics Laboratory (BMI lab.) 2005-2010. Dr. Tollis received his Ph.D. degree in Computer Science from the University of Illinois at Urbana-Champaign in Jan. 1988, He received his Diploma degree in Mathematics from the National University of Athens, Greece and his M.Sc. degree in Computer Science from Vanderbilt University, Nashville, Tennessee. He joined the faculty of The University of Texas at Dallas in December 1987, where he was a Professor of Computer Science until 2004, when he joined the UOC as Professor.

Dr. Tollis has published eight books, over 170 journal and conference papers, and has given more than 70 invited lectures worldwide. His research interests are in the Discovery, Design, Analysis, and Visualization of Networks, Modeling and Visualization of Biomedical Data and Networks, Graph Drawing, Information Visualization and Data Analytics, and Algorithms and Applications. His research has been funded by numerous funding agencies and companies. He holds a U.S. patent and several of his projects have been licensed by companies for commercial distribution. He was Vice President of Research at Tom Sawyer Software, Berkeley CA, where he worked on attracting VC funding.

He is a Founding Editor and Executive Committee member of the electronic *Journal of Graph Algorithms and Applications* (he was editor-in-chief 1997-2013); he is a member of the Editorial Boards of: *Journal of Healthcare Engineering*, 2010-present, *Journal of Discrete Mathematics* 2012-present, and *ISRN Combinatorics*, 2012-present. He

was a member of the Editorial Board of *the IEEE Transactions on Computers* (2000-2004). He was the organizer and Program Committee Chair of the 16th International Symposium on Graph Drawing 2008; he was co-organizer and Program Committee co-chair of the International Symposium on Graph Drawing, 1994; he was a member of several program committees of the International Symposium on Graph Drawing; and is a founding member of the steering committee for Graph Drawing. He has served as a member of program committees of many international conferences, most recently, the 1st Conference on the Virtual Physiological Human, 2010 (VPH 2010), HEALTHINF 2012, HEALTHINF 2013, HEALTHINF 2014, and HEALTHINF 2015. He received (a) the *Young Engineer of the Year award*, March 1993, IEEE-Dallas Section, for contributions to the area of VLSI layout, and (b) the *Outstanding Service award*, March 1993, IEEE Circuits & Systems-Dallas Section.

As of November 2016, according to google scholar Dr. Tollis' scientific work has received more than 8,000 citations, which result in *h-index* 39.

EMPLOYMENT HISTORY

Principal Positions

- 2003 – present, Professor of Computer Science, University of Crete, Greece.
- 2003 – 2015, collaborating researcher, ICS-FORTH, Crete, Greece.
- 1998 - 2004, Professor, Department of Computer Science, School of Engineering and Computer Science, The University of Texas at Dallas, Richardson, TX.
- 1992 – 1998, Associate Professor, Department of Computer Science, School of Engineering and Computer Science, The Univ. of Texas at Dallas, Richardson, TX.
- Dec. 1987 – 1992, Assistant Professor, Department of Computer Science, School of Engineering and Computer Science, The Univ. of Texas at Dallas, Richardson, TX.

Administrative Positions and Industrial Experience

- 2014 - present, Director of the University of Crete Center for Information and Communication Technologies.
- 2014 – present, member of the Technical Advisory Board, Tom Sawyer Software, Inc., CA, USA.
- 2013 - present, Director of the School of Science and Engineering, Data Processing Laboratory, UOC.
- 2005 - 2010, Head of the Biomedical Informatics Laboratory (BMI lab.), Institute of Computer Science, FORTH, (ICS-FORTH), Greece.
- 2007-2011, Chair, Digital Patient Working Group, ERCIM.
- 1997 Jan.- Aug., Vice President of Research, Tom Sawyer Software, Berkeley, CA.
- 1994 – 2004, Director, Computer-Aided-Design and Visualization Laboratory, School of Engineering and Computer Science, The University of Texas at Dallas, Richardson, TX.
- Chairman, IEEE-Dallas Section, Circuits and Systems Society, 1991-92.
- 1985 May-Aug., Visiting Engineer/Scientist, Computational Algorithms Department, Computer Research Laboratory, Tektronix Laboratories, Beaverton, OR.

Visiting Appointments and Consulting

- 2005-2015, Member of the Ethics committee, FORTH.
- Apr.-Aug. 2013, Visiting Professor, Computer Science, Brown University, RI, USA.
- Jan-Mar. 2013, Visiting Professor, Computer Science, University of Rome III, Italy.
- Sep.-Dec. 2012, Visiting Professor, Computer Science, University of Perugia, Italy.
- 2011, Member of the Evaluation Board, BioWin, Brussels, Belgium.
- 2005-2010, Member of the Extended Scientific Council, ICS-FORTH.
- Sep.-Dec. 1997, Visiting Associate Professor, Department of Computer Science, Brown University, Providence, RI.
- 1988-present, Consultant for several companies and universities.

PROFESSIONAL RECOGNITION and SERVICE:

Editorial Positions

- Member of the Editorial Board: *Journal of Discrete Mathematics* 2012-present.
- Member of the Editorial Board: *ISRN Combinatorics*, 2012-present.
- Member of the Editorial Board, *Journal of Healthcare Engineering*, 2010-present.
- Founding Editor of the electronic *Journal of Graph Algorithms and Applications (JGAA)*, accessible via the WWW at <http://jgaa.info/>, 1997-. Editor-in-chief of JGAA, 1997-2013.
- Associate Editor, of the *IEEE Transactions on Computers*, 2000-2004.

Selected Conference Committees

- Founding member, Steering Committee for the International Symposium on Graph Drawing, 1993-present.
- Program Committee Member, 2016 International Conference on Health Informatics, HEALTHINF 2016.
- Program Committee Member, 9th International Symposium on Visual Information Communication and Interaction (VINCI 2016).
- Program Committee Member, 3rd International Conference on Physiological Computing Systems (PhyCS 2016).
- Program Committee Member, 2015 International Conference on Health Informatics, HEALTHINF 2015.
- Program Committee Member, 2014 International Symposium on Graph Drawing (GD 2014).
- Program Committee Member, 2014 International Conference on Health Informatics, HEALTHINF 2014.
- Program Committee Member, 2013 International Conference on Health Informatics, HEALTHINF 2013.
- Program Committee Member, 2012 International Symposium on Graph Drawing (GD 2012).

- Program Committee Member, 2012 International Conference on Health Informatics, HEALTHINF 2012.
- Program Committee Member, 1st Conference on the Virtual Physiological Human, 2010 (VPH 2010).
- Program Committee Member, 8th French Combinatorial Conference, 2010.
- Program Committee Member, 2009 International Symposium on Graph Drawing (GD 2009).
- Program Committee Chair, 2008 International Symposium on Graph Drawing (GD 2008).
- Organizing Committee co-Chair, 2008 International Symposium on Graph Drawing (GD 2008).
- Program Committee Member, 2007 International Symposium on Graph Drawing (GD 2007).
- Program Committee Member, 2005 SOFSEM.
- Program Committee Member, 2003 International Symposium on Graph Drawing (GD 2003).
- Program Committee Member, 2003 European Symposium on Algorithms (ESA 2003).
- Program Committee Member, 2002 International Symposium on Graph Drawing (GD 2002).
- Program Committee Member, 2001 Workshop on Algorithms and Data Structures (WADS 2001).
- Member, Advisory Committee for IEEE International Parallel Processing Symposium and Symposium on Parallel and Distributed Processing, 1997-2000.
- Program Committee Member, 1999 International Symposium on Graph Drawing (GD 1999).
- Program Committee Member, 1998 International Symposium on Graph Drawing (GD 1998).
- Program Chairman, IEEE-Dallas Section, Circuits and Systems Society, 1992-1997.
- Member, Steering Committee for the IEEE Symposium on Parallel and Distributed Processing, 1991-1997.
- Program Committee Co-Chair, 1994 International Workshop on Graph Drawing (GD 1994).
- Program Committee Member, IEEE 1993 International Symposium on Circuits and Systems.
- Program Committee Member, 1990 IEEE Symposium on Parallel and Distributed Processing, Dallas, Texas.

Academic Service

- Chair and supervisor of six Ph. D. committees. Member of numerous Ph. D. committees, both at UTD and UOC.
- Member of over forty hiring and/or promotion committees (Chair of over ten).
- Member of the Graduate Admissions & Financial Aid committee (also chair), Personnel Evaluation Committee, Colloquium committee (also chair), Curriculum committee (both at UTD and UOC).
- Member of the Program/Curriculum committee, Graduate Admissions and Financial Aid committee for Telecommunication Engineering program. (UTD).

- Member of the University Research committee, and the Technical Council; member and Chair of several search committees, Undergraduate and Graduate Studies committees, Graduate Admissions committee, etc. (UOC).
- Supervisor of numerous M.Sc. theses and senior honors projects (UTD and UOC).

Service to Other Universities

- External member of the evaluation and hiring committee, Department of Engineering, Univ. of Perugia, 2015.
- External examiner for all (seven) Ph.D. Theses in Computer Science and Engineering of 2014, Department of Engineering, Univ. of Rome III, Italy, 2014.
- Member of the external evaluation committee of the Department of Informatics and Automation, Univ. of Rome III, Italy, 2006.
- External examiner for "Large Scale Relational Information Visualization, Clustering, and Abstraction", by A. J. Quigley, Ph. D. thesis, University of Newcastle, Australia, 2001-02.
- External examiner for "Flow Techniques and Optimal Drawings of Graphs", by W. Didimo, Ph. D. thesis, University of Rome, Italy, 1999.
- External examiner and member of the committee for "Algorithms for the Design of VLSI Floorplans and Logic Modules", by Fung Yu Young, Ph. D. thesis, University of Texas at Austin, Texas, 1998-99.
- External examiner and member of the committee for "Orthogonal Graph Visualization: The Three-Phase Method with Applications", by T. C. Biedl, Ph. D. thesis, Rutgers University, New Jersey, 1996-97.
- External examiner and member of the committee for "Where to Draw the Line", by A. Garg, Ph. D. thesis, Brown University, Rhode Island, 1994-95.
- External examiner for "VLSI Routing Algorithms in Diagonal Models", by X. Song, Ph. D. thesis, University of Pisa, Italy 1991.
- Reviewer for many journals and conferences in Computer Science and Engineering, as well as several funding organizations.

Other

- Young Engineer of the Year award, March 1993, IEEE-Dallas Section, for contributions to the area of VLSI layout.
- Outstanding Service award, March 1993, IEEE Circuits & Systems-Dallas Section.

RESEARCH INTERESTS:

Research History

Dr. Tollis started his research by investigating algorithms for graph and network problems arising in computer aided design for VLSI layout. His results led him into research in Graph Drawing and Information Visualization. Currently he is working on problems in the area of discovery, design, analysis, and visualization of large networks.

More specifically, his research deals with biomedical data and networks. Recently, he became interested in Economic and Social Networks. He has also worked in the areas of Telecommunication Networks, Computational Geometry, and Computer Aided Design.

Current Research Interests

Analysis, Design, Discovery, and Visualization of large Networks, Biomedical Data and Networks, Graph Drawing, Information Visualization and Data Analytics, Telecommunication Networks, and Algorithm Engineering and Applications.

RESEARCH GRANTS/PROJECTS:

1. VISORSURF: A Hardware Platform for Software-driven Functional Metasurfaces, Horizon 2020, FET project, 01/01/2017 – 30/06/2020, Total budget: 3.885.000€, FORTH budget: 1.226.750€ (contribution: Design and analysis of the topology and control of nanonetwork structures).
2. Papyros: Support and Technology Transfer for the Region of Crete – Information Networks, 4/3/2015 – 9/11/2016, 5.000 € (PI).
3. Stirizo: Support of Educational Networks in Crete, 15/12/2011 – 30/11/2015, 910.968 € (PI: 2014-2015).
4. Elearning: Development of a Platform and Electronic Courses for UoC, 1/9/2012 – 30/11/2015, 528.300,00€ (PI: 2014-2015).
5. Units of excellence for Free Software: Domain Tourism, 97.560.98 € 1/5/2014 – 30/11/2015 (PI).
6. Iron: Hardware Upgrade and Software Development for new Information Systems for UoC, 16/11/2015 – 30/11/2015, 276.750 € (PI: 2014-2015).
7. Stategra: User-driven Development of Statistical Methods for Experimental Planning, Data Gathering, and Integrative Analysis of Next Generation Sequencing, Proteomics and Metabolomics data, FORTH ICS budget: 702.520€ 01/10/2012 – 30-09-2015 (contribution: Analysis and visualization of biomedical data)
8. P-Medicine: From data sharing and integration via VPH models to personalized medicine, 01/02/2011-31/01/2015, FORTH-ICS budget: 1,005,247 €. (contribution: Analysis and visualization of biomedical data).
9. VPH Noe: Virtual Physiological Human Network of Excellence (VPH NoE), FORTH-ICS budget: 285,933, 01/06/2008-30/11/2012 (PI at FORTH).
10. REACTION: Remote Accessibility to Diabetes Management and Therapy in Operational Healthcare Networks, 01/03/2010-28/02/2014, FORTH-ICS budget: 1,030,450 € (contribution: Analysis and visualization of biomedical data).
11. Contra Cancrum: Clinically Oriented Translational Cancer Multilevel Modelling, FORTH ICS budget: 651,920 €, 01/08/2008-31/07/2011. (contribution: Analysis and visualization of biomedical data)
12. EHR-IMPLEMENT: National policies for Implementation of Electronic Health Record (EHR) in the European area: social and organizational issues, FORTH

- ICSbudget: 123,412 € 01/05/2007-30/04/2010. (Contribution: Analysis of EHR data.)
13. ACGT: Advancing Clinico-Genomic Clinical Trials on Cancer: Open Grid Services for Improving Medical Knowledge Discovery, FORTH-ICS budget: 1,276,200 €, 01/02/2006-31/01/2010. (contribution: Analysis and visualization of biomedical data)
 14. Rural Wings, FORTH-ICS budget: 400,000 €, 01/01/2006-31/12/2009 (PI at FORTH).
 15. HEARTFAID: A Knowledge based platform of services for supporting medical - clinical management of heart failure within elderly population, FORTH-ICS budget: 330,416 €, 01/02/2006-31/01/2009. (contribution: Analysis and visualization of medical data.)
 16. D.Y.P.E. Western Greece: Integrated Health Information System for the Regional Health System of Western Greece, FORTH-ICS budget: 493,850€, 28/12/2005-30/06/2008. (exec. Manager, as head of BMI lab.)
 17. D.Y.P.E. 3rd Regional Health System of Attica: Integrated Health Information System and ICT Services for the 3rd Regional Health System of Attica, FORTH-ICS budget: 724,376€, 12/10/2005-11/04/2008. (exec. Manager, as head of BMI lab.)
 18. D.Y.P.E 2nd Regional Health System of South Aegean: Integrated Health Information System for the 2nd Regional Health System of South Aegean, FORTH-ICS budget: 273,700€, 02/05/2006-02/11/2008. (exec. Manager, as head of BMI lab.)
 19. 1st Regional Health System of Attica: Integrated Health Information System and ICT Services for the 1st Regional Health System of Attica, FORTH-ICS budget: 460,451€, 03/11/2006-02/11/2008. (exec. Manager, as head of BMI lab.)
 20. Student Entrepreneurship Program II, University of Crete, € 266,000, 01/09/2005-30/09/2008 (PI).
 21. SYMBIOMatics: Synergies in Medical Informatics and Bioinformatics, FORTH-ICS budget: 93,000€, 01/05/2005-30/04/2007 (coordinator at FORTH).
 22. INFOBIOMED: Structuring European Biomedical Informatics to Support Individualized Healthcare FP6-2002-IST-1/European Union, FORTH-ICS budget: 528,000€, 01/01/2004-31/12/2006. (contribution: Analysis & visualization of biomedical data)
 23. PROGNOCHIP: Development and Establishment of DNA Microarray Technology in Greece: Identification and Validation of Classification and Prognosis Molecular Markers for Breast Cancer, GSRT/Greece, € 587,000, 01/10/2003-31/09/2006. (contribution: Analysis & visualization of biomedical data)
 24. Student Entrepreneurship Program, University of Crete, € 202,526, 01/09/2003-30/08/2005 (PI)
 25. "Graph Drawing and Visualization", Texas Advanced Research Program, Support period January 1998 - August 2000; \$118,940. (PI)
 26. "Industrial Research Agreement", Compaq Computer Corp., Support period June 1999 -May 2000; \$191,136. (PI with R. Mili)
 27. "Visualizing Software Requirements", Sandia National Labs./ DOE, Support period November 1998 -August 1999; \$50,446. (PI with R. Mili)

28. "Graph Visualization Technology", National Institute of Standards and Technology, Advanced Technology Program, Support period October 1995-September 1998; \$2,000,000. (CoPI with B. Madden and A. Sen)
29. "Telecommunication Software", Tandem Telecom Inc., Support period October 1996 -May 1997; \$20,856. (PI)
30. "Telecommunications Software Support II", Electrospace Systems Inc., Support period January 1996 - September 1996; \$26,925. (PI)
31. "Telecommunications Software Support", Electrospace Systems Inc., Support period February 1995 -1996; \$126,771. (PI)
32. "Software Engineering Support", Electrospace Systems Inc., Support period October 1994 -1995; \$64,684. (PI)
33. "1994 International Workshop on Graph Drawing", DIMACS center, October 1994; \$15,000. (CoPI with R. Tamassia)
34. "Design of Optimal Survivable Networks", Alcatel Network Systems Inc., Support period February 1993 - February 1994; \$99,997. (CoPI with I. H. Sudborough)
35. "Advanced Network Topologies for Network Survivability", Alcatel Network Systems Inc., Support period June 1992 -December 1992; \$270,000. (CoPI with G. R. Dattatreya, E. Dekel, J. Fonseka, K. Kiasaleh, I. H. Sudborough and S. Venkatesan)
36. "Optimization of Message Traffic in Bitnet", Corporation for Research and Educational Networking, EDUCOM, Support period June 1991 – August 1992; \$17,017. (PI)
37. "VLSI and Parallel Networks", Texas Advanced Research Program, Support Period: June 1988 -Dec. 1990; \$184,721. (CoPI with I. H. Sudborough)
38. "UTD Research Initiation Grant", August 1-31 1988; \$ 4,556. (PI)

SOFTWARE LICENSES AND PATENTS:

1. "Labeling Graphical Features of Drawings", U. S. Patent Number 6,091,424, July 2000. (with B. Madden and K. Kakoulis)
2. "Software for the Automatic Labeling of Graph Drawings," licensed by Tom Sawyer Software, Berkeley, CA, for commercial distribution, 2000.
3. "An Object-Oriented Library of Components for the Visualization of Graphs", licensed by Vismagic Technologies, Plano Texas, for commercial distribution, 1999.
4. "Net Solver: A Tool for designing Self-Healing Ring Architectures", licensed by TELSOFT Technologies, Dallas, Texas, for commercial distribution, 1996.
5. "Tools for Solving the Edge Labeling Problem", licensed by Tom Sawyer Software, Berkeley, CA, for commercial distribution, 1996.

TEACHING:

Dr. Tollis has taught courses in: Data Structures and Algorithms, Advanced Data Structures and Algorithms, Design and Analysis of Computer Algorithms, Computational Geometry, Graph Algorithms, Bioinformatics Algorithms, Advanced Topics in Biomedical Informatics, Complex Network Dynamics, Telecommunication Networks, Algorithms for the Design and Analysis of Telecommunication Networks, Introduction to the Design of Integrated Circuits, Advanced Design of Integrated Circuits, Recent Advances in VLSI, Graph Drawing and Software Visualization, Special Topics: Tools for VLSI Layout and Graph Drawing, and Special Topics: Geometric Graph Representations and VLSI Layout.

He has been instrumental in defining and designing the M. S. degree - Telecommunications and Networks Track, in the Department of Computer Science at UTD. As a member of the program committee for the Telecommunication Engineering program at UTD (1998-2000), he participated in the design of the B. S. and M. S. degrees in Telecommunication Engineering. The program has received ABET accreditation.

In the newly founded M.Sc. direction of Biomedical Informatics (at UOC), he developed new courses in Biomedical Informatics and Bioinformatics Algorithms; additionally, he developed courses in Information Visualization and Graph Algorithms for the Department of Computer Science at UOC.

PH. D. STUDENTS SUPERVISED:

- Cheng-Hsi Jesse Chen, Ph. D. 1993. Title of dissertation: "Area Optimization of Floorplan Designs." (UTD)
- Achilleas Papakostas, Ph. D. 1996. Title of dissertation: "Information Visualization: Orthogonal Drawings of Graphs." (UTD)
- Konstantinos Kakoulis, Ph. D. 1998. Title of dissertation: "Algorithms for Automatic Placement of Labels in Drawings and Maps." (UTD)
- Janet Six, Ph. D. 2000. Title of dissertation: "Vistool: A Tool for Visualizing Graphs." (UTD)
- Vasilis Tsiaras, Ph. D. 2009. Title of dissertation: "Algorithms for the Analysis and Visualization of Biomedical Networks." (UOC)
- Eleftheria Tzamali, Ph.D. 2011. Title of dissertation: "Computational Study of the metabolic Diversity of the Bacterium Escherichia Coli – From single cells to cell communities and efficient systems." (UOC)

PUBLICATIONS:

Dr. Tollis has published 8 books, 4 book chapters, over 74 journal papers and 101 conference papers. His work has received more than 8000 citations and h-index 39.

Books (8):**Authored:**

1. G. Di Battista, P. Eades, R. Tamassia, and I. G. Tollis. *Graph Drawing: Algorithms for the Visualization of Graphs*, Prentice Hall, 1999.

Edited:

2. I. G. Tollis and M. Patrignani, editors. *Graph Drawing, 16th International Symposium, GD 2008, Heraklion, Crete, Greece, September 21-24, 2008. Revised Papers*, Vol. 5417 of *Lecture Notes in Computer Science*. Springer 2009.
3. G. Liotta, R. Tamassia and I. G. Tollis, editors. *Graph Algorithms and Applications 5*, World Scientific Publishing, 2006.
4. G. Liotta, R. Tamassia and I. G. Tollis, editors. *Graph Algorithms and Applications 4*, World Scientific Publishing, 2006.
5. G. Liotta, R. Tamassia and I. G. Tollis, editors. *Graph Algorithms and Applications 3*, World Scientific Publishing, 2004.
6. G. Liotta, R. Tamassia and I. G. Tollis, editors. *Graph Algorithms and Applications 2*, World Scientific Publishing, 2004.
7. R. Tamassia and I. G. Tollis, editors. *Graph Algorithms and Applications 1*, World Scientific Publishing, 2002.
8. R. Tamassia and I. G. Tollis, editors. *Graph Drawing, DIMACS International Workshop, GD 1994, Princeton, New Jersey, USA, October 10-12, 1994, Proceedings*, volume 894 of *Lecture Notes in Computer Science*. Springer, 1995.

Book Chapters:

9. K. Kakoulis and I.G. Tollis: "Automatic Placement of Labels in Maps and Drawings," *Handbook on Approximation Algorithms and Metaheuristics* Teofilo Gonzalez, Editor, (41 pages, to appear).
10. K. Kakoulis and I.G. Tollis: "Graph Drawing," in *Computing Handbook, Third Edition: Computer Science and Software Engineering (Volume I)*. Teofilo Gonzalez, Editor, pp. 14: 1-21, CRC Press 2014, ISBN 978-1-43-989852-9.

11. J.M. Six and I.G. Tollis: "Circular Drawing Algorithms," in *Handbook of Drawing and Visualization*, Roberto Tamassia, Editor, CRC Press, 2013, pp. 285-315.
12. K. Kakoulis and I.G. Tollis: "Labeling Algorithms," in *Handbook of Drawing and Visualization*, Roberto Tamassia, Editor, CRC Press, 2013, pp. 489-515.

Journal Papers (70+, incl. seven singly authored papers, in bold):

13. Carla Binucci, Markus Chimani, Walter Didimo, Martin Gronemann, Karsten Klein, Fabrizio Montecchiani, Ioannis G. Tollis: Algorithms and Characterizations for 2-Layer Fan-planarity: From Caterpillar to Stegosaurus, *Journal of Graph Algorithms and Applications*, (special issue of invited best papers from "Graph Drawing 2015"), (accepted for publication).
14. Konstantinos Kakoulis, Ioannis G. Tollis: Modifying Orthogonal Drawings for Label Placement, *Algorithms Journal*, Vol. 9, no. 22, pp. 1-19, 2016.
15. Evgenios M. Kornaropoulos and Ioannis G. Tollis: Algorithms and Bounds for Overloaded Orthogonal Drawings, *Journal of Graph Algorithms and Applications*, Vol. 20, no. 2, pp. 217-246, 2016.
16. P. Angelini, C. Binucci, G. Da Lozzo, W. Didimo, L. Grilli, F. Montecchiani, M. Patrignani, I. G. Tollis: Algorithms and Bounds for Drawing Non-planar Graphs with Crossing-free Subgraphs, *Computational Geometry: theory and applications (CGTA)* 50: pp. 34-48 (2015).
17. Carla Binucci, Emilio Di Giacomo, Walter Didimo, Fabrizio Montecchiani, Maurizio Patrignani, Antonios Symvonis, Ioannis G Tollis: Fan-Planarity: Properties and Complexity, *Theoretical Computer Science*, 589: pp. 76-86 (2015).
18. Emilio Di Giacomo, Walter Didimo, Giuseppe Liotta, Fabrizio Montecchiani, Ioannis G. Tollis: Exploring Complex Drawings via Edge Stratification. *Journal of Visual Languages and Computing* 25(4): pp. 533-543, 2014.
19. Vangelis Sakkalis, Theofanis Oikonomou, Vassilis Tsiaras, Ioannis G. Tollis: Graph-theoretic Indices of Evaluating Brain Network Synchronization: Application in an Alcoholism Paradigm, *Neuromethods*, DOI 10.1007/7657_2013_62, pp. 1-11, 2014.
20. P. Hunter, Chapman T, Coveney PV, de Bono B, Diaz V, Fenner J, Frangi AF, Harris P, Hose R, Kohl P, Lawford P, McCormack K, Mendes M, Omholt S, Quarteroni A, Shublaq N, Skår J, Stroetmann K, Tegner J, Thomas SR, Tollis I, Tsamardinos I, van Beek JHGM, Viceconti M. A vision and strategy for the VPH: 2012 update. *Interface Focus*, 3, 20130004, pp. 1-10, 2013. <http://dx.doi.org/10.1098/rsfs.2013.0004>.
21. V. Tsiaras and I. G. Tollis, "DAGmaps and ϵ -Visibility Representations of DAGs: Algorithms and Characterizations," *Journal of Graph Algorithms and Applications*, Vol. 16, no. 2, pp. 359-380, 2012.
22. Eleftheria Tzamali, Panayiota Poirazi, Ioannis G Tollis and Martin Reczko, "A computational exploration of bacterial metabolic diversity identifying metabolic interactions and growth-efficient strain communities," *BMC Systems Biology* 2011, 5:167, pp. 1-15.
23. Eleni G. Christodoulou, Vangelis Sakkalis, Vassilis Tsiaras, and Ioannis G. Tollis, "BrainNetVis: An Open-Access Tool to Effectively Quantify and Visualize Brain Networks," (Invited paper in the Special Issue on: Academic Software Applications for Electromagnetic Brain Mapping Using MEG and

- EEG), *Computational Intelligence and Neuroscience*, Volume 2011 (2011), Article ID 747290, 12 pages, doi:10.1155/2011/747290.
24. Peter Hunter, Peter V. Coveney, Bernard de Bono, Vanessa Diaz, John Fenner, Alejandro F. Frangi, Peter Harris, Rod Hose, Peter Kohl, Pat Lawford, Keith McCormack, Miriam Mendes, Stig Omholt, Alfio Quarteroni, John Skår, Jesper Tegner, S. Randall Thomas, Ioannis Tollis, Ioannis Tsamardinos, Johannes H. G. M. van Beek and Marco Viceconti, "A vision and strategy for the virtual physiological human in 2010 and beyond", *Phil. Trans. R. Soc. A* 2010 368, 2595-2614.
 25. Charalampos Papamanthou and Ioannis G. Tollis, "Applications of Parameterized st-Orientations", *Journal of Graph Algorithms and Applications*, Vol. 14, no. 2, pp. 337-365, 2010.
 26. Sofia Triantafyllou, Ioannis Tsamardinos, Ioannis Tollis, "Learning Causal Structure from Overlapping Variable Sets", *Journal of Machine Learning Research - Proceedings Track 9*: pp. 860-867 (2010).
 27. V. Sakkalis, V. Tsiaras, and I. Tollis, "Graph Analysis and Visualization for Brain Function Characterization using EEG Data," *Journal of Healthcare Engineering*, Vol. 1, No. 3, pp. 435-460, 2010.
 28. Ioannis G. Tollis and Maurizio Patrignani, "Guest Editor's Foreword: Special Issue on Selected Papers from the Sixteenth International Symposium on Graph Drawing, GD 2008," *Journal of Graph Algorithms and Applications*, vol. 14, no. 1, pp. 3-4 (2010).
 29. E. Tzamali, P. Poirazi, I. G. Tollis and M. Reczko, "Computational Identification of Bacterial Communities," *International Journal of Biological and Life Sciences*, vol.1 no. 4, pp. 185-191, 2009. (also in the Proc. of *World Academy of Science, Engineering and Technology*, pp. 269-275, 2009).
 30. V. Tsiaras, S. Triantafyllou, and I. G. Tollis, "DAGmaps: Space Filling Visualization of Directed Acyclic Graphs," *Journal of Graph Algorithms and Applications*, vol. 13, no. 3, pp. 319-347, 2009.
 31. C. Papamanthou and I. G. Tollis, "Algorithms for computing a parameterized st-orientation". *Theoretical Computer Science* 408(2-3): 224-240, 2008.
 32. D. Rebholz-Schuhman, G. Cameron, D. Clark, E. M. van Mulligen, J. L. Coatrieux, E. del Hoyo-Barbolla, F. Martín-Sánchez, L. Milanese, I. Porro, F. Beltrame, I. G. Tollis and J. van der Lei, "SYMBIOmatics: Synergies in Medical Informatics and Bioinformatics - exploring current scientific literature for emerging topics", *BMC Bioinformatics*, 8(S-1), 2007.
 33. J.Y. Bansard, D. Rebholz-Schuhmann, G. Cameron, D. Clark, E. M. van Mulligen, F. Beltrame, E. del Hoyo-Barbolla, F. Martín-Sánchez, L. Milanese, I. G. Tollis, J. van der Lei and J. L. Coatrieux, "Medical Informatics and Bioinformatics: A Bibliometric Study", *IEEE Transactions on Information Technology in Biomedicine*, 11(3):237-243, 2007.
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