

Curriculum Vitae
of

FABRIZIO MONTECCHIANI

(April 2023)

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SHORT BIO

Fabrizio Montecchiani received his PhD in Information Engineering at the University of Perugia in 2014. He is currently an Associate professor at the University of Perugia, Engineering Department, and he holds the National Scientific Habilitation for full professorship in Computer Engineering (09/H1). Since 2019, he is the coordinator of the Large-scale Data Analysis & Visualization Lab¹, the local node at the University of Perugia of the national CINI Big Data Laboratory. In 2021, he was the recipient of the Best Young Italian Researcher in Theoretical Computer Science Award, given by the Italian Chapter of the European Association for Theoretical Computer Science (IC-EATCS).

During his PhD, he has been a visiting PhD student at the Brain Research Center of the National Tsing Hua University of Taiwan, and a visiting PhD student at the University of Tübingen in Germany. Afterwards, he has been a visiting Postdoc fellow at the University of Waterloo in Canada.

His main research interests lie within the fields of graph algorithms and graph drawing, computational geometry, information visualization and visual analytics for Big Data, and algorithm engineering. On the above topics he wrote a remarkable number of research papers, he collaborated with many international researchers, he participated to numerous grants, and he developed software systems that have been commercialized by academic spin-off companies.

He has teaching experience at the undergraduate, graduate and professional level, as well as in supervising students.

From 2011 to 2014, he also collaborated as a software engineer with the academic spin-off Vis4 Srl, an ICT company providing advanced solutions for the visual analysis of complex data sets. In 2017, he co-founded the academic spin-off CONTATTI yi-zhong-yi Srl, a company made up by engineers and linguists offering advanced ICT solutions and smart technologies to promote and develop tourism in Italy, with a particular focus on Chinese tourists.

¹<https://bigdata.unipg.it>

CONTACTS

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CURRENT POSITION

Since 2021, I am Associate Professor at the University of Perugia, Engineering Department (DI).

PREVIOUS POSITIONS

From 2018 to 2021, I have been an Assistant Professor at the University of Perugia, Engineering Department (DI). From 2014 to 2018, I have been a post-doc research fellow at the same department. From 2010 to 2014, I have been a PhD student at the same department.

EDUCATION

- I received my PhD (European Doctorate Program) in Information Engineering at the University of Perugia in 2014.
 - Thesis title: “Crossing Complexity in Graph Drawing”
 - Advisors: Prof. Walter Didimo, Prof. Giuseppe Liotta
 - Committee: Prof. Roberto Grossi, Prof. Michael Kaufmann, Prof. Giuseppe Liotta
 - I received my Master’s Degree (Laurea Specialistica) in Computer and Telecommunications Engineering at the University of Perugia in 2010. The thesis won the national prize “*Premi di Laurea Giorgio Santini 2010*” for the best thesis in Computer Engineering. The software system developed within the thesis activity has been further engineered by the academic spin-off Vis4, and in 2011 the software became a commercial product.
 - Thesis title: “Analysis, design and development of a software system for the visual analysis of financial crime networks”
 - Advisor: Prof. Walter Didimo
 - Final mark: 110/110 cum laude
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AWARDS AND HONORS

- June 2022. National Scientific Habilitation for full professorship in Computer Engineering (09/H1).
- September 2021. Recipient of the Best Young Italian Researcher in Theoretical Computer Science Award, given by the Italian Chapter of the European Association for Theoretical Computer Science (IC-EATCS).
- September 2021. Best Paper Award at GD 2021.
- Since 2019 and ongoing. Coordinator of the Large-scale Data Analysis & Visualization Lab², the local node at the University of Perugia of the national CINI Big Data Laboratory.
- June 2016. Winner of the “2016 Algorithms Travel Award” sponsored by Algorithms, an international open access journal, which provides an advanced forum for studies related to algorithms and their applications, published quarterly online by MDPI.

²<https://bigdata.unipg.it>

- February 2011. Winner of the national prize “Premi di Laurea Giorgio Santini 2010” for the best thesis in Computer Engineering.
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RESEARCH EXPERIENCE ABROAD

September - October 2015 Visiting Postdoc fellow at the David R. Cheriton School of Computer Science, University of Waterloo, Canada. During this period I collaborated with Prof. Therese Biedl and joined the Algorithms and Complexity group.

January to April 2013 Visiting PhD student at the Wilhelm-Schickard-Institut für Informatik, University of Tübingen, Germany. During this period I joined the group leaded by Prof. Michael Kaufmann, whose activity is focused on the following research fields: Graph Drawing, Information Visualization, Computational Geometry, Algorithms and Complexity, Combinatorics Optimization.

November 2012 Visiting PhD student at the Brain Research Center of the National Tsing Hua University of Taiwan. During this period I worked under the supervision of Prof. Ann-Shyn Chiang, on a project whose goal was the visual analysis of biological data.

RESEARCH INTERESTS

My research interests lie within the following fields.

- Graph algorithms and graph drawing.
- Computational geometry.
- Information visualization and visual analytics for Big Data.
- Algorithm engineering and system development for Big Data.

On the above topics I collaborated with several international researchers, I participated to numerous grants, and I developed software systems that have been commercialized by academic spin-off companies.

GRANTS

- *Participant* of the scientific project “Data driven techniques to tax evasion risk analysis”. Contract (45,000 EUR) between the Department of Engineering of the University of Perugia and KPMG SpA within the European call REFORM/SC2021/021.
 - *Principal Investigator* of the scientific project “Analisi e progetto di modelli, processi e algoritmi per la risoluzione di problemi di ottimizzazione su grafi legati alla mobilità elettrica e per l’analisi visuale dei dati”. Contract (35,000 EUR) between the Department of Engineering of the University of Perugia and the company SolarEdge e-Mobility SpA, within the regional program POR FESR Umbria 2014-2020.
 - *Principal Investigator* of the scientific project (8,000 EUR) “Modelli, algoritmi e sistemi per la visualizzazione di grafi e reti” funded by the “Ricerca di Base 2019” program of the Engineering Department - University of Perugia.
 - *Participant* of the MIUR PRIN 2017 project (100,000 EUR) “AHeAD: efficient Algorithms for HARnessing networked Data”, prot. 00120174LF3T8.
 - *Participant* of the scientific project “Analysis, design, and development of algorithms and interfaces for the visual analysis of data within the Knowledge Discovery system PiattaformaPA and B2”. Contract (35,000 EUR) between the Department of Engineering of the University of Perugia and the company ETI3 Srl, within the regional program POR FESR Umbria 2014-2020.
 - *Participant* of the scientific project “INFINITY - Models and algorithms for the visual representation of information on the driving styles of a big dataset of drivers”. Contract (30,000 EUR) between the Department of Engineering of the University of Perugia and the company Sistematica SpA, within the regional call, Innovative Actions, FESR 2007-2013.
 - *Participant* of the MIUR PRIN 2012 project (55,000 EUR), “AMANDA: Algorithmics for MASSive and Networked DATA”, prot. 2012C4E3KT 001.
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EDITORSHIPS

- Guest Editor of the EuroCG 2022 special issue of Computational Geometry: Theory & Applications.

- Guest Editor of the special issue on “Information Processing and Management for Large and Complex Networks” of Future Internet.
- Guest Editor of the special issue on “Graph Drawing Beyond Planarity” of the Journal Of Graph Algorithms and Applications.

PROGRAM COMMITTEES

- Program committee member of the 31st International Symposium on Graph Drawing & Network Visualization (GD 2023), Palermo (Italy), September 20-22, 2023. Website: <https://gd2023.ing.unipg.it/committees.html>
- Program committee member of the 47th International Symposium on Mathematical Foundations of Computer Science (MFCS 2022), Vienna (Austria), August 22-26, 2022. Website: <https://ac.tuwien.ac.at/mfcs2022/>
- Program committee member of the 48th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2022), Tübingen (Germany), June 22-24, 2022. Website: <https://algo.inf.uni-tuebingen.de/wg2022/>
- Program committee co-chair of the 38th European Workshop on Computational Geometry (EuroCG 2022), together with Emilio Di Giacomo (UniPG), Perugia (Italy), March 14-16, 2022. Website: <https://eurocg2022.unipg.it/>
- Program committee member of the 2nd Italian Workshop on Visualization & Visual Analytics (ITAVIS 2020), Ischia (Italy), September 28 - October 2, 2020. Website: <https://sites.google.com/diag.uniroma1.it/itavis>
- Program committee member of the 28th International Symposium on Graph Drawing & Network Visualization (GD 2020), Vancouver (Canada), September 15-18, 2020. Website: <https://gd2020.cs.ubc.ca/>
- Program committee member of the 25th International Symposium on Graph Drawing & Network Visualization (GD 2017), Boston (USA), September 25-27, 2017. Website: <https://gd2017.ccis.northeastern.edu/>
- Program committee member of the Graph and Network Visualization Special Session hosted by the 7th International Conference on Information, Intelligence, Systems and Applications (IISA 2016), Chalikidiki (Greece), July 13-15, 2016.

ORGANIZING COMMITTEES

- Organizing committee co-chair of the 31st International Symposium on Graph Drawing & Network Visualization (GD 2023), Palermo (Italy), September 20-22, 2023. Website: <https://gd2023.ing.unipg.it/>
 - Organizer of the Dagstuhl Seminar 23162 on “New Frontiers of Parameterized Complexity in Graph Drawing”, together with Robert Ganian (TU Wien, AT), Martin Nöllenburg (TU Wien, AT) and Meirav Zehavi (Ben Gurion University – Beer Sheva, IL). April 16–21, 2023. Website: <https://www.dagstuhl.de/en/program/calendar/semhp/?semnr=23162>
 - Organizing committee co-chair of the 38th European Workshop on Computational Geometry (EuroCG 2022), together with Emilio Di Giacomo (UniPG). Perugia (Italy), March 14-16, 2022. Website: <https://eurocg2022.unipg.it/>
 - Organizer of the Dagstuhl Seminar 21293 on “Parameterized Complexity in Graph Drawing”, together with Robert Ganian (TU Wien, AT), Martin Nöllenburg (TU Wien, AT) and Meirav Zehavi (Ben Gurion University – Beer Sheva, IL). July 18–23, 2021. Website: <https://www.dagstuhl.de/en/program/calendar/semhp/?semnr=21293>
 - Organizing committee member of the 28th European Workshop on Computational Geometry (EuroCG 2012), Assisi (Italy), March 19–21, 2012.
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INVITED TALKS AND LECTURES

- Invited talk at the Dagstuhl Seminar 22031 “Bringing Graph Databases and Network Visualization Together”, Schloss Dagstuhl, Germany, 16 January 2022.
- Invited talk at the 22nd Italian Conference on Theoretical Computer Science (ICTCS 2021), 14 September 2021.
- Invited lecture at the Technische Universität Wien, Austria, 15 January 2019.
- Invited lecture at the Universität zu Köln, Germany, 20 November 2018.
- Invited lecture at the FernUniversität in Hagen, Germany, 3 July 2017.
- Invited talk at the NII Shonan Meeting Seminar 089 “Algorithmics for Beyond Planar Graphs”, Shonan Village Center, Japan, 27 Nov. – 1 Dec. 2016.

- Invited talk at the 3rd meeting of the ANR Project Embedded Graphs and their Oriented Structures (EGOS), Bordeaux, France, 5 – 7 Nov. 2014.

INT’NL CONFERENCES AND WORKSHOPS ATTENDED

The following is a list of attended conferences and workshops in the last five years. For each entry, the symbol * indicates that I gave a talk.

- 2023: Dagstuhl Seminar 23051 “Perception in Network Visualization”, Schloss Dagstuhl, Germany; Bertinoro Workshop on Graph Drawing 2023 (BWGD 2023), Bertinoro, Italy; *39nd European Workshop on Computational Geometry (EuroCG 2023), Barcellona, Spain; Dagstuhl Seminar 23162 “New Frontiers of Parameterized Complexity in Graph Drawing”, Schloss Dagstuhl, Germany.
- 2022: *Dagstuhl Seminar 22031 “Bringing Graph Databases and Network Visualization Together”, Schloss Dagstuhl, Germany; Bertinoro Workshop on Graph Drawing 2022 (BWGD 2022), Bertinoro, Italy; Workshop on Graph Drawing and Network Visualization 2022 (GNV 2022), Heiligkreuztal, Germany;
- 2021: 29th International Symposium on Graph Drawing and Network Visualization (GD 2021), Tübingen, Germany; *22nd Italian Conference on Theoretical Computer Science (ICTCS 2021), Bologna, Italy (held online); Dagstuhl Seminar 21293 “Parameterized Complexity in Graph Drawing”, Schloss Dagstuhl, Germany; 33rd Canadian Conference on Computational Geometry (CCCG 2021), Halifax, Nova Scotia, Canada (held online); *17th Algorithms and Data Structures Symposium (WADS 2021), Halifax, Nova Scotia, Canada (held online).
- 2020: 28th Int. Symposium on Graph Drawing & Network Visualization (GD 2020), Vancouver, Canada (held online); *45th International Symposium on Mathematical Foundations of Computer Science (MFCS 2020), Prague, Czech Republic (held online); *14th International Conference and Workshop on Algorithms and Computation (WALCOM 2020), Singapore (held online); NII Shonan Meeting Seminar 171 “Trends and Perspectives for Graph Drawing and Network Visualization”, Shonan Village Center, Japan.
- 2019: *27th Int. Symposium on Graph Drawing & Network Visualization (GD 2019), Prague, Czech Republic; *1st Italian Workshop on Parallel and High

Performance Computing Technologies, Bologna, Italy; Workshop on Graph Drawing and Network Visualization 2019 (GNV 2019), Heiligkreuztal, Germany; Dagstuhl Seminar 19092 “Beyond-Planar Graphs: Combinatorics, Models and Algorithmics”, Schloss Dagstuhl, Germany; Bertinoro Workshop on Graph Drawing 2019 (BWGD 2019), Bertinoro, Italy.

SCIENTIFIC REVIEW ACTIVITY

Government Review Boards: Natural Sciences and Engineering Research Council of Canada (NSERC) , reviewer of Discovery Grant proposals.

International journals (alphabetical order): Algorithmica; Computer Graphics Forum; Computational Geometry: Theory and Applications; Decision Support Systems; Discrete Applied Mathematics; Discrete Mathematics, Discrete Mathematics and Theoretical Computer Science; Discussiones Mathematicae Graph Theory; European Journal of Combinatorics; Filomat; IEEE Access; Information Sciences; Theoretical Computer Science; Journal of Combinatorial Optimization; Journal of Computational Geometry; Journal of Graph Algorithms and Applications; Journal of Visual Languages and Computing.

International conferences (alphabetical order): ESA (2021); EUROCG (2012, 2018, 2020); GD (2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023); ICALP (2014); ISAAC (2011, 2016, 2017, 2021); LATIN (2022); PACIFICVIS (2012, 2015, 2016, 2018, 2019, 2020, 2021); SEA (2018); SOCG (2017, 2020, 2023); SODA (2019); SOFSEM (2023); SWAT (2016, 2020); VIS (2021, 2022); VISIGRAPP (2012); WALCOM (2015, 2018, 2020, 2021); WG (2019, 2020).

ACADEMIC AND PUBLIC SERVICE

2021 – today Member of the Selection Committee and of the Personal Interviews and Personal Interview Panel of the Doctoral Program “Logics for Computer Science - LogiCS@TUWien” at the Vienna University of Technology.

2020 – today Member of the faculty board of the Ph.D. course in Industrial and Information Engineering at the University of Perugia.

2019 – 2020 Member of the faculty board of the Ph.D. course in Ethics of Communication, Scientific Research and Innovation Technology at the University of Perugia.

2019 – today Director of the CINI Big Data Laboratory node at the University of Perugia³.

TEACHING EXPERIENCE

The following teaching activity took place at the Department of Engineering at the University of Perugia.

Master degree

- Course **Introduction to Computer Science and Programming**
Year: 2022/2023 – present
Degree: Bachelor's Degree in Engineering Management (Laurea Triennale in Ingegneria Gestionale)
Role: Teacher (6CFU, 54 hours).
- Course **Computation Models and Advanced Algorithms**
Year: 2020/2021 – present
Degree: Master's Degree in Computer and Robotics Engineering (Laurea Magistrale in Ingegneria Informatica e Robotica)
Role: Co-Teacher (9CFU, 12 of 72 hours).
- Course **Software Engineering**
Year: 2019/2020 – present
Degree: Master's Degree in Computer and Robotics Engineering (Laurea Magistrale in Ingegneria Informatica e Robotica)
Role: Teacher (6CFU, 48 hours).
- Course **Big Data Management**
Year: 2017/2018 – present
Degree: Master's Degree in Computer and Robotics Engineering (Laurea Magistrale in Ingegneria Informatica e Robotica)
Role: Teacher (6CFU, 48 hours).
- Course **Information Visualization and Visual Analytics**
Year: 2020/2021 – 2021/2022
Degree: Master's Degree in Computer and Robotics Engineering (Laurea Magistrale in Ingegneria Informatica e Robotica)
Role: Co-Teacher (9CFU, 12 of 72 hours).

³<https://www.conorzio-cini.it/index.php/it/labbigdata-home/>

- Course: **Lab of Information Visualization**
Year: 2011/2012 – 2019/2020
Degree: Master’s Degree in Computer and Robotics Engineering (Laurea Magistrale in Ingegneria Informatica e Robotica)
Role: Lab Teacher (12 hours).

Bachelor degree

- Course: **Analysis II**
Year: 2011–2012
Degree: Bachelor’s Degree (Laurea Triennale)
Role: Tutor.
- Course: **Geometry**
Year: 2011–2012
Degree: Bachelor’s Degree (Laurea Triennale)
Role: Tutor.

Post-graduate

- Course: **Models and Technologies for Big Data**
Year: 2016, 2017, 2021, 2022
Degree: Doctorate Course in Industrial and Information Engineering (for PhD candidates only)
Role: Teacher (20 hours).
- Course **Visual analytics - Laboratory**
Year: 2017
Degree: Post-graduate Master (Master di II° livello) in “Data Science”⁴
Role: Teacher (12 hours).
- Course **ICT for Smart Cities**
Year: 2015
Degree: Post-graduate Master (Master di II° livello) in “Designing Smart Cities”⁵
Role: Invited Lecturer.

I tutored and co-tutored several students during their Bachelor or Master thesis.

The following teaching activity took place at the ITS Umbria Academy⁶.

⁴<http://masterds.unipg.it/>

⁵<http://www.smartcities.unipg.it/>

⁶<http://www.itsumbria.it>

- Course: **Big Data Management and Analytics**
Year: 2019, 2020, 2021, 2022, 2023
Role: Teacher (25 hours).
- Course: **Software Engineering**
Year: 2022, 2023
Role: Teacher (30 hours).

The following teaching activity took place at the ECIPA Umbria⁷, an association that organizes training courses at national and European levels.

- Course: **Development of Software Systems**
Year: 2018
Role: Teacher (58 hours).
- Course: **Big Data Management**
Year: 2017
Role: Teacher (62 hours).

The following teaching activity took place at the Tiber Umbria Comett Education Programme⁸, an association between Universities and Enterprises created in 1992 under a former Comett project. The main activity of TUCEP is the organization and management of training courses at national and European levels.

- Course: **Development of Software Systems**
Year: 2015
Role: Teacher.

⁷<http://www.ecipaumbria.it/>

⁸<http://www.tucep.org/>

PROFESSIONAL EXPERIENCE & TECHNOLOGY TRANSFER

In December 2017, I co-founded CONTATTI yi-zhong-yi Srl, a spin-off company of the University of Perugia. The company is made up by engineers and linguists and it is aimed at offering advanced ICT solutions and smart technologies to promote and develop tourism in Italy. In particular, the company has Chinese tourists as main target for its solutions and services. The company closed at the end of 2020, also due to the consequences of the COVID-19 pandemic on international tourism.

From 2011 to 2014, I collaborated as a Software Engineer with the academic spin-off Vis4 Srl, an IT company providing advanced solutions for the visual analysis of complex data sets. Vis4, founded in 2009, established relevant contracts and collaborations with national and international companies and institutions, like the Financial Intelligence Agency (AIF) of the San Marino Republic, and Fabrica, the advertisement company of the Benetton group. Vis4 is also one of the founding member companies of the GGB Consortium (Genomics, Genetics, and Biology), founded in the 2010 with the financial support of the Umbria Region; GGB is a center of technological excellence, both in the national and in the international contexts. In January 2014 I have been appointed as administrator of the company, and I left this position in December 2014. In November 2014, all the academic members of Vis4 have sold their shares to private entrepreneurs.

In 2013 I collaborated as consultant with the Umbria Region for the assessment of the regional community network.

PUBLICATIONS

[BC] **Book Chapters**

- [BC-01] G. Liotta, F. Montecchiani. “Edge Partitions and Visibility Representations of 1-planar Graphs”. Chapter 6 in *Beyond Planar Graphs, Communications of NII Shonan Meetings*, Seok-Hee Hong and Takeshi Tokuyama editors, 89–107 (2020).

[SPE] **Journal Special Issues (Editor)**

- [SPE-02] E. Di Giacomo, F. Montecchiani. “Editorial”. Special Issue 38th European Workshop on Computational Geometry (EuroCG 2022).in *Computational Geometry: Theory & Applications*, 109: 101946 (2023).
- [SPE-01] M. A. Bekos, M. Kaufmann, F. Montecchiani. “Guest Editors’ Foreword and Overview”. Special Issue on Graph Drawing Beyond Planarity in *Journal of Graph Algorithms and Applications*, 22(1): 1–10 (2018).

[JOUR] **International Journals**

- [JOUR-57] S. Bhore, G. Da Lozzo, F. Montecchiani, M. Nöllenburg;, “On the upward book thickness problem: Combinatorial and complexity results”. *European Journal of Combinatorics*, 110: 103662 (2023).
- [JOUR-56] P. Bose, P. Carmi, V. Dujmovic, S. Mehrabi, F. Montecchiani, P. Morin, L. F. Schultz Xavier da Silveira, “Geodesic obstacle representation of graphs”. *Computational Geometry: Theory and Applications*, 109: 101946 (2023).
- [JOUR-55] C. Binucci, W. Didimo, F. Montecchiani, “1-planarity testing and embedding: An experimental study”. *Computational Geometry: Theory and Applications*, 108: 101900 (2023).
- [JOUR-54] L. Consalvi, W. Didimo, G. Liotta, F. Montecchiani, “BrowVis: Visualizing Large Graphs in the Browser”. *IEEE Access*, 10: 115776-115786 (2022).
- [JOUR-53] S. Bhore, R. Ganian, F. Montecchiani, M. Nöllenburg, “Parameterized Algorithms for Queue Layouts”. *Journal of Graph Algorithms and Applications*, 26(3): 335-352 (2022).
- [JOUR-52] A. Arleo, W. Didimo, G. Liotta, S. Miksch, F. Montecchiani, “Influence Maximization With Visual Analytics”. *IEEE Transactions Visualization and Computer Graphics*, 28(10): 3428-3440 (2022).

- [JOUR-51] P. Angelini, M. A. Bekos, F. Montecchiani, M. Pfister, “On Morphs of 1-Plane Graphs”. *Journal of Computational Geometry*, 13(1): 244–262 (2022).
- [JOUR-50] M. A. Bekos, E. Di Giacomo, W. Didimo, G. Liotta, F. Montecchiani, “Universal Slope Sets for Upward Planar Drawings”. *Algorithmica*, 84(9): 2556–2580 (2022).
- [JOUR-49] C. Binucci, W. Didimo, M. Kaufmann, G. Liotta, F. Montecchiani, “Placing Arrows in Directed Graph Layouts: Algorithms and Experiments” *Computer Graphics Forum*, 41(1): 364–376 (2022).
- [JOUR-48] L. Angori, W. Didimo, F. Montecchiani, D. Pagliuca, A. Tappini, “Hybrid Graph Visualizations With Chordlink: Algorithms, Experiments, and Applications. *IEEE Transactions Visualization and Computer Graphics*, 28(2): 1288-1300 (2022).
- [JOUR-47] E. Di Giacomo, G. Liotta, F. Montecchiani, “Orthogonal planarity testing of bounded treewidth graphs”. *Journal of Computer and System Sciences*, 125: 129-148 (2022).
- [JOUR-46] M. Chimani, P. Kindermann, F. Montecchiani, P. Valtr, “Crossing Numbers of Beyond-Planar Graphs”. *Theoretical Computer Science*, 898: 44-49 (2022).
- [JOUR-45] M. A. Bekos, M. Gronemann, F. Montecchiani, D. Pálvölgi, A. Symvonis, L. Theocharous, “Grid drawings of graphs with constant edge-vertex resolution”. *Computational Geometry: Theory and Applications*, 98: 101789 (2021).
- [JOUR-44] G. Liotta, F. Montecchiani, A. Tappini, “Ortho-polygon Visibility Representations of 3-connected 1-plane Graphs”. *Theoretical Computer Science*, 863: 40-52 (2021).
- [JOUR-43] P. Kindermann, F. Montecchiani, L. Schlipf, A. Schulz, “Drawing Subcubic 1-Planar Graphs with Few Bends, Few Slopes, and Large Angles”. *Journal of Graph Algorithms and Applications*, 25(1): 1-28 (2021).
- [JOUR-42] S. Bhore, R. Ganian, F. Montecchiani, M. Nöllenburg, “Parameterized Algorithms for Book Embedding Problems”. *Journal of Graph Algorithms and Applications*, 24(4): 603-620 (2020).
- [JOUR-41] P. Angelini, M. A. Bekos, F. J. Brandenburg, G. Da Lozzo, G. Di Battista, W. Didimo, M. Hoffmann, G. Liotta, F. Montecchiani, I. Rutter, C. Tóth, “Simple k -planar graphs are simple $(k + 1)$ -quasi planar”. *Journal of Combinatorial Theory, Series B*, 142: 1–35 (2020).

- [JOUR-40] E. Di Giacomo, G. Liotta, F. Montecchiani, “1-bend Upward Planar Slope Number of SP-digraphs”. *Computational Geometry: Theory and Applications*, 90: 101628 (2020).
- [JOUR-39] W. Didimo, L. Grilli, G. Liotta, L. Menconi, F. Montecchiani, D. Pagliuca, “Combining Network Visualization and Data Mining for Tax Risk Assessment”. *IEEE Access*, 8: 16073–16086 (2020).
- [JOUR-38] E. Di Giacomo, P. Eades, G. Liotta, H. Meijer, F. Montecchiani, “Polyline Drawings with Topological Constraints”. *Theoretical Computer Science*, 809: 250–264 (2020).
- [JOUR-37] M. Bekos, H. Förster, M. Gronemann, T. Mchedlidze, F. Montecchiani, C. Raftopoulou, T. Ueckerdt, “Planar Graphs of Bounded Degree have Bounded Queue Number”. *SIAM Journal on Computing*, 48(5), 1487–1502 (2019).
- [JOUR-36] W. Didimo, L. Grilli, G. Liotta, F. Montecchiani and D. Pagliuca. “Visual querying and analysis of temporal fiscal networks”. *Information Sciences*, 505: 406–421 (2019).
- [JOUR-35] P. Angelini, M. A. Bekos, M. Kaufmann and F. Montecchiani. “On 3D visibility representations of graphs with few crossings per edge”. *Theoretical Computer Science*, 784: 11–20 (2019).
- [JOUR-34] P. Angelini, M. A. Bekos, G. Liotta and F. Montecchiani. “Universal Slope Sets for 1-Bend Planar Drawings”. *Algorithmica*, 81(6): 2527–2556 (2019)
- [JOUR-33] A. Arleo, W. Didimo, G. Liotta and F. Montecchiani. “A Distributed Multilevel Force-directed Algorithm”. *IEEE Transactions on Parallel and Distributed Systems*, 30(4): 754–765 (2019).
- [JOUR-32] W. Didimo, G. Liotta and F. Montecchiani. “A Survey on Graph Drawing Beyond Planarity”. *ACM Computing Surveys*, 52(1): 4:1–4:37 (2019).
- [JOUR-31] T. Biedl, T. M. Chan, S. Lee, S. Mehrabi, F. Montecchiani and H. Vosoughpour. “Guarding Orthogonal Art Galleries with Sliding k -Transmitters: Hardness and Approximation”. *Algorithmica*, 81(1): 69–97 (2019).
- [JOUR-30] M. Bekos, E. Di Giacomo, W. Didimo, G. Liotta, F. Montecchiani, C. Raftopoulou, “Edge Partitions of Optimal 2-plane and 3-plane Graphs”. *Discrete Mathematics*, 342: 1038–1047 (2019).

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