CURRICULUM VITAE

Dr. Panagiotis Bouros
(February 19, 2026)

CONTACT
INFORMATION

Institute of Computer Science
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EDUCATION

National Technical University of Athens, Greece

Doctorate degree, School of Electrical and Computer Engineering   (2005–2011)

- – Thesis title: *Evaluating Queries over Route Collections*
- – Supervisors: Prof. Yannis Vassiliou and Prof. Timos Sellis

Diploma degree, School of Electrical and Computer Engineering   (1998–2003)

- – Thesis title: *Query Language for Hierarchical Structures*
- – Supervisor: Prof. Timos Sellis

RESEARCH
INTERESTS

- Scalable data management
- In-memory databases and modern hardware
- Indexing, search and query processing
- Complex data types including spatial, temporal, text and graphs
- Routing and optimization problems on road networks

RESEARCH
EXPERIENCE

Johannes Gutenberg University Mainz, Germany   (2018-now)

Lecturer and research associate, Institute of Computer Science

Assistant professor (Carl-Zeiss-Stiftung), Institute of Computer Science

Aarhus University, Denmark   (2015–2017)

Post-doctoral researcher, Department of Computer Science

- – Contact person: Prof. Ira Assent

Humboldt-Universität zu Berlin, Germany   (2013–2015)

Post-doctoral researcher, Department of Computer Science

- – Contact person: Prof. Dr. Ulf Leser

The University of Hong Kong, Hong Kong SAR, China (2011–2013)

Post-doctoral researcher, Department of Computer Science

    – Contact person: Prof. Nikos Mamoulis

National Technical University of Athens, Greece (2005–2011)

Doctorate researcher, School of Electrical and Computer Engineering

    – Contact persons: Prof. Yannis Vassiliou and Prof. Timos Sellis

University of Athens, Greece (2005)

Research assistant, Department of Informatics and Telecommunications

    – Contact person: Associate Prof. Aphrodite Tsalgatidou

PUBLICATIONS

Journal Articles

[J22] Panagiotis Simatis, George Christodoulou, Panagiotis Bouros and Nikos Mamoulis, *Scalable Lighting-fast Temporal Indexing*, to appear in the International Journal on Very Large Data Bases (VLDBJ)

[J21] Panagiotis Bouros, George Christodoulou, Christian Rauch, Artur Titkov and Nikos Mamoulis, *Querying Interval Data on Steroids*, IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), Vol 37, No 10, October 2025.

[J20] Christian Rauch and Panagiotis Bouros, *Fast Indexing for Temporal Information Retrieval*, Proceedings of the ACM on Management of Data (PACMMOD), Vol 3 No 4, September 2025.
To be presented at the 2026 ACM International Conference on Management of Data (ACM SIGMOD), Bengaluru, India, May 21 - June 5, 2026.

[J19] Panagiotis Bouros and Nikos Mamoulis, *Relevance queries for interval data*, to appear in the Proceedings of the ACM on Management of Data (PACMMOD), Vol 3 No 3, June 2025.
Presented at the 2025 ACM International Conference on Management of Data (ACM SIGMOD), Berlin, Germany, June 22-27, 2025.

[J18] Achilleas Michalopoulos, Dimitrios Tsitsigkos, Panagiotis Bouros, Nikos Mamoulis and Manolis Terrovitis, *Efficient Distance Queries on Non-point Data*, ACM Transactions on Spatial Algorithms and Systems (ACM TSAS), Vol 11, No 1, March 2025.

[J17] Dimitrios Tsitsigkos, Panagiotis Bouros, Konstantinos Lampropoulos, Nikos Mamoulis and Manolis Terrovits, *Two-layer Space-oriented Partitioning for Non-point Data*, IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), Vol 36, No 3, March 20204.

[J16] George Christodoulou, Panagiotis Bouros and Nikos Mamoulis, *LIT: Lightning-fast In-memory Temporal Indexing*, Proceedings of the ACM on Management of Data (PACMMOD), Vol 2 No 1, February 2024.
Presented at the 2024 ACM International Conference on Management of Data (ACM SIGMOD), Santiago, Chile, June 9-15, 2024.

[J15] George Christodoulou, Panagiotis Bouros and Nikos Mamoulis, *HINT: A Hierarchical Interval Index for Allen Relationships*, International Journal on Very Large Data Bases (VLDBJ), Vol 33, No 1, 2024.

[J14] Zhifeng Bao, <u>Panagiotis Bouros</u>, Reynold Cheng, Byron Choi, Anton Dignös, Wei Ding,Yixiang Fang, Boyang Han, Jilin Hu, Arijit Khan, Wenqing Lin, Xuemin Lin, Cheng Long, Nikos Mamoulis, Jian Pei, Matthias Renz, Shashi Shekhar, Jieming Shi, Eleni Tzirita Zacharatou, Sibo Wang, Xiao Wang, Xue Wang, Raymond Chi-Wing Wong, Da Yan, Xifeng Yan, Bin Yang, Dezhong Yao,Ce Zhang, Peilin Zhao, Rong Zhu, *A Summary of ICDE 2022 Research Session Panels*, Bulletin of the Technical Community on Data Engineering (IEEE Data Engineering Bulletin), Vol 47 No 4, December 2023.

[J13] <u>Panagiotis Bouros</u>, Nikos Mamoulis, Dimitrios Tsitsigkos and Manolis Terrovitis, *In-Memory Interval Joins*, International Journal on Very Large Data Bases (VLDBJ), Vol 30, No 4, July 2021.

[J12] Theodoros Chondrogiannis, <u>Panagiotis Bouros</u>, Johann Gamper, Ulf Leser and David B. Blumenthal, *Finding k-Shortest Paths with Limited Overlap*, International Journal on Very Large Data Bases (VLDBJ), Vol 29, No 5, September 2020.

[J11] Shuyao Qi, <u>Panagiotis Bouros</u> and Nikos Mamoulis, *Top-k Spatial Distance Joins*, International Journal on Advances of Computer Science for Geographic Information Systems (GeoInformatica), Vol 24, No 3, July 2020.

[J10] Konstantinos Theocharidis, John Liagouris, Nikos Mamoulis <u>Panagiotis Bouros</u> and Manolis Terrovitis, *SRX: Efficient Management of Spatial RDF DataTechniques*, International Journal on Very Large Data Bases (VLDBJ), Vol 28, No 5, October 2019.

[J9] <u>Panagiotis Bouros</u> and Nikos Mamoulis, *Spatial Joins: What's next?*, SIGSPATIAL Special, Vol 11, No 1, March 2019.

[J8] Fabian Fier, Nikolaus Augsten, <u>Panagiotis Bouros</u>, Ulf Leser and Johann-Christoph Freytag, *Set Similarity Joins on MapReduce: An Experimental Survey*, Proceedings of the VLDB Endowment (PVLDB), Vol 11, No 10, May 2018.
Presented at the 44th International Conference on Very Large Data Bases (VLDB), Rio de Janeiro, Brazil, August 27-31, 2018.

[J7] Shuyao Qi, Dimitris Sacharidis, <u>Panagiotis Bouros</u> and Nikos Mamoulis, *Snapshot and Continuous Points-based Trajectory Search*, International Journal on Advances of Computer Science for Geographic Information Systems (GeoInformatica), Vol 21, No 4, October 2017.

[J6] <u>Panagiotis Bouros</u> and Nikos Mamoulis, *A Forward Scan based Plane Sweep Algorithm for Parallel Interval Joins*, Proceedings of the VLDB Endowment (PVLDB), Vol 10, No 11, July 2017
Presented at the 43rd International Conference on Very Large Data Bases (VLDB), Munich, Germany, August 28 - September 1, 2017.

[J5] <u>Panagiotis Bouros</u>, Nikos Mamoulis, Shen Ge and Manolis Terrovitis, *Set Containment Join Revisited*, International Journal on Knowledge and Information Systems (KAIS), Vol 49, No 1, October, 2016.

[J4] Willi Mann, Nikolaus Augsten and <u>Panagiotis Bouros</u>, *An Empirical Evaluation of Set Similarity Join Techniques*, Proceedings of the VLDB Endowment (PVLDB), Vol 9, No 9, May 2016.
Presented at the 42nd International Conference on Very Large Data Bases (VLDB), New Delhi, India, September 5-9, 2016.

[J3] John Liagouris, Nikos Mamoulis, Panagiotis Bouros and Manolis Terrovitis, *An Effective Encoding Scheme for Spatial RDF Data*, Proceedings of the VLDB Endowment (PVLDB), Vol 7, No 12, August 2014.
Presented at the 40th International Conference on Very Large Data Bases (VLDB), Hangzhou, China, September 1-5, 2014.

[J2] Panagiotis Bouros, Shen Ge and Nikos Mamoulis, *Spatio-Textual Similarity Joins*, Proceedings of the VLDB Endowment (PVLDB), Vol 6, No 1, November 2012.
Presented at the 39th International Conference on Very Large Data Bases (VLDB), Riva del Garda, Trento, Italy, August 26-30, 2013.

[J1] Panagiotis Bouros, Dimitris Sacharidis, Theodore Dalamagas, Spiros Skiadopoulos and Timos Sellis, *Evaluating Path Queries over Frequently Updated Route Collections*, IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), Vol 24, No 7, July 2012.

Conference & Workshop Proceedings

[P40] Ketevan Gallagher, Vishwanath Seshagiri, Theodoros Chondrogiannis, Panagiotis Bouros and Andreas Züfle, *Your Friends Reveal Where You Are: Location Estimation based on Friends' Locations in Geosocial Networks*, Proceedings of the 1st Workshop on Spatial Intelligence for Smart and Connected Communities (SpatialConnect), in conjunction with the 33rd ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL'25), Minneapolis, MN, USA, November 3, 2025.

[P39] Julius Hoffmann, Panagiotis Bouros and Theodoros Chondrogiannis, *GESONGEN: An Interface for Generating and Visualizing Geosocial Networks*, Proceedings of the 29th European Conference on Advances in Databases and Information Systems (ADBIS'25), Tampere, Finland, September 23-26, 2025. (demo)

[P38] Panagiotis Bouros, Theodoros Chondrogiannis and Daniel Kowalski, *Fast Geosocial Reachability Queries*, Proceedings of the 29th International Conference on Extending Database Technology (EDBT'25), Barcelona, Spain, March 25-28, 2025.

[P37] Panagiotis Bouros, Artur Titkov, Christian Rauch, George Christodoulou and Nikos Mamoulis, *HINT on Steroids: Batch Query Processing for Interval Data*, Proceedings of the 27th International Conference on Extending Database Technology (EDBT'24), Paestum, Italy, March 25-29, 2024. (short paper)

[P36] Arjanit Arifi, Panagiotis Bouros and Theodoros Chondrogiannis, *A Study on ETA Prediction using Machine Learning and Recovered Routes*, Proceedings of the 6th International Workshop on Big Mobility Data Analytics (BMDA), in conjunction with the 29th International Conference on Extending Database Technology (EDBT), Paestum, Italy, March 25, 2024.

[P35] Achilleas Michalopoulos, Dimitrios Tsitsigkos, Panagiotis Bouros, Nikos Mamoulis and Manolis Terrovitis, *Efficient Distance Queries on Non-point Data*, Proceedings of the 31st ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Hamburg, Germany, November 13-16, 2023.

[P34] Abed Al Rahman Sarsour, Panagiotis Bouros and Theodoros Chondrogiannis, *Towards Generating Realistic Geosocial Networks"*, Proceedings of the 7th ACM SIGSPATIAL International Workshop on Location-Based Recommendations, Geosocial Networks, and Geoadvertising (LocalRec), in conjunction with the 31st ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Hamburg, Germany, November 13, 2023.

[P33] Theodoros Chondrogiannis, Johann Bornholdt, <u>Panagiotis Bouros</u> and Michael Grossniklaus, *History Oblivious Route Recovery on Road Networks*, Proceedings of the 30th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Seattle, WA, USA, November 1-4, 2022.

[P32] Claudia Perez Martinez, <u>Panagiotis Bouros</u> and Theodoros Chondrogiannis, *ROD-GEN: An Interactive Interface for Road Network Generation*, Proceedings of the 30th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Seattle, WA, USA, November 1-4, 2022. (demo)

[P31] George Christodoulou, <u>Panagiotis Bouros</u> and Nikos Mamoulis, *HINT: A Hierarchical Index for Intervals in Main Memory*, Proceedings of the 2022 ACM International Conference on Management of Data (ACM SIGMOD), Philadelphia, PA, USA, June 12-17, 2022.

[P30] Artur Titkov and <u>Panagiotis Bouros</u>, *Spatially Combined Keyword Searches*, Proceedings of the 25th International Conference on Extending Database Technology (EDBT), Edinburgh, UK, March 29 - April 1, 2022. (short paper)

[P29] Christian Häcker, <u>Panagiotis Bouros</u>, Theodoros Chondrogiannis and Ernst Althaus, *Most Diverse Near-Shortest Paths*, Proceedings of the 29th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Beijing, China, November 2-5, 2021.

[P28] Theodoros Chondrogiannis, <u>Panagiotis Bouros</u> and Winfried Emser, *Simulation-based Evacuation Planning for Urban Areas*, Proceedings of the 29th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Beijing, China, November 2-5, 2021. (demo)

[P27] Dimitrios Tsitsigkos, Konstantinos Lampropoulos, <u>Panagiotis Bouros</u>, Nikos Mamoulis and Manolis Terrovitis, *A Two-layer Partitioning for Non-point Spatial Data*, Proceedings of the 37th IEEE International Conference on Data Engineering (ICDE), Chania, Greece, April 19-22, 2021.

[P26] Shuyao Qi, <u>Panagiotis Bouros</u> and Nikos Mamoulis, *Top-k String Similarity Joins*, Proceedings of the 32nd International Conference on Scientific and Statistical Database Management (SSDBM), Vienna, Austria, July 7-9, 2020.

[P25] <u>Panagiotis Bouros</u>, Konstantinos Lampropoulos, Dimitrios Tsitsigkos, Nikos Mamoulis and Manolis Terrovitis, *Band Joins for Interval Data*, Proceedings of the 23rd International Conference on Extending Database Technology (EDBT), Copenhagen, Denmark, March 30 - April 2, 2020. (short paper)

[P24] Camila F. Costa, Theodoros Chondrogiannis, Mario A. Nascimento and <u>Panagiotis Bouros</u>, *RRAMEN: An Interactive Tool for Evaluating Choices and Changes in Transportation Networks*, Proceedings of the 23rd International Conference on Extending Database Technology (EDBT), Copenhagen, Denmark, March 30 - April 2, 2020. (demo)

[P23] Dimitrios Tsitsigkos, <u>Panagiotis Bouros</u>, Nikos Mamoulis and Manolis Terrovitis, *In-memory parallel spatial joins*, Proceedings of the 27th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Chicago, Illinois, USA, November 5-8, 2019. (poster)

[P22] Theodoros Chondrogiannis, Mario A. Nascimento and <u>Panagiotis Bouros</u>, *Relative Reachability Analysis as a Tool for Urban Mobility Planning: Position Paper*, Proceedings of the 12th International Workshop on Computational Transportation Science (IWCTS), in conjunction with the 27th ACM International Conference

on Advances in Geographic Information Systems (ACM SIGSPATIAL), Chicago, Illinois, USA, November 5, 2019.

[P21] Panagiotis Bouros, Ira Assent, Jacob Høxbroe Jeppesen and Thomas Skjødeberg Toftegaard, *Processing Satellite Imagery for Decision-Making in Precision Agriculture*, Proceedings of the 2nd International Workshop on Big Data Visual Exploration and Analytics (BigVis), in conjunction with the 22th International Conference on Extending Database Technology (EDBT), Lisbon, Portugal, March 26, 2019. (short paper)

[P20] Theodoros Chondrogiannis, Panagiotis Bouros, Johann Gamper, Ulf Leser and David B. Blumenthal, *Finding k-Dissimilar Paths with Minimum Collective Length*, Proceedings of the 26th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Seattle, Washington, USA, November 6-9, 2018. (poster)

[P19] Panagiotis Bouros and Nikos Mamoulis, *Interval Count Semi-Joins*, Proceedings of the 21st International Conference on Extending Database Technology (EDBT), Vienna, Austria, March 26-29, 2018. (short paper)

[P18] Dimitris Sacharidis, Panagiotis Bouros and Theodoros Chondrogiannis, *Most Preferred Path*, Proceedings of the 25th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Redondo Beach, California, USA, November 7-10, 2017.

[P17] Theodoros Chondrogiannis, Panagiotis Bouros, Johann Gamper and Ulf Leser, *Exact and Approximate Algorithms for Finding k-Shortest Paths with Limited Overlap*, Proceedings of the 20th International Conference on Extending Database Technology (EDBT), Venice, Italy, March 21-24, 2017.

[P16] Anja Kunkel, Astrid Rheinländer, Christopher Schiefer, Sven Helmer, Panagiotis Bouros and Ulf Leser, *PIEJoin: Towards Parallel Set Containment Joins using Prefix Tree Indexes*, Proceedings of the 28th International Conference on Scientific and Statistical Database Management (SSDBM), Budapest, Hungary, July 18-20, 2016.

[P15] Theodoros Chondrogiannis, Panagiotis Bouros, Johann Gamper and Ulf Leser, *Alternative Routing: k-Shortest Paths with Limited Overlap*, Proceedings of the 23rd ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Seattle, Washington, USA, November 3-6, 2015. (poster)

[P14] Shuyao Qi, Panagiotis Bouros, Dimitris Sacharidis and Nikos Mamoulis, *Efficient Point-based Trajectory Search*, Proceedings of the 14th International Symposium on Spatial and Temporal Databases (SSTD), Hong Kong, China, August 26-28, 2015.
Received the **Best Paper Award**.

[P13] Panagiotis Bouros, Dimitris Sacharidis and Nikos Bikakis, *Regionally Influential Users in Location-Aware Social Networks*, Proceedings of the 22nd ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Dallas, Texas, USA, November 4-7, 2014. (poster)

[P12] Dimitris Sacharidis and Panagiotis Bouros, *Routing Directions: Keeping it Fast and Simple*, Proceedings of the 21st ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS), Orlando, Florida, USA, November 5-8, 2013.

[P11] Shuyao Qi, Panagiotis Bouros and Nikos Mamoulis, *Efficient Top-k Spatial Distance Joins*, Proceedings of the 13th International Symposium on Spatial and Temporal Databases (SSTD), Munich, Germany, August 21-23, 2013.

[P10] Panagiotis Bouros, Dimitris Sacharidis, Theodore Dalamagas and Timos Sellis, *Dynamic Pickup and Delivery with Transfers*, Proceedings of the 12th International Symposium on Spatial and Temporal Databases (SSTD), Minneapolis, Minnesota, USA, August 24-26, 2011.

[P9] Manolis Terrovitis, Panagiotis Bouros, Panos Vassiliadis, Timos Sellis and Nikos Mamoulis, *Efficient Answering of Set Containment Queries for Skewed Item Distributions*, Proceedings of the 14th International Conference on Extending Database Technology (EDBT), Uppsala, Sweden, March 21-25, 2011.

[P8] Panagiotis Bouros and Yiannis Vassiliou, *Evaluating Path Queries over Route Collections*, Proceedings of the PhD Workshop in conjunction with the 26th IEEE International Conference on Data Engineering (ICDE), Long Beach, California, USA, March 5, 2010.

[P7] Panagiotis Bouros, Spiros Skiadopoulos, Theodore Dalamagas, Dimitris Sacharidis and Timos Sellis, *Evaluating reachability queries over path collections*, Proceedings of the 21st International Conference on Scientific and Statistical Database Management (SSDBM), New Orleans, Louisiana, USA, June 2-4, 2009.

[P6] Panagiotis Bouros, Theodore Dalamagas, Spiros Skiadopoulos and Timos Sellis, *Evaluating "Find a Path" Reachability Queries*, Proceedings of the Workshop on Spatial and Temporal Reasoning in conjunction with the 18th European Conference on Artificial Intelligence (ECAI), Patras, Greece, July 22, 2008.

[P5] Dimitris Sacharidis, Panagiotis Bouros and Timos Sellis, *Caching Dynamic Skyline Queries*, Proceedings of the 20th International Conference on Scientific and Statistical Database Management (SSDBM), Hong Kong, China, July 9-11, 2008.

[P4] Theodore Dalamagas, Panagiotis Bouros, Theodore Galanis, Magdalini Eirinaki and Timos Sellis, *Mining User Navigation Patterns for Personalizing Topic Directories*, Proceedings of the 9th ACM International Workshop on Web Information and Data Management (WIDM) in conjunction with the 16th ACM International Conference on Information and Knowledge Management (CIKM), Lisbon, Portugal, November 9, 2007.

[P3] Panagiotis Bouros, Aggeliki Fotopoulou and Nicholas Glaros, *An interactive environment for creating and validating syntactic rules*, Proceedings of the 5th International Conference on Recent Advances in Natural Language Processing (RANLP), Borovets, Bulgaria, September 21-23, 2005. (poster)

[P2] Aggeliki Koukoutsaki, Theodore Dalamagas, Timos Sellis and Panagiotis Bouros, *PatMan: A Visual Database System to Manipulate Path Patterns and Data in Hierarhical Catalogs*, Proceedings of the International Workshop of the EU Network of Excellence DELOS on Audio-Visual Content and Information Visualization in Digital Libraries (AVIVDiLib), Cortona, Italy, May 4-6, 2005.

[P1] Panagiotis Bouros, Theodore Dalamagas, Timos Sellis and Manolis Terrovitis, *PatManQL: A language to manipulate patterns and data in hierarchical catalogs*, Proceedings of the 1st International Workshop on Pattern Representation and Management (PaRMa) in conjunction with the 9th International Conference on Extending Database Technology (EDBT), Heraklion, Crete, Greece, March 18, 2004.

Technical Reports

[TR3] Dimitrios Tsitsigkos, Konstantinos Lampropoulos, <u>Panagiotis Bouros</u>, Nikos Mamoulis and Manolis Terrovitis, *A Two-level Spatial In-Memory Index*, CoRR, May 2020.
https://arxiv.org/abs/2005.08600

[TR2] Shuyao Qi, <u>Panagiotis Bouros</u> and Nikos Mamoulis, *Efficient Top-k Joins on Complex Data Types*, TR-2015-03, Department of Computer Science, University of Hong Kong, Hong Kong SAR, China, March 2016.
http://www.cs.hku.hk/research/techreps/document/TR-2015-03.pdf

[TR1] <u>Panagiotis Bouros</u>, *Semantic Web Services: A conceptual comparison of OWL-S, WSMO and METEOR-S approaches*, Department of Informatics and Telecommunications, University of Athens, Greece, 2005.
http://www.dblab.ece.ntua.gr/~pbour/docs/SWS_Conceptual_Comparison.pdf

Editorial

[E12] <u>Panagiotis Bouros</u>, Tamraparni Dasu, Yaron Kanza, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 8th ACM SIGSPATIAL Workshop on Location-Based Recommendations, Geosocial Networks, and Geoadvertising*, LocalRec@ SIGSPATIAL 2024, Atlanta, GA, USA, October 29, 2024.

[E11] <u>Panagiotis Bouros</u>, Tamraparni Dasu, Yaron Kanza, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 7th ACM SIGSPATIAL Workshop on Location-Based Recommendations, Geosocial Networks, and Geoadvertising*, LocalRec@ SIGSPATIAL 2023, Hamburg, Germany, November 13, 2023.

[E10] <u>Panagiotis Bouros</u>, Tamraparni Dasu, Yaron Kanza, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 6th ACM SIGSPATIAL Workshop on Location-Based Recommendations, Geosocial Networks, and Geoadvertising*, LocalRec@ SIGSPATIAL 2022, Seattle, WA, China, November 1, 2022.

[E9] <u>Panagiotis Bouros</u>, Tamraparni Dasu, Yaron Kanza, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 5th ACM SIGSPATIAL Workshop on Location-Based Recommendations, Geosocial Networks, and Geoadvertising*, LocalRec@ SIGSPATIAL 2021, Beijing, China, November 2, 2021.

[E8] <u>Panagiotis Bouros</u>, Tamraparni Dasu, Yaron Kanza, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 4th ACM SIGSPATIAL Workshop on Location-Based Recommendations, Geosocial Networks, and Geoadvertising*, LocalRec@ SIGSPATIAL 2020, Seattle, WA, USA, November 3, 2020.

[E7] <u>Panagiotis Bouros</u>, Amr Magdy, Matthias Renz, Mohamed Sarwat, Andreas Züfle, *Proceedings of the 6th International ACM SIGMOD Workshop on Managing and Mining Enriched Geo-Spatial Data*, GeoRich@ SIGMOD 2020, Portland, OR, USA, June 14, 2020.

[E6] <u>Panagiotis Bouros</u>, Tamraparni Dasu, Yaron Kanza, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 3rd ACM SIGSPATIAL International Workshop on Location-based Recommendations, Geosocial Networks and Geoadvertising*, LocalRec@SIGSPATIAL 2019, Chicago, IL, USA, November 5, 2019.

[E5] Walid G. Aref, Michela Bertolotto, <u>Panagiotis Bouros</u>, Christian S. Jensen, Ahmed R. Mahmood, Kjetil Nørvåg, Dimitris Sacharidis, Mohamed Sarwat, *Proceedings of the 16th International Symposium on Spatial and Temporal Databases*, SSTD 2019, Vienna, Austria, August 19-21, 2019.

[E4] Panagiotis Bouros, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 2nd ACM SIGSPATIAL Workshop on Recommendations for Location-based Services and Social Networks*, LocalRec@SIGSPATIAL 2018, Seattle, WA, USA, November 6, 2018.

[E3] Panagiotis Bouros, Matthias Renz and Dimitris Sacharidis, *Proceedings of the 1st ACM SIGSPATIAL Workshop on Recommendations for Location-based Services and Social Networks*, LocalRec@SIGSPATIAL 2017, Redondo Beach, CA, USA, November 7, 2017.

[E2] Panagiotis Bouros and Mohamed Sarwat, *Proceedings of the 4th International ACM Workshop on Managing and Mining Enriched Geo-Spatial Data*, GeoRich@ SIGMOD 2017, Chicago, IL, USA, May 14, 2017.

[E1] Panagiotis Bouros, Neal Lathia, Matthias Renz, Francesco Ricci and Dimitris Sacharidis, *Proceedings of the Workshop on Location-Aware Recommendations*, LocalRec 2015, co-located with the 9th ACM Conference on Recommender Systems (RecSys 2015), Vienna, Austria, September 19, 2015.

ACADEMIC EXPERIENCE/ COLLABORATIONS	**Johannes Gutenberg University Mainz**, Germany

Instructor

– Database Systems   (Summer term 2018–2026)
– Database Systems II / Non-Standard Database Systems   (Winter 2019/20–2023/24, 2025/26)
– Database Systems Seminar   (Winter 2018/19, 2025/26)
– Non-Standard Database Systems Seminar   (Summer 2020–2026)
– Database Systems Lab (Praktikum)   (Summer 2021–2026, Winter 2018/19–2020/21)
– Non-Standard Database Systems Lab (Praktikum)   (Winter 2022/23, 2025/26)

Supervisor

– Christian Rauch, *Temporal Information Retrieval*, Doctorate thesis (ongoing)
– Justus Oberhausen, *Indexing composite interval data*, Bachelor thesis   (ongoing)
– Felix Weinmar, *Graph database for systems neuroscience – frontend, browser tool*, Bachelor thesis   (ongoing)
– Bodowin Weber, *Visualizing and benchmarking interval indexing*, Bachelor thesis   (2026)
– Ahn Viet Ngo, *Graph database for Circuit neuroscience – frontend, editor tool*, Bachelor thesis   (2025)
– Sebastian Hemberger, *Indexing composite interval data*, Bachelor thesis (2025)
– Dennis Scheck, *Generating and visualizing complex interval data*, Bachelor thesis   (2025)
– Joshua Kempter, *A user interface for displaying, exploring and searching through systems neuroscience data*, Bachelor thesis   (2024)
– Samia Mubarika Goraya, *Comparing State-of-the-Art NLP Techniques for Information Extraction from Systems Neuroscience Publications*, Master thesis (2024)

- Tobias Laures, *Academic Social Neworks-Spatial Evolution of Scientific Communities*, Master thesis (2024)
- Julius Hoffmann, *A Graphical Interface for Managing Geosocial networks*, Bachelor thesis (2024)
- Patrick Götz, *A graphical user interface for systems neuroscience data*, Bachelor thesis (2024)
- Jan Raider, *A Graphical User Interface for Managing Interval Data*, Bachelor thesis (2024)
- Yazhou Pan, *Processing spatial keyword search queries*, Bachelor thesis (2023)
- Lina Khidair, *An interactive graphical user interface for systems neuroscience graph data*, Bachelor thesis (2023)
- Huu Duy Nguyen, *Path Diversification for Evacuation Planning*, Bachelor thesis (2023)
- Abed Al Rahman Sansour, *A Graphical User Interface for generating Geosocial networks*, Bachelor thesis (2023)
- Maximilian Zerbe, *Spatio-textual Outlier Detection*, Bachelor thesis (2023)
- Arjanit Arifi, *Training ETA models with recovered routes*, Bachelor thesis (2023)
- Adrian Kissinger, *Geospatial data on maps for routing applications*, Bachelor thesis (2023)
- David Betz, *Extending the EURASIM Interface for Evacuation Planning in Urban Areas*, Bachelor thesis (2023)
- Mubarika Samia Goraya, *Generating complex and composite data*, Bachelor thesis (2022)
- Claudia Berenice Perez Martinez, *An interactive graphical interface for generating road networks*, Bachelor thesis (2022)
- Yannic Marcel Moog, *Extending k-Shortest Paths with Limited Overlap*, Bachelor thesis (2021)
- Daniel-Valentin Kowalski, *Evaluating GeoSocial Reachability Queries*, Bachelor thesis (2021)
- Christian Häcker, *k Most Diverse Near-Shortest Paths*, Bachelor thesis (2021)
- Artur Titkov, *Spatially Combined Text Searches*, Bachelor thesis (2020)
- Mohamed Masarwa, *Monitoring Geo-Social Influence in Location-Aware Social Networks*, Bachelor thesis (2019)
- Matthias Sawatzky, *A Web Application for Analysis and Comparison of k-Shortest Paths with Limited Overlap Algorithms on Road Networks*, Bachelor thesis (2019)

co-Supervisor

- Alan Osman, *SIMD-fied Interval Indexing* (working title), Master thesis (ongoing)
- Lisa-Particia Barth, *App-Based Specification and Visualization of User Preferences in Routing*, Master thesis (2022)
- Marc Araujo Conde, *A Database with Amnesia*, Bachelor thesis (2021)
- Alina Gerhards, *Equi-joins on GPU*, Master thesis (2019)

University of Ioannina, Greece

Advisor or co-Supervisor

- Achilleas Michalopoulos, *Partitioning and Indexing Techniques for Scalable Spatial Query Evaluation*, Doctorate thesis (on-going)
- Panagiotis Simatis, *Indexing and Querying Complex Data* (working title), Doctorate thesis (on-going)
- Dimitrios Tsitsigkos, *Join Operators for Complex Data*, Doctorate thesis (2024)
- Giorgos Kotsinas, *Ranking Queries over Range Data.* Master thesis (2024)
- George Christodoulou, Managing Big and Complex Data in Main Memory, Doctorate thesis (2023)

EBS University for Business and Law, Germany

Instructor

- Data Structures & Database Management Systems (Fall 2024, 2025)

University of Kostanz, Germany

co-Supervisor

- Timo Suk, *Route Inference as a Tool for Generating Training Data for ML-based tasks*, Master thesis (2024)
- Nina Röckelein, *Measuring the Attractiveness of Transportation Modes using Relative Reachability and Mobility Patterns*, Bachelor thesis (2023)
- Judith Kunz, *Finding Similarity Through Dissimilarity: Utilizing path dissimilarity for role extraction in networks*, Master thesis (2022)

Aarhus University, Denmark

Instructor

- Introduction to Databases (Q1, Fall 2015)

Teaching assistant

- Indexing of disk-based data (Q3, Spring 2017)
- Multidimensional Databases (Q3, Spring 2016)

Advisor

- Tobias Sommer, *Outlier detection on spatio-temporal data*, Graduate student project (2016)
- Jens C. B. Madsen & Benjamin Petersen, *Continuous Monitoring of Geo-Socially Influential Users*, Graduate student project (2016)

Free University of Bozen-Bolzano, Italy

Advisor

- Theodoros Chondrogiannis, *Efficient Algorithms for Route Planning Problems on Road Networks*, Doctorate thesis (2015–2017)

Humboldt-Universität zu Berlin, Germany

Advisor

- Florian Hönicke, *Optimizing Set Similarity Joins on MapReduce*, Diploma thesis (2015)
- Anja Kunkel, *Set containment joins using two prefix trees*, Undergraduate student project (2014)

The University of Hong Kong, Hong Kong SAR, China

Advisor

- Shuyao Qi, *Advanced Ranking Queries on Composite Data*, Doctorate thesis (2012–2016)
- Shen Ge, *Advanced analysis and join queries in multidimensional spaces*, Doctorate thesis (2012)

National Technical University of Athens, Greece

Teaching assistant and lab instructor

- Database Systems (Fall 2006–2009)
- Computer Programming Lab (Fall 2005)

Advisor

- John Liagouris, *Web Data Management with Applications in Privacy*, Doctorate thesis (2014)
- Dora Kontogianni, *GRAPHIT-DB: Graph Data Management System (II)*, Diploma thesis (2009)
- Vassilis Giannopoulos, *P-Miner+: Portal Catalogs Administration Supporting Usage Data Mining Processes*, Diploma thesis (2009)
- John Liagouris & Trifonas Farmakakis, *DataBase supported Reasoning System (DBRS)*, Diploma thesis (2008)
- Lemonia Boula, *GRAPHIT-DB: Graph Data Management System (I)*, Diploma thesis (2007)
- Theodore Galanis, *P-Miner: Portal Catalogs Administration Supporting Usage Data Mining Processes*, Diploma thesis (2006)

University of Athens, Greece

Teaching assistant

- Software Engineering (Fall 2005)
- System Analysis (Spring 2005)

Talks/Events **Invited**

- Universität-Stuttgart, Germany, October 17, 2025
- Philipps-Universität Marburg, Germany, February 18, 2025
- Leibniz Universität Hannover, Germany, February 3, 2025
- Universität Hamburg, Germany, September 17, 2024
- Technische Universität Wien (TUW), Austria, September 19, 2023
- Ludwig-Maximilians-Universität München (LMU), August 2, 2023
- Technische Universität Berlin (TUB), Germany, May 8, 2023
- Freie Universität Berlin, Germany, July 20, 2022
- Hasso Plattner Institute, University of Potsdam, Germany, June 23, 2022
- University of Manchester, UK, March 14, 2022
- Friedrich-Schiller-Universität Jena, Germany, May 21, 2021
- Université Libre de Bruxelles, Belgium, April 28, 2021
- Ionian University, Greece, February 16, 2021
- University of Vienna, Austria, December 11, 2020
- University of Ioannina, Greece, November 2, 2020
- University of Regensburg, Germany, October 8, 2020
- University of Bonn, Germany, January 10, 2020
- IT University of Copenhagen, Denmark, September 24-25, 2019
- Vrije Universiteit Brussel, Belgium, June 6, 2019
- "Athena" Research and Innovation Center, Athens, Greece, November 14, 2017
- Johannes Gutenberg Universität Mainz, Germany, April 8, 2017
- University of Southampton, UK, April 4, 2017
- Birkbeck, University of London, UK, March 13, 2017
- Leibniz Universität Hannover, Germany, September 8, 2016
- Technische Universität Berlin (TUB), Germany, July 11, 2016
- University of Manchester, UK, May 25, 2016
- University of Oxford, UK, May 18, 2016
- University of South Denmark (SDU), Odense, Denmark, March 4, 2016
- Centrum Wiskunde & Informatica (CWI), Amsterdam, Netherlands, December 17, 2014
- Free University of Bozen-Bolzano (UNIBZ), Italy, October 23 & 24, 2013

Venues

- *A Tale of Intervals*, Greece-Hong Kong Databases Workshop, May 18, 2025.

- *Fast Geosocial Reachability Queries*, 29th International Conference on Extending Database Technology (EDBT'25), Barcelona, Spain, March 26, 2025.

- *Towards Generating Realistic Geosocial Networks*, 7th ACM SIGSPATIAL International Workshop on Location-Based Recommendations, Geosocial Networks, and Geoadvertising (LocalRec), in conjunction with the 31st ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Hamburg, Germany, November 13, 2023.

- *Most Diverse Near-Shortest Paths*, 29th ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Beijing, China, November 4, 2021.

- *Band Joins for Interval Data*, 23rd International Conference on Extending Database Technology (EDBT), Copenhagen, Denmark, April 1, 2020.

- *Processing Satellite Imagery for Decision-Making in Precision Agriculture*, 2nd International Workshop on Big Data Visual Exploration and Analytics (BigVis) in conjunction with the 22nd International Conference on Extending Database Technology (EDBT), Lisbon, Portugal, March 26, 2019.

- *A Forward Scan based Plane Sweep Algorithm for Parallel Interval Joins*, 43rd International Conference on Very Large Data Bases (VLDB), Munich, Germany, August 31, 2017.

- *Spatio-Textual Similarity Joins*, 39th International Conference on Very Large Data Bases (VLDB), Riva del Garda, Trento, Italy, August 29, 2013.

- *Evaluating Path Queries over Route Collections*, 26th IEEE International Conference on Data Engineering (ICDE) PhD Workshop, Long Beach, CA, USA, March 5, 2010.

- *Evaluating Reachability Queries Over Path Collections*, 21st International Conference on Scientific and Statistical Database Management (SSDBM), New Orleans, LA, USA, June 2-4, 2009.

- *Evaluating "Find a Path" Reachability Queries*, Workshop on Spatial and Temporal Reasoning (STRWS) in conjunction with the 18th European Conference on Artificial Intelligence (ECAI), Patras, Greece, July 22, 2008.

- *Caching Dynamic Skyline Queries*, 20th International Conference on Scientific and Statistical Database Management (SSDBM), Hong Kong, China, July 11, 2008.

- *Mining User Navigation Patterns for Personalizing Topic Directories*, 9th ACM International Workshop on Web Information and Data Management (WIDM) in conjunction with the 16th ACM International Conference on Information and Knowledge Management (CIKM), Lisbon, Portugal, November 9, 2007.

- *An interactive environment for creating and validating syntactic rules*, 5th International Conference on Recent Advances in Natural Language Processing (RANLP), Borovets, Bulgaria, September 21-23, 2005.

- *PatManQL: A language to manipulate patterns and data in hierarchical catalogs*, International Workshop on Pattern Representation and Management (PaRMa) in conjunction with the 9th International Conference on Extending Database Technology (EDBT), Heraklion, Crete, Greece, March 18, 2004.

National events

- *Efficient Distance Queries on Non-point Data*, 19th Hellenic Data Management Symposium (HDMS), Ioannina, Greece, July 3, 2025.

- *A Forward Scan based Plane Sweep Algorithm for Parallel Interval Joins*, 16th Hellenic Data Management Symposium (HDMS), Larnaca, Cyprus, July 3, 2018.

- *An Effective Encoding Scheme for Spatial RDF Data*, 13th Hellenic Data Management Symposium (HDMS), Athens, July 30-31, 2015.

- *Spatio-Textual Similarity Joins*, 12th Hellenic Data Management Symposium, (HDMS), Athens, Greece, July 24-25, 2014.

- *Dynamic Pickup and Delivery with Transfers*, 10th Hellenic Data Management Symposium, (HDMS), Athens, Greece, June 17-18, 2011.

- *Efficient Answering of Set Containment Queries for Skewed Item Distributions*, 10th Hellenic Data Management Symposium, (HDMS), Athens, Greece, June 17-18, 2011.

- *Evaluating reachability queries over path collections*, 8th Hellenic Data Management Symposium (HDMS), Athens, Greece, August 31-September 1, 2009.

- *Caching Dynamic Skyline Queries*, 7th Hellenic Data Management Symposium (HDMS), Heraklion, Greece, July 28-29, 2008.

SERVICE

Member of Program Committee

- SIGMOD (2027)

- VLDB, MDM (2026)

- VLDB, EDBT, SIGSPATIAL, DASFAA, SSTD, CDF4MD@MDM (2025)

- VLDB, SIGSPATIAL, DASFAA, EDBT-PhD. MDM (meta-reviewer), SISAP, CDF4MD@MDM (2024)

- VLDB, SIGSPATIAL, DASFAA, SSTD, SISAP (2023)

- ICDE, SIGSPATIAL, DASFAA, SISAP (2022)

- ICDE, SIGSPATIAL, SSTD, DASFAA, SISAP, TIME (2021)

- ICDE, SIGMOD (demos), SIGSPATIAL, CIKM (short papers), SISAP, TIME (2020)

- SIGSPATIAL, SISAP (2019)

- VLDB, EDBT, SIGSPATIAL, SISAP (2018)

- SIGSPATIAL, BigDataService, Smart City BigData@BigDataService (2017)

- ICDE, CIKM, SIGSPATIAL, BigDataService, SISAP, GeoRich@SIGMOD (2016)

- CIKM, SIGSPATIAL, DASFAA, BigDataService, SISAP, GeoRich@SIGMOD (2015)

- CIKM, SIGSPATIAL, ICDM demos, SISAP, iiWAS, BASNA, GeoRich@SIGMOD (2014)

- CIKM Posters (2011)

Journal Reviewer

- VLDBJ (×9), TODS (×2), TKDE (×6), GeoInformatica (×2), DKE, IS (×2), WWWJ, TSAS (×4), DAPD (×2), JCST, TJSS

External Reviewer

- SIGMOD, VLDB (2017)
- VLDB, SIGKDD (2016)
- SIGMOD, ICDE, EDBT (2015)
- SIGMOD, SIGKDD (2014)
- SIGMOD, ICDE, SIGKDD, SSTD, DASFAA (2013)
- DASFAA (2012)
- SIGMOD, CIKM, SSTD, TPDL (2011)
- ICDE, SETN, DEXA, EGOVIS (2010)
- VLDB, EDBT, CIKM, BPM (2009)
- Journal of IR (2008)
- PCI, PersDL (2007)
- PSI, DaWak, HDMS (2006)
- DEXA, EC-Web, I3E, ICWS (2005)

Member of Organizing Committee

- IEEE BigData (PC Vice Co-Chair) (2025)
- SIGSPATIAL, LocalRec@SIGSPATIAL (2024)
- SIGSPATIAL, LocalRec@SIGSPATIAL (2023)
- SIGSPATIAL, LocalRec@SIGSPATIAL (2022)
- LocalRec@SIGSPATIAL (2021)
- GeoRich@SIGMOD, LocalRec@SIGSPATIAL (2020)
- SSTD, LocalRec@SIGSPATIAL (2019)
- LocalRec@SIGSPATIAL (2018)
- GeoRich@SIGMOD, LocalRec@SIGSPATIAL, GeoTour@ADBIS (2017)
- GeoRich@SIGMOD (2016)
- LocalRec@RecSys, GeoRich@SIGMOD (2015)
- GeoRich@SIGMOD (2014)

DISTINCTIONS
- Best paper award, International Symposium on Spatial and Temporal Databases (SSTD) (2015)
- **Greek State Scholarships Foundation (IKY)** (2007–2010)

- *AEOLIAN: Abduction in Environmental Sciences by Artificial Intelligence*
  Carl-Zeiss Foundation Breakthroughs 2025: Climate and environment

- *KINet: Artificial intelligence-based mission support with sensor safety net and sensor data analysis*
  German Federal Ministry of Education and Research (BMBF) call on "Artificial Intelligence in Civil Security Research II"

- *Next Generation Route Planning*
  Council for Independent Research, Denmark

- *Next Generation Route Planning*
  Carlsberg Foundation, Denmark

- *Spatio-Textual Data Management*
  Alexander von Humboldt Foundation, Germany

ACADEMIC
PROJECTS

Johannes Gutenberg University Mainz, Germany

Temporal Information Retrieval Search on Steroids (2025–2026)

- Funded by the Internal University Research Funding

Big Data: In-Memory Databases and Data Analytics (2018–2022)

- Funded by the Carl-Zeiss Foundation

Aarhus University, Denmark

Future Cropping (2016–2017)

- Funded by the Innovation Fund Denmark, J. nr. 5107-00002B

Humboldt-Universität zu Berlin, Germany

METRIK: Model-Based Development of Technologies for Self-Organizing Decentralized Information Systems in Disaster Management (2013–2015)

- Funded by the German Research Foundation (DFG), grant no GRK 1324

The University of Hong Kong, Hong Kong SAR, China

Spatio-Textual Joins (2011–2013)

- Funded by the Research Grants Council (RGC) of Hong Kong, HKU 714212E

National Technical University of Athens, Greece

Tree-structured Data Source Integration on the Semantic Web (2007)

- Scientific and technological cooperation between RTD organizations in Greece, USA, Canada, Australia, New Zealand, Japan, Korea, Taiwan, Malaisia and Singapore

University of Athens, Greece

DL.org: Coordination action on digital library interoperability, best practices and modeling foundations (2009)

    – Funded by the European Union

DILIGENT: A Testbed Digital Library Infrastructure on Grid Enabled Technology (2007)

    – Funded by the European Union

SODIUM: Service Oriented Development In a Unified Environment (2005)

    – Funded by the European Union

INTEROP: Interoperability research and networked enterprises applications and software (2005)

    – Funded by the European Union

Athens University of Economics and Business, Greece

Web data mining and management based on the Peer-to-Peer (P2P) networks paradigm (2007–2008)

    – Funded by the Greek Ministry of Development

SQO-OSS: Source Quality Observatory for Open Source Software (2006–2008)

    – Funded by the European Union

EXPERIENCE IN INDUSTRY

Biovista Knowledge Management for the Life Sciences, Greece

Software and database engineer (2006)

    – Performance enhancement of BEA search engine core
    – MySQL server tuning, database and query analysis and optimization
    – Implementing inverted file on top of Berkeley DB

Institute for Language and Speech Processing (ILSP), Greece

Software engineer - Department of Electronic Lexicography (2001–2005)

    – Symfonia, advanced spelling checker
    – Rules for syntactic analysis of human text
    – Environment for creating and validating syntactic rules of Symfonia

iLang Language Innovation, Greece

Software engineer (2004–2005)

    – Development of an electronic edition for a thesaurus