Kyriakos Mouratidis

Curriculum Vitae
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Personal Information	First Name: Kyriakos Surname: Mouratidis Gender: Male Nationality: Greek
Current Position	Professor of Computer Science School of Computing and Information Systems Singapore Management University
Education	Ph.D. in Computer Science Department of Computer Science and Engineering Hong Kong University of Science and Technology B.Sc. in Computer Science Department of Computer Science Aristotle University of Thessaloniki, Greece GPA: 9.14/10 (2nd highest GPA in cohort)
Research Interests	Spatial and Spatiotemporal Databases, Multi-objective and Preference-based Queries, Mobile Computing.
Journal Articles	J1. Dimitris Papadias, Yufei Tao, Kyriakos Mouratidis, Chun Kit Hui: Aggregate Nearest Neighbor Queries in Spatial Databases. *ACM Transactions on Database Systems (TODS)*, 30(2), 529-576, 2005. J2. Kyriakos Mouratidis, Dimitris Papadias, Spiridon Bakiras, Yufei Tao: A Threshold-based Algorithm for Continuous Monitoring of *k* Nearest Neighbors. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 17(11), 1451-1464, 2005. J3. Jun Zhang, Dimitris Papadias, Kyriakos Mouratidis, Manli Zhu: Query Processing in Spatial Databases Containing Obstacles. *International Journal of Geographic Information Science (IJGIS)*, 19(10), 1091-1111, 2005. J4. Kyriakos Mouratidis, Dimitris Papadias: Continuous Nearest Neighbor Queries over Sliding Windows. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 19(6), 789-803, 2007.

J5. Panos Kalnis, Gabriel Ghinita, Kyriakos Mouratidis, Dimitris Papadias: Preventing Location-based Identity Inference in Anonymous Spatial Queries. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 19(12), 1719-1733, 2007.

J6. Kyriakos Mouratidis, Dimitris Papadias, Spiros Papadimitriou: Tree-based Partition Querying: A Methodology for Computing Medoids in Large Spatial Datasets. *Very Large Data Bases Journal (VLDBJ)*, 17(4), 923-945, 2008.

J7. Kyriakos Mouratidis, Dimitris Sacharidis, HweeHwa Pang: Partially Materialized Digest Scheme: An Efficient Verification Method for Outsourced Databases. *Very Large Data Bases Journal (VLDBJ)*, 18(1), 363-381, 2009.

J8. Kyriakos Mouratidis, Spiridon Bakiras, Dimitris Papadias: Continuous Monitoring of Spatial Queries in Wireless Broadcast Environments. *IEEE Transactions on Mobile Computing (TMC)*, 8(10), 1297-1311, 2009.

J9. Leong Hou U, Kyriakos Mouratidis, Man Lung Yiu, Nikos Mamoulis: Optimal Matching between Spatial Datasets under Capacity Constraints. *ACM Transactions on Database Systems (TODS)*, 35(2), 2010.

J10. Leong Hou U, Kyriakos Mouratidis, Nikos Mamoulis: Continuous Spatial Assignment of Moving Users. *Very Large Data Bases Journal (VLDBJ)*, 19(2), 141-160, 2010.

J11. Kyriakos Mouratidis, Man Lung Yiu: Anonymous Query Processing in Road Networks. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 22(1), 2-15, 2010.

J12. Dimitris Sacharidis, Kyriakos Mouratidis, Dimitris Papadias: *k*-Anonymity in the Presence of External Databases. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 22(3), 392-403, 2010.

J13. Kyriakos Mouratidis, HweeHwa Pang: Efficient Evaluation of Continuous Text Search Queries. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 23(10), 1469-1482, 2011.

J14. HweeHwa Pang, Jilian Zhang, Kyriakos Mouratidis: Enhancing Access Privacy of Range Retrievals over B+-Trees. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 25(7), 1533-1547, 2013.

J15. Jilian Zhang, Kyriakos Mouratidis, HweeHwa Pang: Direct Neighbor Search. *Information Systems (IS)*, 44, 73-92, 2014.

J16. Kyriakos Mouratidis, Jing Li, Yu Tang, Nikos Mamoulis: Joint Search by Social and Spatial Proximity. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 27(3), 781-793, 2015.

J17. Yimin Lin, Kyriakos Mouratidis: Best Upgrade Plans for Single and Multiple Source-Destination Pairs. *GeoInformatica: Special Issue on the Best of SSTD 2013*, 19(2), 365-404, 2015.

J18. Pui Hang Li, Man Lung Yiu, Kyriakos Mouratidis: Discovering Historic Traffic-tolerant Paths in Road Networks. *GeoInformatica*, 21(1), 1-32, 2017.

J19. Leong Hou U, Junjie Zhang, Kyriakos Mouratidis, Ye Li: Continuous Top-k Monitoring on Document Streams. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 29(5), 991-1003, 2017.

J20. Bo Tang, Man Lung Yiu, Kyriakos Mouratidis, Jiahao Zhang, Kai Wang: On Discovering Motifs and Frequent Patterns in Spatial Trajectories with Discrete Fréchet Distance. *GeoInformatica*, 26(1), 29-66, 2022.

J21. Kyriakos Mouratidis, Keming Li, Bo Tang: Quantifying the Competitiveness of a Dataset in Relation to General Preferences. *Very Large Data Bases Journal (VLDBJ)*, 33(1), 231-250, 2024.

Conference Publications	C1. Dimitris Papadias, Qiongmao Shen, Yufei Tao, Kyriakos Mouratidis: Group Nearest Neighbor Queries. Proceedings of the *IEEE International Conference on Data Engineering (ICDE)*, pp. 301-312, 2004.

C2. Jun Zhang, Dimitris Papadias, Kyriakos Mouratidis, Manli Zhu: Spatial Queries in the Presence of Obstacles. Proceedings of the *International Conference on Extending Database Technology (EDBT)*, pp. 366-384, 2004.

C3. Kyriakos Mouratidis, Marios Hadjieleftheriou, Dimitris Papadias: Conceptual Partitioning: An Efficient Method for Continuous Nearest Neighbor Monitoring. Proceedings of the *ACM Conference on Management of Data (SIGMOD)*, pp. 634-645, 2005.

C4. Kyriakos Mouratidis, Dimitris Papadias, Spiros Papadimitriou: Medoid Queries in Large Spatial Databases. Proceedings of the *International Symposium on Spatial and Temporal Databases (SSTD)*, pp. 55-72, 2005.

C5. Manolis Terrovitis, Spiridon Bakiras, Dimitris Papadias, Kyriakos Mouratidis: Constrained Shortest Path Computation. Proceedings of the *International Symposium on Spatial and Temporal Databases (SSTD)*, pp. 181-199, 2005.

C6. Kyriakos Mouratidis, Spiridon Bakiras, Dimitris Papadias: Continuous Monitoring of Top-k Queries over Sliding Windows. Proceedings of the *ACM Conference on Management of Data (SIGMOD)*, pp. 635-646, 2006.

C7. Kyriakos Mouratidis, Man Lung Yiu, Dimitris Papadias, Nikos Mamoulis: Continuous Nearest Neighbor Monitoring in Road Networks. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 43-54, 2006.

C8. Stavros Papadopoulos, Dimitris Sacharidis, Kyriakos Mouratidis: Continuous Medoid Queries over Moving Objects. Proceedings of the *International Symposium on Spatial and Temporal Databases (SSTD)*, pp. 38-56, 2007.

C9. Leong Hou U, Man Lung Yiu, Kyriakos Mouratidis, Nikos Mamoulis: Capacity Constrained Assignment in Spatial Databases. Proceedings of the *ACM Conference on Management of Data (SIGMOD)*, pp. 15-28, 2008.

C10. HweeHwa Pang, Kyriakos Mouratidis: Authenticating the Query Results of Text Search Engines. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 126-137, 2008.

C11. Dimitris Sacharidis, Kostas Patroumpas, Manolis Terrovitis, Verena Kantere, Michalis Potamias, Kyriakos Mouratidis, Timos K. Sellis: On-Line Discovery of Hot Motion Paths. Proceedings of the *International Conference on Extending Database Technology (EDBT)*, pp. 392-403, 2008.

C12. HweeHwa Pang, Jilian Zhang, Kyriakos Mouratidis: Scalable Verification for Outsourced Dynamic Databases. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 802-813, 2009.

C13. Leong Hou U, Nikos Mamoulis, Kyriakos Mouratidis: A Fair Assignment Algorithm for Multiple Preference Queries. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 1054-1065, 2009.

C14. Kyriakos Mouratidis, HweeHwa Pang: An Incremental Threshold Method for Continuous Text Search Queries. Proceedings of the *IEEE International Conference on Data Engineering (ICDE)*, pp. 1187-1190 (short paper), 2009.

C15. Leong Hou U, Nikos Mamoulis, Kyriakos Mouratidis: Efficient Evaluation of Multiple Preference Queries. Proceedings of the *IEEE International Conference on Data Engineering (ICDE)*, pp. 1251-1254 (short paper), 2009.

C16. Kar Way Tan, Yimin Lin, Kyriakos Mouratidis: Spatial Cloaking Revisited: Distinguishing Information Leakage from Anonymity. Proceedings of the *International Symposium on Spatial and Temporal Databases (SSTD)*, pp. 117-134, 2009.

C17. Georgios Kellaris, Kyriakos Mouratidis: Shortest Path Computation on Air Indexes. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 747-757, 2010.

C18. Man Lung Yiu, Yimin Lin, Kyriakos Mouratidis: Efficient Verification of Shortest Path Search via Authenticated Hints. Proceedings of the *IEEE International Conference on Data Engineering (ICDE)*, pp. 237-248, 2010.

C19. Kyriakos Mouratidis, Yimin Lin, Man Lung Yiu: Preference Queries in Large Multi-Cost Transportation Networks. Proceedings of the *IEEE International Conference on Data Engineering (ICDE)*, pp. 533-544, 2010.

C20. Jilian Zhang, Kyriakos Mouratidis, HweeHwa Pang: Heuristic Algorithms for Balanced Multi-way Number Partitioning. Proceeding of the *International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 693-698 (full paper, full presentation), 2011.

C21. Kyriakos Mouratidis, Man Lung Yiu: Shortest Path Computation with No Information Leakage. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 692-703, 2012.

C22. Kyriakos Mouratidis, HweeHwa Pang: Computing Immutable Regions for Subspace Top-k Queries. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 73-84, 2013.

C23. Yimin Lin, Kyriakos Mouratidis: Shortlisting Top-K Assignments. Proceeding of the *International Conference on Scientific and Statistical Database Management (SSDBM)*, article no. 21, 2013.

C24. Yimin Lin, Kyriakos Mouratidis: Best Upgrade Plans for Large Road Networks. Proceedings of the *International Symposium on Spatial and Temporal Databases (SSTD)*, pp. 223-240, 2013.

C25. Jilian Zhang, Kyriakos Mouratidis, HweeHwa Pang: Global Immutable Region Computation. Proceedings of the *ACM Conference on Management of Data (SIGMOD)*, pp. 1151-1162, 2014.

C26. Pui Hang Li, Man Lung Yiu, Kyriakos Mouratidis: Historical Traffic-Tolerant Paths in Road Networks. Proceedings of the *ACM Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL)*, pp. 477-480 (short paper), 2014.

C27. Kyriakos Mouratidis, Jilian Zhang, HweeHwa Pang: Maximum Rank Query. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 1554-1565, 2015.

C28. Kyriakos Mouratidis, Jing Li, Yu Tang, Nikos Mamoulis: Joint Search by Social and Spatial Proximity [Extended Abstract]. Proceedings of the *IEEE International Conference on Data Engineering (ICDE)*, pp. 1578-1579, 2016 (in poster session devoted to TKDE articles published in 2015).

C29. Bo Tang, Man Lung Yiu, Kyriakos Mouratidis, Kai Wang: Efficient Motif Discovery in Spatial Trajectories Using Discrete Fréchet Distance. Proceedings of the *International Conference on Extending Database Technology (EDBT)*, pp. 378-389, 2017.

C30. Bo Tang, Kyriakos Mouratidis, Man Lung Yiu: Determining the Impact Regions of Competing Options in Preference Space. Proceedings of the *ACM Conference on Management of Data (SIGMOD)*, pp. 805-820, 2017.

C31. Leong Hou U, Junjie Zhang, Kyriakos Mouratidis, Ye Li: Continuous Top-k Monitoring on Document Streams (Extended Abstract). Proceedings of the *IEEE International Conference on Data Engineering (ICDE)*, pp. 1803-1804, 2018 (in poster session devoted to TKDE articles published in 2017).

C32. Kyriakos Mouratidis, Bo Tang: Exact Processing of Uncertain Top-k Queries in Multi-criteria Settings. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 866-879, 2018.

C33. Bo Tang, Kyriakos Mouratidis, Man Lung Yiu, Zhenyu Chen: Creating Top Ranking Options in the Continuous Option and Preference Space. Proceedings of the *Very Large Data Bases Conference (VLDB)*, pp. 1181-1194, 2019.

C34. Bo Tang, Kyriakos Mouratidis, Mingji Han: On m-Impact Regions and Standing Top-k Influence Problems. Proceedings of the *ACM Conference on Management of Data (SIGMOD)*, pp. 1784-1796, 2021.

C35. Kyriakos Mouratidis, Keming Li, Bo Tang: Marrying Top-k with Skyline Queries: Relaxing the Preference Input while Producing Output of Controllable Size. Proceedings of the *ACM Conference on Management of Data (SIGMOD)*, pp. 1317-1330, 2021.

C36. Kankan Zhou, Eason Lai, Wei Bin Au Yeong, Kyriakos Mouratidis, Jing Jiang: ROME: Evaluating Pre-trained Vision-Language Models on Reasoning beyond Visual Common Sense. *Findings of the Association for Computational Linguistics: EMNLP*, pp. 10185-10197, 2023.

C37. Hanhua Xiao, Yuchen Li, Yanhao Wang, Panagiotis Karras, Kyriakos Mouratidis, Natalia-Rozalia Avlona: How to Avoid Jumping to Conclusions: Measuring the Robustness of Outstanding Facts in Knowledge Graphs. Proceedings of the *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, pp. 3539-3550, 2024.

Keynote Speeches, Tutorials & Invited Papers	I1. Kyriakos Mouratidis: Spatial Queries in Wireless Broadcast Environments. Keynote at *International ACM Workshop on Data Engineering for Wireless and Mobile Access (MobiDE)*, pp. 39-44, 2012.
	I2. Kyriakos Mouratidis: Strong Location Privacy: A Case Study on Shortest Path Queries. Invited paper at *International Workshop on Mobile Data Analytics (MoDA)*, (ICDE Workshops) pp. 136-143, 2013.
	I3. Kyriakos Mouratidis: Geometric Aspects and Auxiliary Features to Top-k Processing. Advanced seminar at *International Conference on Mobile Data Management (MDM)*, pp. 1-3, 2016.
	I4. Kyriakos Mouratidis: Geometric Approaches for Top-k Queries. Tutorial at *Very Large Data Bases Conference (VLDB)*, pp. 1985-1987, 2017.
	I5. Kyriakos Mouratidis: Applying Spatial Database Techniques to Other Domains: a Case Study on Top-k and Computational Geometric Operators. Invited seminar at *ACM Workshop on Managing and Mining Enriched Geo-Spatial Data (GeoRich)*, pp. 25-26, 2018.
	I6. Kyriakos Mouratidis: Geometric Top-k Processing: Updates since MDM'16. Advanced seminar at *International Conference on Mobile Data Management (MDM)*, pp. 1-3, 2019.
	I7. Kyriakos Mouratidis: Opportunities for Spatial Database Research in the Context of Preference Queries. Keynote at *ACM SIGSPATIAL Workshop on Location-based Recommendations, Geosocial Networks and Geoadvertising (LocalRec)*, pp. 1-3, 2023.
Proceedings Editor	1. Dieter Pfoser, Yufei Tao, Kyriakos Mouratidis, Mario A. Nascimento, Mohamed F. Mokbel, Shashi Shekhar, Yan Huang: *Advances in Spatial and Temporal Databases - 12th International Symposium, SSTD 2011, Minneapolis, MN, USA, August 24-26, 2011, Proceedings*. Lecture Notes in Computer Science 6849, Springer, 2011.
	2. Mario A. Nascimento, Mohamed A. Sharaf, Feifei Li, Kyriakos Mouratidis: *Proceedings of the 12th International ACM Workshop on Data Engineering for Wireless and Mobile Access, MobiDE 2013, New York, NY, USA, June 23, 2013*. ACM, 2013.
	3. Mario A. Nascimento, Matthias Renz, Tobias Emrich, Kyriakos Mouratidis, Andreas Züfle: *Proceedings of ACM Workshop on Managing and Mining Enriched Geo-Spatial Data, GeoRich@SIGMOD 2014, Snowbird, UT, USA, June 27, 2014*. ACM, 2014.
	4. Kyriakos Mouratidis, Matthias Renz, Tobias Emrich, Andreas Züfle, Krzysztof Janowicz: *Second International ACM Workshop on Managing and Mining Enriched Geo-Spatial Data, GeoRich@SIGMOD 2015, Melbourne, VIC, Australia, May 31, 2015*. ACM, 2015.
Book Chapters & Encyclopedia Entries	1. Kyriakos Mouratidis, Dimitris Papadias, Spiros Papadimitriou: Computing Medoids in Large Spatial Datasets. *Geographic Data Mining and Knowledge Discovery, Second Edition*, pp. 189-228, Harvey J. Miller and Jiawei Han (editors), Taylor and Francis, 2008.
	2. Kyriakos Mouratidis: Continuous Monitoring of Spatial Queries.

Encyclopedia of Database Systems, pp. 479-484, M. Tamer Özsu and Ling Liu (editors), Springer, 2009.

3. Sarana Nutanong, Mohammed Eunus Ali, Egemen Tanin, Kyriakos Mouratidis: Dynamic Nearest Neighbor Queries in Euclidean Space. *Encyclopedia of GIS*, pp. 496-501, Shashi Shekhar and Hui Xiong (editors), Springer, 2017.

Research Grants	External: Kyriakos Mouratidis (PI), "PERFLEXO: a PERsonalized, FLExible, and controlled Output-size framework for multi-objective preference queries in large databases", Ministry of Education (MOE) Tier 2, 2022-2025, S$596,687.00 Internal: Kyriakos Mouratidis (PI), "Determining Impact Regions in Preference Space", SMU Internal Grant, 2017, S$31,634.27 Kyriakos Mouratidis (PI), "Joint Search by Social and Spatial Proximity", SMU Internal Grant, 2014, S$21,593.78
Teaching Experience	Course Instructor, Singapore Management University, May 2006 - present: IS202 / IS112 - Data Management IS410 - Advanced Data Management ISSS615 - Data Management (for Master of IT in Business programme) Teaching Assistant, Hong Kong University of Science and Technology, September 2002 - June 2004.
Ph.D. Student Supervision	Graduated: Yimin Lin Jilian Zhang (co-advised with Prof. HweeHwa Pang)
M.Phil. Student Supervision	Graduated: Yiyi Wang
University & School Service	Programme Director, Masters of Applied Information Systems (MAIS), School of Computing and Information Systems, Jul 2014 - Jun 2018 University Senate Member, Faculty Senate, Apr 2017 - Mar 2021 Executive Committee (EXCO) of Faculty Senate, Apr 2018 - Mar 2021 Faculty Advisory Committee (Teaching and Learning), Dec 2011 - Jun 2014
External Service	Senior Roles: Associate Editor for DAPD journal since May 2017 Associate Editor for SIGMOD Record since October 2019 Steering Committee Member for ACM GeoRich since June 2015

Field Editor on "Spatial Optimization" for Encyclopedia of GIS (2nd ed.)

Demonstrations Co-Chair for SSTD 2011

Vision and Challenge Track Co-Chair for SSTD 2011

Program Committee Co-Chair for MobiDE 2013

Program Committee Co-Chair for GeoRich 2014

Senior PC Member (meta-reviewer) for DASFAA 2015

General Co-Chair for GeoRich 2015

Best Paper Award Committee Member for SIGMOD 2016

Group Leader for SIGMOD 2016

Best Demo Award Committee Member for VLDB (2017, 2018)

Co-Chair of Student Research Competition at ACM SIGSPATIAL (2018, 2019)

Senior PC Member (meta-reviewer) for CIKM 2022

Workshops Co-Chair for MDM 2023

Best Paper Award Committee Member for ACM SIGSPATIAL 2023

Associate Editor for SIGMOD 2024

Vice PC Chair for ACM SIGSPATIAL 2024

Program Committee Memberships:

SSTD (2007, 2009, 2013, 2015, 2017, 2019, 2021)
ICDE (2008, 2017, 2019, 2020, 2021, 2022) & ICDE Demo Track (2009, 2013)
SSDBM (2008, 2011)
SIGMOD (2010, 2013, 2016) & SIGMOD Demo Track (2018, 2019)
HDMS (2010, 2011, 2012, 2014, 2018)
ACM SIGSPATIAL (2011, 2012, 2013, 2015, 2016, 2017)
VLDB (2012, 2013, 2014, 2023) & VLDB Demo Track (2017, 2018)
MDM (2012, 2013, 2016, 2019) & MDM Demo Track 2013
MobiGIS (2012, 2013, 2014, 2015)
and: SIGMOD IDAR 2009, DEXA 2009, ER SeCoGIS 2009, CIKM 2009 (Demo Track), ICDE 2010 PhD Workshop, CIKM 2010, APSIPA 2010, IEEE BigData 2013, EDBT 2018, DASFAA 2018

Awards   Distinguished Associate Editor Award, SIGMOD, 2024.

Nominated for Teaching Excellence in Postgraduate Professional Programmes Award, SMU Teaching Excellence Awards, 2022.

Lee Kong Chian Research Fellowship, Lee Foundation, 2018-2020.

CSD Alumni Award, 1 of the 4 recipients of the inaugural CSD Alumni Awards by the Department of Computer Science at Aristotle University of Thessaloniki, Greece, 2017.

Nominated for Excellent Teacher Award, SMU Teaching Excellence Awards, 2016.

Long Service Award (10 years), SMU, 2016.

Nominated for Excellent Teacher Award, SMU Teaching Excellence Awards, 2015.

Long Service Award (5 years), SMU, 2011.

Nominated for Most Promising Teacher Award, SMU Teaching Excellence Awards, 2009.

Fellowship for Research Excellence, Lee Foundation, Singapore, 2007-2009.

Postgraduate Studentship, Hong Kong University of Science and Technology, 2002 - 2006.

Scholarship for attending the 2002 Lecture Series in Computer Science, *The Data Avalanche: Reducing Information Overload*, Onassis Foundation, Greece, 2002.

Scholarship for Academic Excellence (ranked 1st in class in 4th year of undergraduate study), State Scholarship's Foundation, Greece, 2002.

Scholarship for Academic Excellence (ranked 1st in class in 3rd year of undergraduate study), State Scholarship's Foundation, Greece, 2001.