

CURRICULUM VITAE

Part A. PERSONAL INFORMATION

CV date	Dec 2019
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Name and Surname	Michael Vassilakopoulos		
Researcher numbers	Researcher ID	K-2324-2017	
	Orcid code	0000-0003-2256-5523	

A.1. Current position

University	University of Thessaly		
Department	Electrical and Computer Engineering		
Address and Country	37 Glavani – 28th October Str 382 21 Volos – Greece		
Phone number	+30-24210-74984	E-mail	mvasilako@uth.gr
Current position	Associate Professor of Database Systems		

A.2. Education

Degree	University	Month/Year
B.Eng. Computer & Informatics Engineering (9.1/10, honors)	University of Patras, Greece	7/1990
PhD Computer & Informatics Engineering (honors)	Aristotle University of Thessaloniki, Greece	1/1995

Part B. CV SUMMARY

Dr. Michael Vassilakopoulos was born in Thessaloniki, Greece, in 1967. During basic and secondary education he has been a flag-bearer (top student of his school). In 1985 he entered the department of Computer Engineering and Informatics of the University of Patras (top department of Greece in Sciences and Engineering, at the time) from which, in 1990, he obtained a five-year Diploma in Computer Engineering and Informatics with honors. His diploma thesis deals with Computational Geometry. During his studies, he has been an undergraduate scholar of the Greek State Scholarship Foundation. During 1990-1991, he attended postgraduate courses at the department of Electrical and Computer Engineering of the Aristotle University of Thessaloniki (AUTH – Greece). In 1991, after taking an exam of the Greek State Scholarship Foundation, he was nominated a scholarship for PhD studies. He followed PhD studies at the department of Electrical and Computer Engineering of AUTH and obtained a PhD in Computer Science from this department in Jan. 1995 with honors. His thesis deals with Spatial Databases. Subsequently, for 18 months, he followed the obligatory military service in Greece as a Special Scientist / Computer Programmer. He obtained a scholarship of the Greek State Scholarship Foundation for Post-Doc research at AUTH, from 12/97 to 1/99. Since 1996, he has taught in several Universities and Technology Institutes (the University of Macedonia, AUTH, the Alexander Technological Educational Institute of Thessaloniki, the Hellenic Open University, the Open University of Cyprus, the University of Western Macedonia, the University of Central Greece and the University of Thessaly). In 2000, he entered the Greek Public Administration where he served as an Informatics Engineer. In 2002, he was elected an Associate Professor of Databases at the Department of Informatics of the Alexander Technological Educational Institute of Thessaloniki, where he also served as Vice Chair and Division Director. In 2007, he was elected a professor of the Alexander Technological Educational Institute of Thessaloniki. Between 2008 and 2013, he was an Associate Professor of Database Systems at the Department of Computer Science and Biomedical Informatics of the University of Central Greece (Lamia). He also served as a vice chair of this department. Since 2014, he is an Associate Professor of Database Systems at the Department of Electrical and Computer Engineering of the University of Thessaly (Volos). During spring 2019, he served as Director of Postgraduate Studies in Information Systems at the Hellenic Open University. Currently, he serves as Head of the new department of Digital Systems (Univ. of Thessaly) and as Director of the Data Structuring and Engineering Lab, of the Univ. of Thessaly. He has participated in/coordinated several RTD projects related to Databases, GIS, WWW, Information Systems and Employment. His research interests include databases, data

structures, algorithms, data mining, employment analysis, information systems, GIS and current trends of data management.

Part C. RELEVANT MERITS

C.1. Publications (DBLP list)

Journal Articles

2019

[j26] George Roumelis, Athanasios Fevgas, Michael Vassilakopoulos, Antonio Corral, Panayiotis Bozanis, Yannis Manolopoulos: Bulk-loading and bulk-insertion algorithms for xBR+-trees in Solid State Drives. *Computing* 101(10): 1539-1563 (2019)

[j25] Panagiotis Moutafis, George Mavrommatis, Michael Vassilakopoulos, Spyros Sioutas: Efficient processing of all-k-nearest-neighbor queries in the MapReduce programming framework. *Data Knowl. Eng.* 121: 42-70 (2019)

2018

[j24] George Roumelis, Michael Vassilakopoulos, Antonio Corral, Yannis Manolopoulos An efficient algorithm for bulk-loading xBR+-trees. *Computer Standards & Interfaces* 57: 83-100 (2018)

[j23] Francisco García-García, Antonio Corral, Luis Iribarne, Michael Vassilakopoulos, Yannis Manolopoulos Efficient large-scale distance-based join queries in spatialhadoop. *Geoinformatica* 22(2): 171-209 (2018)

2017

[j22] George Roumelis, Michael Vassilakopoulos, Antonio Corral, Yannis Manolopoulos Efficient query processing on large spatial databases: A performance study. *Journal of Systems and Software* 132: 165-185 (2017)

2016

[j21] George Roumelis, Antonio Corral, Michael Vassilakopoulos, Yannis Manolopoulos New plane-sweep algorithms for distance-based join queries in spatial databases. *Geoinformatica* 20(4): 571-628 (2016)

2014

[j20] Nikitas N. Karanikolas, Michael Vassilakopoulos Comparison of Post-Relational and Object-Relational modelling for real-world database applications. *J. Systems and IT* 16(4): 313-340 (2014)

2006

[j19] Antonio Corral, Yannis Manolopoulos, Yannis Theodoridis, Michael Vassilakopoulos Cost models for distance joins queries using R-trees. *Data Knowl. Eng.* 57(1): 1-36 (2006)

[j18] Katerina Raptopoulou, Michael Vassilakopoulos, Yannis Manolopoulos On past-time indexing of moving objects. *Journal of Systems and Software* 79(8): 1079-1091 (2006)

2005

[j17] Antonio Corral, Michael Vassilakopoulos On Approximate Algorithms for Distance-Based Queries using R-trees. *Comput. J.* 48(2): 220-238 (2005)

[j16] Athanasios D. Styliadis, Michael Vassilakopoulos A spatio-temporal geometry-based model for digital documentation of historical living systems. *Information & Management* 42(2): 349-359 (2005)

2004

[j15] Antonio Corral, Yannis Manolopoulos, Yannis Theodoridis, Michael Vassilakopoulos Algorithms for processing K-closest-pair queries in spatial databases. *Data Knowl. Eng.* 49(1): 67-104 (2004)

[j14] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos Benchmarking access methods for time-evolving regional data. *Data Knowl. Eng.* 49(3): 243-286 (2004)

[j13] Antonio Corral, Yannis Manolopoulos, Yannis Theodoridis, Michael Vassilakopoulos Multi-Way Distance Join Queries in Spatial Databases. *Geoinformatica* 8(4): 373-402 (2004)

2003

[j12] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos Generating Dynamic Raster Data. *IEEE Data Eng. Bull.* 26(2): 33-39 (2003)

- [j11] Alexandros Nanopoulos, Michael Vassilakopoulos, Yannis Manolopoulos Performance Evaluation of Lazy Deletion Methods in R-trees. *Geoinformatica* 7(4): 337-354 (2003)
2002
- [j10] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos On the Generation of Time-Evolving Regional Data. *Geoinformatica* 6(3): 207-231 (2002)
2000
- [j9] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos Overlapping Linear Quadrees and Spatio-Temporal Query Processing. *Comput. J.* 43(4): 325-343 (2000)
- [j8] Eleni Tousidou, Michael Vassilakopoulos, Yannis Manolopoulos Performance Evaluation of Parallel S-Trees. *J. Database Manag.* 11(3): 28-34 (2000)
1997
- [j7] Michael Vassilakopoulos, Yannis Manolopoulos On Sampling Regional Data. *Data Knowl. Eng.* 22(3): 309-318 (1997)
1996
- [j6] Yannis Manolopoulos, Enrico Nardelli, Guido Proietti, Michael Vassilakopoulos On the creation of quadtrees by using a branching process. *Image Vision Comput.* 14(2): 159-164 (1996)
1995
- [j5] Michael Vassilakopoulos, Yannis Manolopoulos Dynamic Inverted Quadtree: A Structure for Pictorial Databases. *Inf. Syst.* 20(6): 483-500 (1995)
- [j4] Michael Vassilakopoulos, Yannis Manolopoulos, Brigitte Kröll Efficiency Analysis of Overlapped Quadtrees. *Nord. J. Comput.* 2(1): 70-84 (1995)
- [j3] Michael Vassilakopoulos, Yannis Manolopoulos A random model for analyzing region quadtrees. *Pattern Recognition Letters* 16(11): 1137-1145 (1995)
1994
- [j2] Michael Vassilakopoulos, Yannis Manolopoulos Analytical Comparison of Two Spatial Data Structures. *Inf. Syst.* 19(7): 569-582 (1994)
1993
- [j1] Michael Vassilakopoulos, Yannis Manolopoulos, K. Economou Overlapping quadtrees for the representation of similar images. *Image Vision Comput.* 11(5): 257-262 (1993)

Conference and Workshop Papers

- 2019
- [c48] Francisco García-García, Antonio Corral, Luis Iribarne, Michael Vassilakopoulos: MRSLICE: Efficient RkNN Query Processing in SpatialHadoop. *MEDI* 2019: 235-250
- [c47] Panagiotis Moutafis, Francisco García-García, George Mavrommatis, Michael Vassilakopoulos, Antonio Corral, Luis Iribarne: MapReduce algorithms for the K group nearest-neighbor query. *SAC* 2019: 448-455
2018
- [c46] Anderson Chaves Carniel, George Roumelis, Ricardo Rodrigues Ciferri, Michael Vassilakopoulos, Antonio Corral, Cristina Dutra de Aguiar Ciferri: An Efficient Flash-aware Spatial Index for Points. *GEOINFO* 2018: 68-79
- [c45] Francisco García-García, Antonio Corral, Luis Iribarne, Michael Vassilakopoulos: Voronoi-Diagram Based Partitioning for Distance Join Query Processing in SpatialHadoop. *MEDI* 2018: 251-267
- [c44] George Roumelis, Michael Vassilakopoulos, Antonio Corral, Athanasios Fevgas, Yannis Manolopoulos: Spatial Batch-Queries Processing Using xBR ⁺ -trees in Solid-State Drives. *MEDI* 2018: 301-317
2017
- [c43] George Mavrommatis, Panagiotis Moutafis, Michael Vassilakopoulos, Francisco García-García, Antonio Corral SliceNBound: Solving Closest Pairs and Distance Join Queries in Apache Spark. *ADBIS* 2017: 199-213
- [c42] Francisco García-García, Antonio Corral, Luis Iribarne, George Mavrommatis, Michael Vassilakopoulos A Comparison of Distributed Spatial Data Management Systems for Processing Distance Join Queries. *ADBIS* 2017: 214-228
- [c41] Nikolaos Athanasiou, Michael Vassilakopoulos, Antonio Corral, Yannis Manolopoulos Use-based Optimization of Spatial Access Methods. *MEDES* 2017: 65-72

- [c40] George Roumelis, Michael Vassilakopoulos, Antonio Corral, Yannis Manolopoulos Bulk Insertions into xBR \wedge \wedge -trees. MEDI 2017: 185-199
- [c39] Francisco García-García, Antonio Corral, Luis Iribarne, Michael Vassilakopoulos RkNN Query Processing in Distributed Spatial Infrastructures: A Performance Study. MEDI 2017: 200-207
2016
- [c38] Francisco García-García, Antonio Corral, Luis Iribarne, Michael Vassilakopoulos, Yannis Manolopoulos Enhancing SpatialHadoop with Closest Pair Queries. ADBIS 2016: 212-225
- [c37] Nikolaos Mallios, Michael Vassilakopoulos LearnEA - Design and Functionalities of a Hybrid Personalized Learning Electronic Assistant. ICEIS (2) 2016: 339-344
- [c36] George Roumelis, Michael Vassilakopoulos, Antonio Corral, Yannis Manolopoulos Bulk-Loading xBR \wedge \wedge -trees. MEDI 2016: 57-71
2015
- [c35] George Roumelis, Michael Vassilakopoulos, Thanasis Loukopoulos, Antonio Corral, Yannis Manolopoulos The xBR \wedge \wedge -tree: An Efficient Access Method for Points. DEXA (1) 2015: 43-58
- [c34] George Roumelis, Michael Vassilakopoulos, Antonio Corral, Yannis Manolopoulos Plane-Sweep Algorithms for the K Group Nearest-Neighbor Query. GISTAM 2015: 83-93
- [c33] Nikolaos Ch. Kasmeridis, Michael Vassilakopoulos A diet-guide mobile application for diabetes mellitus management. Panhellenic Conference on Informatics 2015: 377-381
- [c32] Panos Papadopoulos, Thanasis Loukopoulos, Ioannis Anagnostopoulos, Nikolaos Tziritas, Michael Vassilakopoulos RAC: a remote application calling framework for coordination of mobile apps. Panhellenic Conference on Informatics 2015: 394-399
2014
- [c31] George Roumelis, Thanasis Loukopoulos, Michael Vassilakopoulos Database Design of a Geo-environmental Information System . ICEIS (2) 2014: 375-382
- [c30] George Roumelis, Michael Vassilakopoulos, Antonio Corral, Yannis Manolopoulos A New Plane-Sweep Algorithm for the K-Closest-Pairs Query. SOFSEM 2014: 478-490
2012
- [c29] Nikitas Karanikolas, Michael Vassilakopoulos, Nektarios Giannoulis A software tool for building a statistical prefix processor. BCI 2012: 100-105
- [c28] George Roumelis, Michael Vassilakopoulos, Antonio Corral The Deletion Operation in xBR-Trees. Panhellenic Conference on Informatics 2012: 138-143
2011
- [c27] George Roumelis, Michael Vassilakopoulos, Antonio Corral Performance Comparison of xBR-trees and R*-trees for Single Dataset Spatial Queries. ADBIS 2011: 228-242
- [c26] Nikitas N. Karanikolas, Michael Vassilakopoulos Assessment of language skills weaknesses and their confrontation through personalized e-lessons. CompSysTech 2011: 478-484
- [c25] George Roumelis, Michael Vassilakopoulos, Antonio Corral Nearest Neighbor Algorithms Using xBR-Trees. Panhellenic Conference on Informatics 2011: 51-55
- [c24] Michael Vassilakopoulos, Antonio Corral, Nikitas N. Karanikolas Join-Queries between Two Spatial Datasets Indexed by a Single R*-Tree. SOFSEM 2011: 533-544
2010
- [c23] Ioannis Michelakos, Nikolaos Mallios, Elpiniki I. Papageorgiou, Michael Vassilakopoulos Ant Colony Optimization and Data Mining: Techniques and Trends. 3PGCIC 2010: 284-289
- [c22] Ioannis Michelakos, Elpiniki I. Papageorgiou, Michael Vassilakopoulos A Hybrid Classification Algorithm Evaluated on Medical Data. WETICE 2010: 98-103
- [c21] Ioannis Michelakos, Elpiniki I. Papageorgiou, Michael Vassilakopoulos A Study of cAnt-Miner2 Parameters Using Medical Data Sets. WETICE 2010: 119-121
2009
- [c20] Nikitas N. Karanikolas, Michael Vassilakopoulos Conceptual Universal Database Language: Moving Up the Database Design Levels. ADBIS 2009: 330-346
2008
- [c19] Antonio Corral, Manuel Torres, Michael Vassilakopoulos, Yannis Manolopoulos Predictive Join Processing between Regions and Moving Objects. ADBIS 2008: 46-61
2006

- [c18] Katerina Raptopoulou, Michael Vassilakopoulos, Yannis Manolopoulos Efficient processing of past-future spatiotemporal queries. SAC 2006: 68-72
2006
- [c17] Antonio Corral, Alejandro D'Ermiliis, Yannis Manolopoulos, Michael Vassilakopoulos VA-Files vs. R*-Trees in Distance Join Queries. ADBIS 2005: 153-166
2004
- [c16] Katerina Raptopoulou, Michael Vassilakopoulos, Yannis Manolopoulos Towards Quadtree-Based Moving Objects Databases. ADBIS 2004: 230-245
2003
- [c15] Antonio Corral, Yannis Manolopoulos, Yannis Theodoridis, Michael Vassilakopoulos Distance Join Queries of Multiple Inputs in Spatial Databases. ADBIS 2003: 323-338
- [c14] Adriano Di Pasquale, Luca Forlizzi, Christian S. Jensen, Yannis Manolopoulos, Enrico Nardelli, Dieter Pfoser, Guido Proietti, Simonas Saltenis, Yannis Theodoridis, Theodoros Tzouramanis, Michael Vassilakopoulos Access Methods and Query Processing Techniques. Spatio-Temporal Databases: The CHOROCHRONOS Approach 2003: 203-261
2002
- [c13] Antonio Corral, Joaquín Cañadas, Michael Vassilakopoulos Approximate Algorithms for Distance-Based Queries in High-Dimensional Data Spaces Using R-Trees. ADBIS 2002: 163-176
- [c12] Apostolos Vontas, Philippos Koutsakas, Christina Athanasopoulou, Adamantios Koumpis, Panos Hatzaras, Yannis Manolopoulos, Michael Vassilakopoulos Integrating Mobile Agent Infrastructures in Operational ERP Systems. ICEIS 2002: 1107-1110
2001
- [c11] Antonio Corral, Michael Vassilakopoulos, Yannis Manolopoulos The Impact of Buffering on Closest Pairs Queries Using R-Trees. ADBIS 2001: 41-54
- [c10] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos Time split linear quadtree for indexing image databases. ICIP (2) 2001: 733-736
- [c9] Antonio Corral, Joaquín Cañadas, Michael Vassilakopoulos Processing Distance-Based Queries in Multidimensional Data Spaces Using R-trees. Panhellenic Conference on Informatics 2001: 1-18
2000
- [c8] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos Multiversion Linear Quadtree for Spatio-Temporal Data. ADBIS-DASFAA 2000: 279-292
- [c7] Antonio Corral, Yannis Manolopoulos, Yannis Theodoridis, Michael Vassilakopoulos Closest Pair Queries in Spatial Databases. SIGMOD Conference 2000: 189-200
1999
- [c6] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos Processing of Spatio-Temporal Queries in Image Databases. ADBIS 1999: 85-97
- [c5] Antonio Corral, Michael Vassilakopoulos Esquemas de Indexación Espacio-Temporales para Datos Microclimáticos. JISBD 1999: 61-62
- [c4] Antonio Corral, Michael Vassilakopoulos, Yannis Manolopoulos Algorithms for Joining R-Trees and Linear Region Quadtrees. SSD 1999: 251-269
1998
- [c3] Theodoros Tzouramanis, Michael Vassilakopoulos, Yannis Manolopoulos Overlapping Linear Quadtrees: A Spatio-Temporal Access Method. ACM-GIS 1998: 1-7
1995
- [c2] Yannis Manolopoulos, Enrico Nardelli, Guido Proietti, Michael Vassilakopoulos On the Generation of Aggregated Random Spatial Regions. CIKM 1995: 318-325
1993
- [c1] Michael Vassilakopoulos, Yannis Manolopoulos Analytical Results on the Quadtree Storage-Requirements. CAIP 1993: 41-48

Parts in Books or Collections

- 2011
- [p2] Ioannis Michelakos, Nikolaos Mallios, Elpiniki I. Papageorgiou, Michael Vassilakopoulos Ant Colony Optimization and Data Mining. Next Generation Data Technologies for Collective Computational Intelligence 2011: 31-60
2005

[p1] Antonio Corral, Michael Vassilakopoulos Approximate Computation of Distance-Based Queries. Spatial Databases 2005: 130-154

Editorship

2005

[e1] Yannis Manolopoulos, Apostolos Papadopoulos, Michael Vassilakopoulos Spatial Databases: Technologies, Techniques and Trends. Idea Group 2005, ISBN 1-59140-388-X

Reference Works

2018

[r6] Antonio Corral, Michael Vassilakopoulos: Closest-Pair Query. Encyclopedia of Database Systems (2nd ed.) 2018

[r5] Michael Vassilakopoulos, Theodoros Tzouramanis: Quadrees (and Family). Encyclopedia of Database Systems (2nd ed.) 2018

2009

[r4] Antonio Corral, Michael Vassilakopoulos Closest-Pair Query. Encyclopedia of Database Systems 2009: 368-373

[r3] Michael Vassilakopoulos, Theodoros Tzouramanis Quadrees (and Family). Encyclopedia of Database Systems 2009: 2219-2225

2005

[r2] Antonio Corral, Michael Vassilakopoulos Query Processing in Spatial Databases. Encyclopedia of Database Technologies and Applications 2005: 511-516

[r1] Michael Vassilakopoulos, Antonio Corral Spatio-Temporal Indexing Techniques. Encyclopedia of Database Technologies and Applications 2005: 652-657

C.2. Research projects and grants (selected list)

1. Management of Moving Objects and the WWW. 1/04-8/06. 54,000 € **Leader**.
2. Efficient Image databases, Protocol of cooperation Greece-Bulgaria. 11/05-11/07. 12,000 €. **Leader**.
3. Career Office of the U. of Central Greece, Ministry of Education. 7/10-12/12, 123,500 €. **Leader**.
4. Development of a Geo-ENVironmental information system for the region of CENTral Greece, Ministry of Education. 6/13-10/15, 555,000 €. **Leader**.
5. TIN2013-41576-R. Envolving dynamic systems in the cloud. A framework toward the Smart user interfaces. MINECO, Secretaría de Estado de Investigación, Desarrollo e Innovación, Programa Estatal de IDI orientada a los Restos de la Sociedad, Luis Iribarne (University of Almeria), 01/01/2014-31/12/2017, 160.579,1 €. **Researcher**.
6. Structure of Employment and Career of the U. of Central Greece. 11/10-2/11. **Researcher**.
7. Digital Guide of Higher Technological Education Professions (DIGUIPRO). 4/12-3/15. **Researcher**.
8. Design thinking in higher education for promoting human-centered innovation in business and society (ERASMUS+, 6/18-8/18. **Researcher**
9. Active Digital Learning Environments in Schools (ERASMUS+), 6/18 - 8/18. **Researcher**
10. Small Businesses Clinic, Ministry of Economy and Development, 6/18 - . **Researcher**

C.3 Participation in the supervision of Information Technology programs

1. Program "Politia" (in English: "State") for the modernization of the Public Administration in the Region of Central Macedonia.
2. Business Plan of the Region of Central Macedonia for Actions in the Information Society.
3. Elaboration of the Business Plan of the Ministry of Macedonia and Thrace within the Information Society Program of the 3rd Community Support Framework.

C.4 Member of Program Committees and Reviewer in Journals

Member of Program Committees in international research conferences from 2007: PCI, BCI, ACM SAC DBTTA, MEDI, ICEIS, ADBIS, CompSysTech, CONFENIS, HDMS, EANN, ICADIWT, CKDD, WETICE, Collaborative Technologies, EDTCI, AINA, INCoS, CISIS, MDSD, SCOPE, ZOCO, 3PGCIC, PATTERNS, CLOUD COMPUTING, Applied Computing, Data Mining, COLLA, DATA ANALYTICS, Web Based Communities and Social Media, Big Data Analytics, Data Mining and Computational Intelligence, GEOProcessing, GISTAM, ICCGI, WebIntelligence, ICSOFT, DATA, BIGDACI, WEBIST

Reviewer in international journals from 2007: Journal of Computer Science and Technology, Data and Knowledge Engineering, IEEE Transactions on Data and Knowledge Engineering, Journal of Systems and Software, Information Sciences, Journal of Information Science and Engineering, Journal of Information Science, International Journal of Grid and Utility Computing, International Journal of Production Research, Information - MDPI, Arabian Journal of Geosciences, Journal of Medical Systems, International Journal of Intelligent Information and Database Systems, International Journal of Virtual Reality, Journal of Location Based Services, Knowledge and Information Systems, Mobile Information Systems, Scientific World Journal, International Journal of Geo-Information, Security and Communication Networks, The Computer Journal

Member of the editorial board: International Journal of Distributed Systems and Technologies, Mobile Information Systems

C.5 Other Merits

Foreign languages: English C2, French B2, German A1.

15 years of experience in Open and Distance Learning at undergraduate and postgraduate level (as an adjunct faculty of the Hellenic Open University and the Open University of Cyprus).