



Antonios Deligiannakis

Biographical Note

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1. About me

I am an Associate Professor of Computer Science at the School of Electrical and Computer Engineering of the Technical University of Crete, the Director of the Distributed Multimedia Information Systems And Applications (MUSIC) Laboratory, and a member of the Editorial Board at the “**Big Data Research**” Journal by ELSEVIER. I am also the Coordinator of the H2020 European project [INFORE: Interactive Extreme-Scale Analytics and Forecasting](#), which was ranked 1st among 77 submitted project proposals.

My research interests are in the broad area of Big Data Management Systems, including Big Data Analytics over data streams, distributed data processing, secure processing and query authentication over data outsourced to untrusted servers, distributed complex event processing in large scale systems, data synopses, approximate query processing and large scale data mining.

2. Education

- Postdoc National & Kapodistrian University of Athens
Department of Informatics and Telecommunications 2006 - 2007
- Ph.D. University of Maryland, USA 5/2005
Department of Computer Science
- GPA: 4.0/4.0.
 - Thesis: *Accurate Data Approximation in Constrained Environments.*
 - Advisor: Nick Roussopoulos
- M.Sc. University of Maryland, USA 5/2001
Department of Computer Science
- GPA: 4.0/4.0.
 - Advisor: Nick Roussopoulos
- Diploma of Electrical & Computer Engineering 6/1999
National Technical University of Athens
Department of Electrical and Computer Engineering
- GPA: 9.58/10.
 - Thesis: *SISYPHUS: A Chunk-Based Storage Manager for OLAP Data Cubes.*
 - Advisor: Timos Sellis

3. Positions

3.1 Academic Positions

Associate Professor 3/2014 - now
School of Electrical and Computer Engineering
Technical University of Crete

Assistant Professor 4/2008 – 3/2014
Department of Electronic and Computer Engineering
Technical University of Crete

3.2 Other Teaching Positions

Teaching – Position PD 407/80 2/2008 – 4/2008
Course: “Structured Programming”
Department of Electronic and Computer Engineering
Technical University of Crete

Teaching – Position PD 407/80 Fall Semester 2007
Course: “Systems Programming”
Department of Informatics and Telecommunications
National & Kapodistrian University of Athens

3.3 Research Experience

Summer Intern, AT&T Labs-Research, USA June-August 2003

Visitor, AT&T Labs and Center for Discrete Mathematics
& Theoretical Computer Science (DIMACS) September 2002

Graduate Research Assistant, University of Maryland, USA 9/2001-5/2005

4. Awards and Distinctions

4.1 Paper Awards and Distinctions

Best Demo Paper Award – ACM CIKM 2020

- **Best Demo Paper Award** at the 29th **ACM International Conference of Information and Knowledge Management (ACM CIKM)**, for the publication “INforE: Interactive Cross-platform Analytics for Everyone”.

Paper Distinction – ACM SIGMOD 2016

- The paper “Practical Private Range Search Revisited” that appeared in **ACM SIGMOD 2016** was ranked as one of the top papers and invited at the **ACM Transactions on Database Systems (ACM TODS)**, Best of SIGMOD/PODS’2016 special issue. At most 4 top papers in ACM SIGMOD receive this invitation.

Paper Distinction – ACM SIGMOD 2013

- The paper “Lightweight Authentication of Linear Algebraic Queries on Data Streams” that appeared in **ACM SIGMOD 2013** was ranked as one of the top papers and invited at the **ACM Transactions on Database Systems (ACM TODS)**, Best of SIGMOD/PODS’2013 special issue. At most 4 top papers in ACM SIGMOD receive this invitation.

Best Student Paper Award – IEEE ICDE 2009

- **Best Student Paper Award** at the 25th **IEEE International Conference on Data Engineering (ICDE)**, for the paper “Double Index Nested-loop Reactive Join for Result Rate Optimization”.

Best Paper Award – ICBL 2017

- **Best Paper Award** at the **International Conference on Interactive Collaborative and Blended Learning (ICBL – part of IMCL) 2017**, for the paper “**Design, Implementation and Evaluation of a Computer Science Teacher Training Programme for Learning and Teaching of Python Inside and Outside School - Establishing and Supporting Code Clubs to Learn Computer Programming by Self-contained Examples**”.

4.2 Other Honors and Awards

University of Maryland – UMIACS Fellowship 1999-2001

- Recipient of one out of two UMIACS (University of Maryland Institute for Advanced Computer Studies) fellowships for first year graduate students.

National Fellowship Foundation (IKY) 1996-1999

- Awards for academic excellence, Athens, Greece (4 times).

5. Publications

<http://www.softnet.tuc.gr/~adeli/pubindex.htm>

5.1 Editorship

[ED1] G. Cormode, K. Yi, A. Deligiannakis, M.N. Garofalakis: Proceedings of the First International Workshop on Big Dynamic Distributed Data, Riva del Garda, Italy, August 30, 2013. CEUR Workshop Proceedings 1018, CEUR-WS.org 2013.

5.2 Tutorials

[TU1] A. Artikis, N. Giatrakos, A. Deligiannakis, M.N. Garofalakis. Complex Event Processing in the Big Data Era. To appear at the VLDB Conference, Munich, Germany, August 2017.

5.3 Book Chapters

[BC1] A. Deligiannakis. View Maintenance Aspects. Encyclopedia of Database Systems, 2009: 3328-3331.

[BC2] A. Deligiannakis, Y. Kotidis. Exploiting Spatio-Temporal Correlations for Data Processing in Sensor Networks. Advances in Geosensor Networks, pages 45-65, ISBN 978-3-540-79995-5.

[BC3] A. Deligiannakis. View Maintenance Aspects. Encyclopedia of Database Systems (2nd Edition), 2018.

5.4 Refereed Journal Publications

5.4.1 Refereed Journal Publications at a Glance

Όνομα	Τίτλος Περιοδικού	Σχετικές Δημοσιεύσεις	
TODS	ACM Transactions on Database Systems	J4, J16, J17, J20	(σύνολο: 4)
VLDBJ	VLDB Journal	J3, J5, J6, J18, J24	(σύνολο: 5)
TKDE	IEEE Transactions on Knowledge and Data Engineering	J9, J15	(σύνολο: 2)
PVLDB	Proceedings of the VLDB Endowment	J8, J12	(σύνολο: 2)
IS	Information Systems	J2, J10, J11, J13, J21, J25	(σύνολο: 6)
SigRec	SIGMOD Record	J14	(σύνολο: 1)
JSS	Journal of Systems and Software	J19	(σύνολο: 1)
FGCS	Future Generation Computer Systems	J22	(σύνολο: 1)
TecSoc	IEEE Technology and Society Magazine	J23	(σύνολο: 1)
DEngBul	IEEE Data Engineering Bulletin on In-Network Query Processing/Data Management	J1	(σύνολο: 1)
IJDC	International Journal of Digital Curation	J7	(σύνολο: 1)
Acronym	Title of Journal	Publications	
TODS	ACM Transactions on Database Systems	J4, J16, J17, J20	(total: 4)
VLDBJ	VLDB Journal	J3, J5, J6, J18	(total: 4)
TKDE	IEEE Transactions on Knowledge and Data Engineering	J9, J15	(total: 2)
PVLDB	Proceedings of the VLDB Endowment	J8, J12	(total: 2)
IS	Information Systems	J2, J10, J11, J13, J21	(total: 5)
SigRec	SIGMOD Record	J14	(total: 1)
JSS	Journal of Systems and Software	J19	(total: 1)
FGCS	Future Generation Computer Systems	J22	(total: 1)
DEngBul	IEEE Data Engineering Bulletin on In-Network Query Processing/Data Management	J1	(total: 1)
IJDC	International Journal of Digital Curation	J7	(total: 1)

5.4.2 List of Refereed Journal Publications

[J1] A. Deligiannakis, Y. Kotidis. Data Reduction Techniques in Sensor Networks. IEEE Data Engineering Bulletin on In-Network Query Processing/Data Management, 28(1):19-25, March 2005.

[J2] A. Deligiannakis, Y. Kotidis, N. Roussopoulos. Processing Approximate Aggregate Queries in Wireless Sensor Networks. Information Systems, Volume 31(8), pages 770-792, December 2006.

[J3] A. Deligiannakis, Y. Kotidis, N. Roussopoulos. Dissemination of Compressed Historical Information in Sensor Networks. VLDB Journal, 16(4):439-461 (2007).

- [J4] A. Deligiannakis, M. Garofalakis, N. Roussopoulos. Extended Wavelets for Multiple Measures. *ACM Transactions on Database Systems (TODS)*, Vol. 32, No. 1, March 2007.
- [J5] A. Deligiannakis, Y. Kotidis, N. Roussopoulos. Bandwidth-Constrained Queries in Sensor Networks. *VLDB Journal*, 17(3):443-467 (2008).
- [J6] D. Sacharidis, A. Deligiannakis, T. Sellis. Hierarchically Compressed Wavelet Synopses. *VLDB Journal*, 18(1):203-231 (2009).
- [J7] P. Constantopoulos, C. Dallas, I. Androutsopoulos, S. Angelis, A. Deligiannakis, D. Gavrilis, Y. Kotidis, C. Papatheodorou. DCC&U: An Extended Digital Curation Lifecycle Model. *International Journal of Digital Curation*, Volume 4(1), pages 34-45, 2009.
- [J8] G. Cormode, A. Deligiannakis, M. Garofalakis, A. McGregor. Probabilistic Histograms for Probabilistic Data. *Proceedings of the VLDB Endowment (PVLDB)*, 2(1): pages 526-537, 2009.
- [J9] M.A. Bornea, V. Vassalos, Y. Kotidis, A. Deligiannakis. Adaptive Join Operators for Result Rate Optimization on Streaming Inputs. *IEEE Transactions on Knowledge and Data Engineering*, 2010 (**“Best of ICDE 2009” Special Issue**).
- [J10] A. Deligiannakis, Y. Kotidis, V. Stoumpos, A. Delis. Collection Trees for Event-Monitoring Queries. *Information Systems*, Volume 36, Issue 2, April 2011, Pages 386-405.
- [J11] A. Deligiannakis, Y. Kotidis. Detecting Proximity Events in Sensor Networks. *Information Systems*, Volume 36, Issue 7, Pages 1044-1063, November 2011.
- [J12] O. Papapetrou, M. Garofalakis, A. Deligiannakis. Sketch-based Querying of Distributed Sliding-Window Data Streams. *Proceedings of the VLDB Endowment*, 5(10): pages 992-1003, 2012.
- [J13] N. Giatrakos, Y. Kotidis, A. Deligiannakis, V. Vassalos, Y. Theodoridis. In-Network Approximate Computation of Outliers with Quality Guarantees. *Information Systems*, Volume 38, Issue 8, Pages 1285-1308, November 2013.
- [J14] S. Christodoulakis, M.N. Garofalakis, E.G.M. Petrakis, A. Deligiannakis, V. Samoladas, E. Ioannou, O. Papapetrou, S. Sotiriadis. Data Management Research at the Technical University of Crete. *SIGMOD Record* 42(4): 61-66 (2013).
- [J15] D. Keren, G. Sagy, A. Abboud, D. Ben-David, A. Schuster, I. Sharfman, A. Deligiannakis. Geometric Monitoring of Heterogeneous Streams. *IEEE Transactions on Knowledge and Data Engineering*, 26(8): 1890-1903 (2014).
- [J16] N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, I. Sharfman, A. Schuster: Distributed Geometric Query Monitoring Using Prediction Models. *ACM Transactions on Database Systems*, 39(2): 16 (2014).
- [J17] S. Papadopoulos, G. Cormode, A. Deligiannakis, M.N. Garofalakis: Lightweight Query Authentication on Streams. *ACM Transactions on Database Systems*, 39(4): 30:1-30:45, 2014 (**Best of SIGMOD/PODS'2013 special issue**).
- [J18] O. Papapetrou, M.N. Garofalakis, A. Deligiannakis. Sketching distributed sliding-window data streams. *VLDB Journal*, 24(3): 345-368 (2015).
- [J19] I. Flouris, N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, M. Kamp, M. Mock. Issues in complex event processing: Status and prospects in the Big Data era. *Journal of Systems and Software*, 127: 217-236 (2017).
- [J20] I. Demertzis, S. Papadopoulos, O. Papapetrou, A. Deligiannakis, M.N. Garofalakis, C. Papamanthou. Practical Private Range Search in Depth. *ACM Transactions on Database Systems*, 43(1): 2:1-2:52, 2018 (**Best of SIGMOD/PODS'2016 special issue**).
- [J21] N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, D. Keren, V. Samoladas: Scalable Approximate Query Tracking over Highly Distributed Data Streams with Tunable Accuracy Guarantees. *Information Systems*, 76: 59-87 (2018).
- [J22] N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, Y. Kotidis: Omnibus Outlier Detection in Sensor Networks using Windowed Locality Sensitive Hashing. *Future Generation Computer Systems* 110: 587-609 (2020).
- [J23] N. Giatrakos, N. Katzouris, A. Deligiannakis, A. Artikis, M. Garofalakis, G. Paliouras, H. Arndt, R. Grasso, R. Klinkenberg, M.P. De Leon, G.G. Tartaglia, A. Valencia and D. Zisis: Interactive Extreme-Scale Analytics towards Battling Cancer. *IEEE Technology and Society Magazine*, Volume 38, Issue 2, Pages 54-61, June 2019.
- [J24] N. Giatrakos, E. Alevizos, A. Artikis, A. Deligiannakis, M. Garofalakis: Complex Event Recognition in the Big Data Era: A Survey. *VLDB Journal*, Volume 29, Issue 1, Pages 313-352, 2020.
- [J25] I. Flouris, N. Giatrakos, A. Deligiannakis, M. Garofalakis: Network-wide complex event processing over geographically distributed data sources. *Information Systems*, Volume 88, 2020.

5.5 Refereed Conference and Workshop Publications

5.5.1 Refereed Conference and Workshop Publications at a Glance

Acronym	Full Title	Publications	
SIGMOD	ACM SIGMOD - International Conference on Management of Data	C1, C3, C5, C13, C19, C21, C30, C31, C29 (demo)	(total: 8) +1 demo
ICDE	IEEE International Conference on Data Engineering	C8, C9, C10, C11, C16, C18	(total: 6)
CIKM	ACM CIKM - ACM International Conference on Information and Knowledge Management	C20, C34, C35	(total: 3)
EDBT	International Conference on Extending Database Technology	C4	(total: 1)
ICASSP	IEEE International Conference on Acoustics, Speech and Signal Processing	C24	(total: 1)
SSDBM	International Conference on Scientific and Statistical Database Management	C6	(total: 1)
SIGSPATIAL	ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems	C27	(total: 1)
ESWC	Extended Semantic Web Conference	C17	(total: 1)
DEBS	ACM International Conference on Distributed and Event-based Systems	C33, C28 (demo)	(total: 1) + 1 demo
ICAA	International Conference on Applied Algorithms	C23	(total: 1)
OTHER	Δημοσιεύσεις σε Διεθνή Συνέδρια ή Ημερίδες, εκτός των παραπάνω	C2, C7, C12, C14, C15, C22, C25, C26, C32	(total: 9)

5.5.2 List of Refereed Conference and Workshop Publications

- [C1] Y. Sismanis, A. Deligiannakis, N. Roussopoulos, Y. Kotidis. Dwarf: Shrinking the Petacube. In Proc. of the ACM SIGMOD International Conference on Management of Data, Madison, Wisconsin, USA, June 2002.
- [C2] Y. Sismanis, A. Deligiannakis, Y. Kotidis, N. Roussopoulos. Hierarchical Dwarfs for the Rollup Cube. In proceedings of ACM International Workshop on Data Warehousing and OLAP (DOLAP), New Orleans, USA, November 2003.
- [C3] A. Deligiannakis, N. Roussopoulos. Extended Wavelets for Multiple Measures. In Proc. of the ACM SIGMOD International Conference on Management of Data, San Diego, California, USA, June 2003.
- [C4] A. Deligiannakis, Y. Kotidis, N. Roussopoulos. Hierarchical in-Network Data Aggregation with Quality Guarantees. In proceedings of the 9th International Conference on Extending Database Technology (EDBT), Heraklion, Crete, Greece, 2004.
- [C5] A. Deligiannakis, Y. Kotidis, N. Roussopoulos. Compressing Historical Information in Sensor Networks. In Proc. of the ACM SIGMOD International Conference on Management of Data, Paris, France, June 2004.
- [C6] A. Deligiannakis, M. Garofalakis, N. Roussopoulos. A Fast Approximation Scheme for Probabilistic Wavelet Synopses. In Proc. of the 17th International Conference on Scientific and Statistical Database Management (SSDBM), Santa Barbara, USA, June 2005.
- [C7] Y. Kotidis, A. Deligiannakis, V. Stoumpos, V. Vassalos, A. Delis. Robust Management of Outliers in Sensor Network Aggregate Queries. In Proc. of the 6th Int. ACM Workshop on Data Engineering for Wireless and Mobile Access (*MobiDE*), Beijing, China, June 2007.
- [C8] V. Stoumpos, A. Deligiannakis, Y. Kotidis, A. Delis. Processing Event-Monitoring Queries in Sensor Networks. In Proc. of the 24th IEEE International Conference on Data Engineering (ICDE) – poster paper, Cancun, Mexico, April 2008.
- [C9] A. Deligiannakis, V. Stoumpos, Y. Kotidis, V. Vassalos, A. Delis. Outlier-Aware Data Aggregation in Sensor Networks. In Proc. of the 24th IEEE International Conference on Data Engineering (ICDE) – poster paper, Cancun, Mexico, April 2008.
- [C10] Antonios Deligiannakis, Yannis Kotidis, Vasilis Vassalos, Vassilis Stoumpos, Alex Delis. Another Outlier Bites the Dust: Computing Meaningful Aggregates in Sensor Networks. In Proc. of the 25th IEEE International Conference on Data Engineering (ICDE), Shanghai, China, March 2009.
- [C11] M.A. Bornea, V. Vassalos, Y. Kotidis, A. Deligiannakis. Double Index Nested-loop Reactive Join for Result Rate Optimization (**best student paper award**). In Proc. of the 25th IEEE International Conference on Data Engineering (ICDE), Shanghai, China, March 2009.
- [C12] A. Deligiannakis, Y. Kotidis, V. Stoumpos, A. Delis. Building Efficient Aggregation Trees for Sensor Network Event-Monitoring Queries. In Proc. of the 3rd International Conference on Geosensor Networks Oxford, United Kingdom, July 2009.

- [C13] N. Giatrakos, Y. Kotidis, A. Deligiannakis, V. Vassalos, Y. Theodoridis. TACO: Tunable Approximate Computation of Outliers in wireless sensor networks. In Proc. of the ACM SIGMOD International Conference on Management of Data, Indianapolis, Indiana, USA, June 2010.
- [C14] N. Giatrakos, Y. Kotidis, A. Deligiannakis. PAO: Power-Efficient Attribution of Outliers in Wireless Sensor Networks. In 7th VLDB Workshop on Data Management for Sensor Networks (DMSN), Singapore, September 2010.
- [C15] V. Dritsou, P. Constantopoulos, A. Deligiannakis, Y. Kotidis. Shortcut Selection in RDF Databases. In Proceedings of the 2nd International Workshop on Data Engineering meets the Semantic Web (DESWeb), Hannover, Germany, April 2011.
- [C16] M. Bornea, A. Deligiannakis, Y. Kotidis, V. Vassalos. Semi-Streamed Index Join for Near-Real Time Execution of ETL Transformations. In Proceedings of the 27th IEEE International Conference on Data Engineering (ICDE), Hannover, Germany, April 2011.
- [C17] V. Dritsou, P. Constantopoulos, A. Deligiannakis, Y. Kotidis. Optimizing Query Shortcuts in RDF Databases. In Proceedings of the 8th Extended Semantic Web Conference (ESWC), Heraklion, Greece, May-June 2011.
- [C18] S. Burdakis, A. Deligiannakis. Detecting Outliers in Sensor Networks using the Geometric Approach. In Proceedings of the 28th IEEE International Conference on Data Engineering (ICDE), Washington DC, USA, April 2012.
- [C19] N. Giatrakos, A. Deligiannakis, M. Garofalakis, I. Sharfman. Prediction-Based Geometric Monitoring over Distributed Data Streams. In Proceedings of the ACM SIGMOD International Conference on Management of Data, Scottsdale, Arizona, USA, May 2012.
- [C20] A. Arvanitis, A. Deligiannakis, Y. Vassiliou. Efficient Influence-Based Processing of Market Research Queries. In Proc. of ACM CIKM 2012, Maui, Hawaii, USA, October-November 2012.
- [C21] S. Papadopoulos, G. Cormode, A. Deligiannakis, M. Garofalakis. Lightweight Authentication of Linear Algebraic Queries on Data Streams (*Invited to ACM Transactions on Database Systems*). In Proc. of the ACM SIGMOD International Conference on Management of Data, New York City, New York, USA, June 2013.
- [C22] A. Deligiannakis, N. Giatrakos, N. Pallikarakis: Towards a prototype medical system for devices vigilance and patient safety. In Proc. of the IEEE Symposium on Computational Intelligence in Healthcare and e-health (CICARE), Orlando, Florida, December 2014.
- [C23] D. Keren, G. Sagy, A. Abboud, D. Ben-David, A. Schuster, I. Sharfman, A. Deligiannakis: Monitoring Distributed, Heterogeneous Data Streams: The Emergence of Safe Zones. International Conference on Applied Algorithms (ICAA), Kolkata, India, January 2014.
- [C24] A. Igglezakis, A. Deligiannakis, A. Bletsas: Geometric monitoring for CSI reduction in amplify-and-forward relay networks. In Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Florence, Italy, May 2014.
- [C25] I. Flouris, N. Giatrakos, M.N. Garofalakis, A. Deligiannakis. Issues in Complex Event Processing Systems. In Proceedings of the 1st IEEE International Workshop on Real Time Data Stream Analytics (RTStreams'15), held in conjunction with IEEE BigDataSE-15, Helsinki, Finland, August 2015.
- [C26] S. Bothe, V. Manikaki, A. Deligiannakis, M. Mock. Towards Flexible Event Processing in Distributed Data Streams. In Proceedings of the Event Processing, Forecasting and Decision-Making in the Big Data Era (EPForDM) Workshop, held in conjunction with EDBT/ICDT, Brussels, Belgium, March 2015.
- [C27] D. Sacharidis, A. Deligiannakis. Spatial cohesion queries. In Proceedings of the 23rd ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, Bellevue, WA, USA, November 2015.
- [C28] I. Flouris, V. Manikaki, N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, M. Mock, S. Bothe, I. Skarbovsky, F. Fournier, M. Stajcer, T. Krizan, J. Yom-Tov, M. Volarevic. Complex event processing over streaming multi-cloud platforms: the FERARI approach (**demo paper**). In Proceedings of the 10th ACM International Conference on Distributed and Event-based Systems (DEBS), Irvine, CA, June 2016.
- [C29] I. Flouris, V. Manikaki, N. Giatrakos, A. Deligiannakis, M.N. Garofalakis, M. Mock, S. Bothe, I. Skarbovsky, F. Fournier, M. Stajcer, T. Krizan, J. Yom-Tov, T. Curin. FERARI: A Prototype for Complex Event Processing over Streaming Multi-cloud Platforms (**demo paper**). In Proceedings of the ACM SIGMOD/PODS Conference, San Francisco, CA, June 2016.
- [C30] N. Giatrakos, A. Deligiannakis, M.N. Garofalakis. Scalable Approximate Query Tracking over Highly Distributed Data Streams. In Proceedings of the ACM SIGMOD/PODS Conference, San Francisco, CA, June 2016.
- [C31] I. Demertzis, S. Papadopoulos, O. Papapetrou, A. Deligiannakis, M.N. Garofalakis. Practical Private Range Search Revisited (*Invited to ACM Transactions on Database Systems*). In Proceedings of the ACM SIGMOD/PODS Conference, San Francisco, CA, June 2016.
- [C32] N. Moumoutzis, G. Boukeas, V. Vassilakis, N. Pappas, C. Xanthaki, I. Maragkoudakis, A. Deligiannakis, S. Christodoulakis. Design, Implementation and Evaluation of a Computer Science

Teacher Training Programme for Learning and Teaching of Python Inside and Outside School - Establishing and Supporting Code Clubs to Learn Computer Programming by Self-contained Examples. In ICBL (part of IMCL) 2017.

- [C33] Nikos Giatrakos, Alexander Artikis, Antonios Deligiannakis, Minos Garofalakis: Uncertainty-Aware Event Analytics over Distributed Settings. In Proceedings of the 13th International Conference on Distributed and Event-based Systems (DEBS'19), Darmstadt, Germany, June 2019.
- [C34] Nikos Giatrakos, David Arnu, Theodoros Bitsakis, Antonios Deligiannakis, Minos N. Garofalakis, Ralf Klinkenberg, Aris Konidaris, Antonis Kontaxakis, Yannis Kotidis, Vasilis Samoladas, Alkis Simitsis, George Stamatakis, Fabian Temme, Mate Torok, Edwin Yaqub, Arnau Montagud, Miguel Ponce de Leon, Holger Arndt, Stefan Burkard: INforE: Interactive Cross-platform Analytics for Everyone (**best demo paper award**). In ACM CIKM 2020: 3389-3392.
- [C35] Antonis Kontaxakis, Nikos Giatrakos, Antonios Deligiannakis: A Synopses Data Engine for Interactive Extreme-Scale Analytics. In ACM CIKM 2020: 2085-2088.

5.6 U.S. Patents

- [PA1] METHODS AND APPARATUS FOR REPRESENTING PROBABILISTIC DATA USING A PROBABILISTIC HISTOGRAM. Graham Cormode, Antonios Deligiannakis, Minos Garofalakis, Andrew McGregor. Granted.
- [PA2] Probabilistic Wavelet Synopses for Multiple Measures. Antonios Deligiannakis, Minos Garofalakis and Nick Roussopoulos. Granted.
- [PA3] Dwarf cube architecture for reducing storage sizes of multidimensional data Nick Roussopoulos, Yannis Sismanis, Antonios Deligiannakis and Yannis Kotidis. Granted.

6. Professional Service

6.1 Service to Journals

6.1.1 Editorial Board in Journals

Antonios Deligiannakis is a member of the Editorial Board of the “**Big Data Research**” journal, published by **ELSEVIER**.

6.1.2 Reviewer for Journals

Acronym	Title of Journal	Reviewer in Years...	Total
TODS	ACM Transactions on Database Systems	2017, 2016, 2010, 2008, 2007, 2006	6
VLDBJ	VLDB Journal	2019, 2018, 2017, 2012	4
TKDE	IEEE Transactions on Knowledge and Data Engineering	2019, 2018, 2016, 2015, 2014, 2012, 2010, 2009, 2008, 2007, 2004	11
BigData	Big Data Research	2016	1
TPDS	<i>IEEE Transactions on Parallel and Distributed Systems</i>	2008	1
DPDB	Distributed and Parallel Databases	2012, 2010	2
TKDD	<i>ACM Transactions on Knowledge Discovery from Data</i>	2010	1
CPMC	<i>IEEE Transactions on Computers, Pervasive and Mobile Computing</i>	2009	1
Sensors	Sensors	2009	1
KDE	<i>Knowledge & Data Engineering</i>	2009	1
JCSS	Journal of Computer and System Sciences	2011	1
CN	<i>Communication Networks and Distributed Systems</i>	2008	1

6.2 Service to Conferences

6.2.1 Conference Organizing Committee

6.2.1.1 General Chair

1. First International Workshop on Big Dynamic Distributed Data (BD3), held in conjunction with VLDB 2013, Riva del Garda, Italy, August 30, 2013.
2. Event Processing, Forecasting and Decision-Making in the Big Data Era (EPForDM), held in conjunction with EDBT/ICDT 2015, Brussels, Belgium, March 27, 2015.

6.2.1.2 Program Chair

1. Hellenic Data Management Symposium (HDMS), Athens, Greece, July 28-29, 2016.
2. 1st International Workshop on Data Analytics and Machine Learning Made Simple (SIMPLIFY 2021), co-located with EDBT 2021.

6.2.1.3 Research PC Vice Chair

1. 37th IEEE International Conference on Data Engineering (ICDE'2021), Chania, Greece, April 19-23, 2021.

6.2.1.4 Publicity Chair

1. 9th International ACM Workshop on Data Engineering for Wireless and Mobile Access (MobiDE), June 6, 2010, Indianapolis, IN, USA (in conjunction with SIGMOD/PODS 2010).
2. 23rd ACM International Conference on Information and Knowledge Management (CIKM 2014), Shanghai, China, November 3-7, 2014.

6.2.2 Conference Program Committee (PC) Member

Acronym	Conference Name	Years at PC	Total
SIGMOD	ACM SIGMOD International Conference on Management of Data	2021, 2020, 2018, 2016, 2015, 2013	6
VLDB	Very Large Data Bases	2021, 2018, 2016, 2014, 2013, 2012	7
ICDE	IEEE International Conference on Data Engineering	2021, 2020, 2019, 2017, 2016, 2014, 2012, 2009	8
CIKM	ACM International Conference on Information and Knowledge Management	2016, 2015, 2014, 2012, 2010	5
EDBT	International Conference on Extending Database Technology	2021, 2019, 2017, 2016	4
BigData	IEEE International Conference on Big Data	2013	1
ECML/PKDD	European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases	2011	1
SDM	SIAM International Conference on Data Mining	2015, 2009	2
EUSPN	International Conference on Emerging Ubiquitous Systems and Pervasive Networks	2018	1
GSN	International Conference on Geosensor Networks	2011, 2009	2
MobiDE	ACM Workshop on Data Engineering for Wireless and Mobile Access	2011, 2010, 2009, 2008	4
DaWaK	13th International Conference on Data Warehousing and Knowledge Discovery	2011	1
MDM	International Conference on Mobile Data Management	2011	1
GEOProcessing	International Conference on Advanced Geographic Information Systems, Applications, and Services	2012, 2011	2
HDMS	Hellenic Data Management Symposium	2011, 2010, 2009	3
CSE	IEEE International Conference on Computational Science and Engineering	2010	1
ADBIS	East-European Conference on Advances in Databases and Information Systems	2010	1
SeNTIE	International Workshop on Sensor Networks Technologies for Information Explosion Era	2010, 2009, 2008	3
DOLAP	ACM International Workshop on Data Warehousing and OLAP	2009, 2008, 2006	3
WDPP	International Workshop on Data and Process Provenance	2009	1
NetDB	International Workshop on Networking Meets Databases	2008	1
DISN	International Workshop on Data Intensive Sensor Networks	2007	1

6.2.3 Referee for Conferences

- Conference referee for EDBT 2011, SIGMOD (2008), CIKM, ICDE, VLDB (2007), KDD (2007) and the Hellenic Data Management Symposium (HDMS)

7. Teaching Experience

7.1 Teaching

Technical University of Crete

- Course: "Structured Programming" 2008-2015
- Course: "Data Management and Processing in Sensor Networks" 2008-2019
- Course: "Special Topics in Databases" 2008-now
- Course: "Database Systems" 2016-now
- Course: "Software Development Tools and Systems Programming" 2019-now

National & Kapodistrian University of Athens

2007-2008

- Course: "Systems Programming"

DBChat Organizer, University of Maryland, USA

2001-2004

- DBChat is a weekly seminar-type database group meeting. My duties included compiling the list of papers to be discussed, arranging class schedules, and putting the class material on the Web. DBChat was offered as a course in the Fall 2001 semester.

7.2 Students

7.2.1 PhD Students

Antonios Deligiannakis is currently supervising Ioannis Flouris, whose PhD topic is on "Achieving Scalability in Complex Event Processing Systems using In-Situ Processing" (Greek title: "Επιτυγχάνοντας Κλιμακωσιμότητα Σε Συστήματα Πολύπλοκης Επεξεργασίας Γεγονότων Μέσω Τοπικής Επεξεργασίας").

7.2.2 MSc Students

Antonios Deligiannakis supervised/supervises the following MSc students:

Student	Title	Status
Ioannis Flouris	Suffix trees construction algorithms Αλγόριθμοι Κατασκευής Δέντρων Επιθέματος	Completed
Vasiliki Manikaki	Architecture and Implementation of a Distributed Complex Event Processing System Αρχιτεκτονική και Υλοποίηση ενός Καταμεμημένου Συστήματος Πολύπλοκης Επεξεργασίας Γεγονότων	Completed
Konstantinos Tsakonas	BucDoor: Bottom Up Computation of Iceberg Data Cubes with Hadoop Υπολογισμός Κύβων Δεδομένων τύπου Παγόβουνου με το Hadoop	Completed
Stylianos Mammias	Designing efficient algorithms for approximating probabilistic data Σχεδίαση αποδοτικών αλγόριθμων για την προσέγγιση πιθανοτικών δεδομένων	Completed
Ioannis Demertzis* * co-advisor (primary advisor: M. Garofalakis)	Practical secure and efficient range search Πρακτική, Ασφαλής και Αποδοτική Επεξεργασία Ερωτημάτων Εύρους	Completed
Theodoros Bitsakis	Operator Cost Estimation Εκτίμηση Κόστους Τελεστών	Ongoing
Antonios Kontaxakis	Streaming Machine Learning in RapidMiner Αλγόριθμοι Εκμάθησης Μηχανής σε ένα Πέρασμα στο RapidMiner	Completed

7.2.3 Undergraduate Students – Diploma Thesis Supervisor

Antonios Deligiannakis supervised the following undergraduate students during their diploma thesis: Smalis Sklavos, Chrysovalantis Kanellopoulos, Serafeim Mpousgos, Aleka Seliniotaki, Eytyxios Vavourakis, Emmanouil Bogiatzis, Dionysios Kalogiropoulos, Sabbas Burdakis, Sofia Georgakaki, Antonios Inglezakis, George Palollis, Iakovina Zografou, Antonios Pougardis, Konstantinos Zarifis, Marina Mavrikou, Stella Maropaki, Christina Christodoulaki, Ioannis Papadakis, Dimitrios Tzimas, Dimitra Karatza, Anesti Efrosyni, Goutziouli Dimitra, Stamatakis Georgios, Bitsakis Theodoros, Antonios Kontaxakis, Moullos Argyris, Vatikiotis Evaggelos, Fragiadoulakis Emmanouil, Voltsis Evaggelos, Mantonanaki Christina, Zoukas Kostantinos, Psarakis Kyriakos, Mariolou Nektaria, Katsani Merieme, Kyriakopoulos Konstantinos, Prountzos Georgios, ... and is currently supervising several undergraduate students, with the majority of these diploma theses being on Big Data systems.

7.3 Participation in 3-member PhD Examination Committees and Participation in Examination Committees of MSc/PhD Students outside Technical University of Crete

Student	Supervisor	Committee	Degree	Status
Mihaela A. Bornea	B. Βασσάλος (ΟΠΑ)	3-member	PhD	Completed
Κων/νος Γεωργούλας	Ι. Κωτίδης (ΟΠΑ)	3-member	PhD	Completed
Παναγιώτης Αλεβίζος	Α. Μπλέτσας (ΠΟΛ. ΚΡΗΤ.)	3-member	PhD	Completed
Ιωάννης Μυτιλήνης	Ν. Κοζύρης (ΕΜΠ)	5-member	PhD	Completed
Δημήτριος Σαχαρίδης	Τ. Σελλής (ΕΜΠ)	7-member	PhD	Completed
Νίκος Μπικάκης	Τ. Σελλής (ΕΜΠ)	7-member	PhD	Completed
Αθανάσιος Βεργούλης	Τ. Σελλής (ΕΜΠ)	7-member	PhD	Completed
Βασιλική Ντρίτσου	Π. Κωνσταντόπουλος (ΟΠΑ)	7-member	PhD	Completed
Χάρης Γεωργιάδης	Β. Βασσάλος (ΟΠΑ)	7-member	PhD	Completed
Αντώνιος Ζήσιμος	Ν. Κοζύρης (ΕΜΠ)	5-member	PhD	Completed
Νάσια Ασίκη	Ν. Κοζύρης (ΕΜΠ)	5-member	PhD	Completed
Κων/νος Λιοντής	Ι. Κωτίδης (ΟΠΑ)	2-member	M.Sc.	Completed
Γεώργιος Δουμουράς	Ι. Κωτίδης (ΟΠΑ)	2-member	M.Sc.	Completed
Νικόλαος Γιατράκος	Ι. Θεοδορίδης (ΠΑΠΕΙ)	7-member	PhD	Completed
Παναγιώτη Λιάκου	Α. Δελής (ΕΚΠΑ)	7-member	PhD	Completed

8. Participation in Funded Projects

8.1 EU Projects

- *INFORE - Interactive Extreme-Scale Analytics and Forecasting*
(H2020 ICT-12-2018-2020 – **Ranked 1st out of 77 proposals**)
Ρολε: **Project Coordinator**
Project Budget: 4.434.848,75€
Budget of partner: 834.687,50€
- *FERARI - Flexible Event Processing for Big Data Architectures*
(FP7-ICT-2013 (Scalable Data Analytics Objective) Collaborative STREP Project, 2014--2017)
Role: Co-principal investigator for TUC
(Principal Investigator: Minos Garofalakis)
- *LEADS - Large-Scale Elastic Architecture for Data-as-a-Service*
(FP7-ICT-2011 Collaborative STREP Project, 2012--2015)
Role: Main investigator for TUC/TSI: work on efficient result authentication of results provided by untrusted servers to which data and computation have been outsourced.
(Principal Investigator: Minos Garofalakis)
- *LIFT - Using Local Inference in Massively Distributed Systems*
(FP7-ICT-2009 FETOpen Collaborative STREP Project, 2010--2013)
Role: Main Investigator for TUC
(Principal Investigator: Minos Garofalakis)

8.2 National Projects

- *EIPAS (05/2013-09/2015): Thales.*
Role: Principal Investigator for TUC
- *EICOS (06/2013-09/2015): Thales.*
Role: Principal Investigator for TUC
- *BLASE (2014-2017) - Backscatter Networks for Large-Scale Environmental Sensing: ERC-04*
Role: Main Investigator for TUC
(Principal Investigator: Aggelos Bletsas)
- *AquaNet (2013-2015): Co-Operation (Συνεργασία)*
Role: Main Investigator for TUC
(Principal Investigator: Eftychios Koutroulis)

9. Personal Info

- Greek citizen
- Born 16/05/1976 in Athens, Greece
- Married – 1 child
- Military Service: Completed