

## PANOS K. CHRYSANTHIS

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### RESEARCH INTERESTS

Management of Data (Big Data, Databases, Web Databases, Data Streams & Sensor networks),  
Cloud, Distributed & Mobile Computing, Workflow Management, Operating & Real-time Systems

### EDUCATION

Ph.D. in Computer and Information Science, University of Massachusetts, Amherst, August 1991

M.S. in Computer and Information Science, University of Massachusetts, Amherst, May 1986

B.S. in Physics (Computer Science concentration), University of Athens, Greece, December 1982

### APPOINTMENTS

*Professor*, Dept. of Computer Science (Joint-Secondary appointment in Electrical Engineering and the Telcomm Program), University of Pittsburgh (Jan. 2004 to present).

*Adjunct Professor*, Dept. of Computer Science, Carnegie-Mellon University (Aug. 2000 to present).

*Visiting Professor*, Dept. of Computer Science, Carnegie Mellon University, Pittsburgh (Aug. 1999 to Aug. 2000; Dec. 2015 - Aug. 2015)

*Adjunct Professor*, Dept. of Computer Science, University of Cyprus, Cyprus (Jan 2008 to Dec. 2014).

*Faculty member*, Computational Biology PhD Program, University of Pittsburgh and Carnegie-Mellon University (Sept. 2004 to present).

*Visiting Professor*, Dept. of Computer Science, University of Cyprus, Cyprus (Aug. 2006 to June 2007).

*Faculty Member*, RODS Laboratory, Center for Biomedical Informatics, University of Pittsburgh (May 2002 to Aug. 2006).

*Associate Professor*, Dept. of Computer Science (Joint-Secondary appointment in Electrical Engineering), University of Pittsburgh (Sept. 1997 to Dec. 2003).

*Assistant Professor*, Dept. of Computer Science, University of Pittsburgh (Sept. 1991 to Aug. 1997).

*Assistant Professor* (Joint-Secondary appointment), Dept. of Electrical Engineering, University of Pittsburgh (Sept. 1996 to Aug. 1997).

*Visiting Professor*, Dipart. di Informatica e Sistemistica, Universita di Roma "La Sapienza," Italy (July 1994).

*Visiting Research Faculty*, Dept. of Computer Science, University of Massachusetts (June 1992 and July 1993).

## HONORS and AWARDS

*Honorary Visiting Professorship, University of Diaspora, University of Cyprus (May 2016)*

*Provost Award for Excellence in Mentoring, University of Pittsburgh (April 2015)*

*ACM Distinguished Scientist (October 2010).*

*ACM Senior Member (December 2007).*

*IEEE Computer Society Senior Member (June 2006).*

*Pitt Innovator Award (Sept. 2006).*

*National Science Foundation CAREER Award (July 1995).*

*Computer Science Teaching Award, University of Pittsburgh, for effectiveness in teaching of a foundation graduate course during 2013-14.*

*Computer Science Teaching Award, University of Pittsburgh, for effectiveness in teaching of an advanced graduate course during 2008-09.*

*Computer Science Teaching Award, University of Pittsburgh, for effectiveness in teaching of a graduate (elective) course during 1994-95.*

*Computer Science Teaching Awards, University of Pittsburgh, for effectiveness in teaching of an undergraduate (service) course during 1994-95, during 1995-96, 1996-97, and 1998-99.*

*Research Fellow of Information Systems, The Athens Laboratory of Business Administration, Greece (Jan. 1995)*

*Nominee for the ACM Doctoral Dissertation Award (July 1992): Selected by the University of Massachusetts at Amherst as the best doctoral dissertation in Computer Science in 1991.*

*Graduate Studies Scholarship: Department of Computer and Information Science, University of Massachusetts, Amherst, USA (Sept '83 to Aug '91).*

*State Scholarship Institute of Greece: Honorary Scholarships for academic performance during 1979-80 and 1980-81.*

## BOOK

1. K. Ramamritham and P. K. Chrysanthis. *Advances in Concurrency Control and Transaction Processing*, IEEE Computer Society Press, 1997.

## BOOK CONTRIBUTIONS

1. P. K. Chrysanthis and K. Ramamritham. "Extended Transaction Models and the ACTA Framework." *Encyclopedia of Database Systems*, pp. 1091-1092, 2009.
2. D. Zeinalipour-Yazti and P. K. Chrysanthis. "Mobile Sensor Network Data Management." *Encyclopedia of Database Systems*, pp. 1755-1759, 2009.
3. K. Ramamritham and P. K. Chrysanthis. "Semantics-based Concurrency Control." *Encyclopedia of Database Systems*, p. 2591, 2009.
4. P. K. Chrysanthis and E. Pitoura. "Data Broadcasting, Caching and Replication in Mobile Computing." *Encyclopedia of Database Systems*, pp. 557-561, 2009.

5. S. Papastavrou, G. Samaras, P. Evripidou and P. K. Chrysanthis. "Dynamically Generated Web Content: Research and Technology Practices", *Web Data Management Practices: Emerging Techniques and Technologies*, Athena Vakali and George Pallis (Eds), Sept. 2006.
6. P. K. Chrysanthis, K. Pruhs and V. Liberatore. "Middleware for Scalable Data Dissemination". (Ch. 11) *Middleware for Communications*, Qusay H. Mahmoud ed., John Wiley & Sons, June 2004.
7. V. Zadoronzhny and P. K. Chrysanthis. "Locations-based Query Processing." In *H. Karma and A. Hammad (Editors), Telegeoinformatics: Location Based Computing and Services*, Taylor & Francis, London, Mar. 2004.
8. P. K. Chrysanthis and K. Ramamritham. "Correctness Criteria and Concurrency Control." (Ch. 9) *Management of Heterogeneous and Autonomous Database Systems*, A.K. Elmagarmid, M. Rusinkiewicz and A. Sheth, eds., pp. 253–276, Morgan Kaufmann, 1999.
9. P. K. Chrysanthis, G. Samaras and Y. J. Al-Houmaily. "Recovery and Performance of Atomic Commit Protocols in Distributed Database Systems." (Ch. 13) *Recovery in Database Management Systems*, V. Kumar and M. Hsu, eds., pp. 370–416, Prentice Hall, 1998.
10. P. K. Chrysanthis. "Serializability-based Correctness Criteria." (Ch. 2) *Performance of Concurrency Control Mechanisms in Centralized Database Management Systems*, V. Kumar, ed., Prentice Hall, 1995, pp. 7–29.
11. P. K. Chrysanthis and K. Ramamritham. "ACTA: a framework for specifying and reasoning about transaction structure and behavior." *Readings in Database Systems, 2nd edition*, M. Stonebraker, ed., Morgan Kaufmann, 1994, pp. 335–344. (First published in *Proceedings of the 1990 ACM SIGMOD International Conference on the Management of Data*, pp. 194–203.)
12. K. Ramamritham and P. K. Chrysanthis. "In Search for the Acceptability Criteria: Database Consistency Requirements and Transaction Correctness Properties," *Distributed Object Management*, T. Özsu, U. Dayal, and P. Valduriez, eds., Morgan Kaufmann Publishers, 1993, pp. 212–230. (First version published in *the Proceedings of the International Workshop on Distributed Object Management*, pp. 211–229, Canada, August 1992.)
13. P. K. Chrysanthis and K. Ramamritham. "ACTA: The SAGA Continues." (Ch. 10) *Database Transaction Models for Advanced Applications*, A. K. Elmagarmid, ed., Morgan Kaufmann Publishers, 1992, pp. 349–398.

## JOURNAL PUBLICATIONS

1. T. N. Pham, N. R. Katsipoulakis, P. K. Chrysanthis, A. Labrinidis. "Uninterruptible Migration of Continuous Queries without Operator State Migration." *ACM Sigmod Record* (ACM SigRec), 46(3), Sep. 2017.
2. N. R. Katsipoulakis, A. Labrinidis, P. K. Chrysanthis. "A holistic view of stream partitioning costs." *Proceeding of Very Large Data Bases* (PVLDB), 10(11):1286-1297, Aug. 2017.
3. T. N. Pham, P. K. Chrysanthis, A. Labrinidis. "Avoiding class warfare: Managing Continuous Queries with Differentiated Classes of Service." *The International Journal on Very Large Data Bases* (VLDBJ), 25(2):197-221, April 2016,.

4. R. Rexit, F. Tsui, J. Espino, P. K Chrysanthis, S. Wesaratchakit, Y. Ye. "An Analytics Appliance for Identifying (Near) Optimal Over-the-Counter Medicine Products as Health Indicators for Influenza Surveillance." *Information Systems Journal (InfoSys)*, 48:151-163, 2015.
5. M. K. Iskander, D. Wilkinson, T. Trainor, A. J. Lee, and P. K. Chrysanthis, "Balancing Performance, Accuracy, and Precision for Secure Cloud Transactions." *IEEE Transactions on Parallel and Distributed Systems (IEEE TPDS)*, 25(2):417-426, Feb. 2014.
6. P. Andreou, D. Zeinalipour-Yazti, G. Samaras, P. K. Chrysanthis. "A network-aware framework for energy-efficient data acquisition in wireless sensor networks." *J. Network and Computer Applications (JNCA)*, 46: 227-240, 2014.
7. S. Papastavrou, P. K. Chrysanthis and G. Samaras. "Performance Vs. Freshness in Web Database Applications." *WWW Journal (WWWJ)*, Nov. 2013.
8. A. Konstantinidis, D. Zeinalipour-Yazti, P. Andreou, G. Samaras, P. K. Chrysanthis. "Intelligent search in social communities of smartphone users." *Distributed and Parallel Databases (DAPD)*, 31(2):115-149, Feb. 2013.
9. L. Al Moakar, P. K. Chrysanthis, C. Chung, S. Guirguis, A. Labrinidis, P. Neophytou, K. Pruhs. "Auction-based Admission Control for Continuous Queries in a Multi-Tenant DSMS." *International Journal of Next-Generation Computing (IJNGC)*, 3(3):1-28, Nov. 2012.
10. P. Andreou, D. Zeinalipour-Yazti, P. K. Chrysanthis and G. Samaras. "In-Network Data Acquisition and Replication in Mobile Sensor Networks." *Distributed and Parallel Databases (DAPD)*, 29(1-2):87-112, Jan. 2011.
11. P. Andreou, D. Zeinalipour-Yazti, P. K. Chrysanthis and G. Samaras. "Power Efficiency through Tuple Ranking in Wireless Sensor Network Monitoring." *Distributed and Parallel Databases (DAPD)*, 29(1-2):113-150, Jan 2011.
12. P. Andreou, D. Zeinalipour-Yazti, A. Bamboris, P. K. Chrysanthis and G. Samaras. "Optimized Query Routing Trees for Wireless Sensor Networks." *Information Systems Journal (InfoSys)*, 3(2):267-291, June 2010.
13. S. Obermeier, S. Böttcher, M. Hett, P. K. Chrysanthis and G. Samaras. "Blocking reduction for distributed transaction processing within MANETs." *Distributed and Parallel Databases Journal (DAPD)*, 25(3):165-192, June 2009.
14. M. A. Sharaf, P. K. Chrysanthis, A. Labrinidis, and K. Pruhs. "Algorithms and Metrics for Processing Multiple Heterogeneous Continuous Queries." *ACM Transactions on Database Systems (ACM TODS)*, 33(1):5.1-5.44, Mar. 2008.
15. A. Bonifati, P. K. Chrysanthis, A. M. Ouksel and K.U. Sattler. "Distributed Databases and Peer-to-Peer Databases: Past and Present." *ACM Sigmod Record (ACM SigRec)*, 37(1):5-11, Mar. 2008.
16. V. Zadorozhny, P. K. Chrysanthis, D. Sharma. "Sensor Queries: Algebraic Optimization for Time and Energy." *International Journal of Distributed Sensor Networks (IJDSN)*, 4(3): 262-284, 2008.
17. J. Beaver, K. Pruhs, P. K. Chrysanthis and V. Liberatore. "Improving the Hybrid Data Dissemination Model of Web Documents." *WWW Journal (WWWJ)*, 11 (3):313-337, 2008.

18. E. Pitoura and P. K. Chrysanthis. "Caching and Replication in Mobile Data Management." *IEEE Data Engineering Bulletin* (IEEE TCDE Bull), 30(3): 13-20, 2007.
19. G. Santhanakrishnan, A. Amer and P. K. Chrysanthis. "Self-Tuning Caching: The Universal Caching Algorithm." *Software: Practice and Experience* (SP&E), 36(11-12): 1179–1188, 2006.
20. S. Papastavrou, G. Samaras, P. Evripidou, P. K. Chrysanthis "A Decade of Dynamic Web Content: A Structured Survey on Past and Present Practices and Future Trend." *IEEE Communications Surveys and Tutorials* (IEEE CS&T), 8(1-4): 52–60, 2006.
21. A. Al-Hammouri, W. Zhang, R. F. Buchheit, P. K. Chrysanthis, V. Liberatore, and K. Pruhs. "Network Awareness and Application Adaptability." *Journal on Information Systems and e-Business Management* (ISeB), 4(4): 399-419, 2006.
22. V. Zadorozhny, D. Sharma, P. K. Chrysanthis, and A. Labrinidis. "Data Transmission Algebra for Collision-Aware Scheduling in Sensor Networks." *The Systems and Means of Informatics Journal, Special Issue on Formal Methods and Models for Compositional Infrastructures of Distributed Information Systems*, Russian Academy of Science, 15(3): 271-292, 2005
23. D. Fiedler, K. Walcott, T. Richardson, G.M. Kapfhammer, A. Amer, P. K. Chrysanthis. "Towards the Measurement of Tuple Space Performance." *ACM SIGMETRICS Performance Evaluation Review*, 33(3): 51-62, Dec. 2005.
24. M. A. Sharaf, and P. K. Chrysanthis. "On-Demand Data Broadcasting for Mobile Decision Making." *Journal of ACM Mobile Networking and Applications* (MONET), 9(6):703-714, Dec. 2004.
25. M. A. Sharaf, Jon Beaver, A. Labrinidis, and P. K. Chrysanthis. "Balancing Energy Efficiency and Quality of Aggregate Data in Sensor Networks," *The International Journal on Very Large Data Bases* (VLDBJ), 13(4): 384-403, Dec 2004.
26. S. Mazumdar and P. K. Chrysanthis. "Localization of Integrity Constraints in Mobile Databases and Specification in PRO-MOTION." *ACM/Baltzer Mobile Networks*, 9(5):481-490, Oct. 2004.
27. G. Samaras, K. Karenos, P. K. Chrysanthis, E. Pitoura. "Mobile Agent-Based Services for Database View Materialization." *ACM SIGMOBILE Mobile Computing and Communications Review* (MC2R), 8(3):32-43, July 2004.
28. O. Shigiltchoff, P. K. Chrysanthis and E. Pitoura. "Multiversion Data Dissemination: Broadcast Organizations and Caching." *Information Systems Journal* (InfoSys), 29 (6): 509-528, March 2004.
29. E. Pitoura and P. K. Chrysanthis. "Multiversion Wireless Data Broadcasting." *IEEE Transactions on Computers* (ToC), 51(10):1224-1230, Oct. 2002.
30. S. Papastavrou, P. K. Chrysanthis, G. Samaras, and E. Pitoura. "An Evaluation of the Java-based Approaches to Web Database Access." *International Journal of Cooperative information Systems*, 10(4):401–422, 2001.
31. Y. J. Al-Houmaily and P. K. Chrysanthis. "An Atomic Commit Protocol for Gigabit-Networked Distributed Database Systems." *Journal of Systems Architecture, The EuroMicro Journal*, 46(9): 809-833, June 2000.

32. S. Weissman Lauzac and P. K. Chrysanthis. "Utilizing Versions of Views within a Mobile Environment." *Journal of Computing and Information*, Special Issue on the ICCI-98: 9th International Conference on Computing and Information, 1999.
33. S. Banerjee and P. K. Chrysanthis. "Group Two-Phase Locking: A Scalable Data Sharing Protocol." *IEICE Transactions on Information Systems*, Vol. E82-D, No. 1, pp. 236–245, Jan. 1999.
34. G. D. Walborn and P. K. Chrysanthis. "PRO-MOTION: Support for Mobile Database Access." *Personal and Ubiquitous Computing*, Vol. 1, No. 3, pp. 171–181, Sept. 1997.
35. S. T. Frezza, S. P. Levitan and P. K. Chrysanthis. "Linking Requirements and Design Data for Automated Functional Evaluation." *Computers in Industry*, Vol. 30, pp. 13-25, Sept. 1996.
36. A. Massari, S. Weissman and P. K. Chrysanthis. "Supporting Mobile Database Access through Query by Icons." *Distributed and Parallel Databases (DAPD)*, Vol. 4, No. 3, pp. 249–270, July 1996.
37. K. Ramamritham and P. K. Chrysanthis. "A Taxonomy of Correctness Criteria in Database Applications." *The International Journal on Very Large Data Bases (VLDBJ)*, Vol. 4, No. 1, pp. 181–293, Jan. 1996.
38. P. K. Chrysanthis and K. Ramamritham. "Synthesis of Extended Transaction Models Using ACTA." *ACM Transactions on Database Systems (TODS)*, Vol. 19, No. 3, pp. 450–491, Sept. 1994.
39. P. K. Chrysanthis and K. Ramamritham. "Delegation in ACTA as a Means to Control Sharing in Extended Transactions." *IEEE Data Engineering Bulletin*, Special Issue on Workflow and Extended Transaction Systems, M. Hsu, special editor, 16(2): 16-19, June 1993.
40. P. K. Chrysanthis and K. Ramamritham. "A Unifying Framework for Transactions in Competitive and Cooperative Environments." *IEEE Office and Knowledge Engineering Bulletin*, Special Issue on Non-Standard Transaction Models, S. B. Zdonik, special editor, 4(1):3–22, Feb. 1991.
41. C. T. Liu, P. K. Chrysanthis and S.K. Chang. "Schema Evolution through Changes to ER Diagrams." *Journal of Information Science and Engineering (JISE)*, Vol. 9, No. 4, pp. 657–683, Dec. 1993.

#### REFEREED CONFERENCE & WORKSHOP PUBLICATIONS

1. R. Alseghayer, D.I Petrov, P. K. Chrysanthis, M. A. Sharaf, A. Labrinidis. "Detection of Highly Correlated Live Data Streams." *Proc. of the 11th Int'l Workshop on Real Time Business Intelligence and Analytics (BIRTE'17)*, pp. 3:1-3:8, Aug. 2017.
2. A. U. Shein, P. K. Chrysanthis, A. Labrinidis. "FlatFIT: Accelerated Incremental Sliding-Window Aggregation For Real-Time Analytics." *29th Int'l Conference on Scientific and Statistical Database Management (SSDBM'17)*, pp. 5:1-5:12, Jun. 2017.
3. D. Petrov, R. Alseghayer, M. A. Sharaf, P. K. Chrysanthis, A. Labrinidis. "Interactive Exploration of Correlated Time Series." *4th Int'l Workshop on Exploratory Search in Databases and the Web (ExploreDB'17)*, pp. 2.1-2.6, May 2017, Co-located with ACM SIGMOD 2017.

4. V. K. Raghu, X. Ge, P. K. Chrysanthis, P. V. Benos. "Integrated Theory-and Data-Driven Feature Selection in Gene Expression Data Analysis." *Proc. of the 33rd IEEE Int'l Conference on Data Engineering (ICDE'17)*, pp. 1525-1532, Apr. 2017.
5. X. Ge, Y. Xue, Z. Luo, M. Sharaf, and P. K. Chrysanthis. "REQUEST: A Scalable Framework for Interactive Construction of Exploratory Queries." *Proc. IEEE Int'l Conference on Big Data (BigData 2016)*, pp.646-655, Dec. 2016.
6. A. Zheng, A Labrinidis, P. K. Chrysanthis and and Jack Lange. "ARGO: Architecture-Aware Graph Partitioning." *Proc. IEEE Int'l Conference on Big Data (BigData 2016)*, pp. 284-293, Dec. 2016.
7. D. Kline, N. Parshook, X. Ge, E. Brunvand, R. Melhem, P. K. Chrysanthis and A. Jones. "Holistically Evaluating the Environmental Impacts in Modern Computing Systems." *Proc. of the 7th Int'l Green and Sustainable Computing Conference (IGSC'16)*, pp. 1-8, Nov. 2016.
8. X. Ge, P. K. Chrysanthis, K. Pelechrinis. "MPG: Not so Random Exploration of a City," *Proc. of the 17th IEEE Int'l Conference on Mobile Data Management (MDM'16)*, pp. 72-81, June 2016.
9. A. Zheng, A Labrinidis, and P. K. Chrysanthis. "Planar: Parallel Lightweight Architecture-Aware Adaptive Graph Repartitioning." *Proc. of the 32nd IEEE Int'l Conference on Data Engineering (ICDE'16)*, pp. 121-132, May 2016.
10. H. Ehsan, M. A. Sharaf and P. K. Chrysanthis. "MuVE: Efficient Multi-Objective View Recommendation for Visual Data Exploration." *Proc. of the 32nd IEEE Int'l Conference on Data Engineering (ICDE'16)*, 731-742, May 2016.
11. A. Zheng, A. Labrinidis, P. H. Pisciuneri, P. K. Chrysanthis and P. Givi. "PARAGON: Parallel Architecture-Aware Graph Partition Refinement Algorithm." *Proc. of the 19th Int'l Conference on Extending Database Technology (EDBT'16)*, pp. 1-12, Mar 2016.
12. A. U. Shein, P. K. Chrysanthis and A. Labrinidis. "F1: Accelerating the optimization of Aggregate Continuous Queries." *Proc. of the 24th ACM Int'l Conference on Information and Knowledge Management (CIKM'15)*, pp. 1151-1160, Oct. 2015.
13. C. Mafrica, J. Johnson, S. Bock, T. N. Pham, B. R. Childers, P. K. Chrysanthis and A. Labrinidis. "Stream query processing on emerging memory architectures." *Proc. of the 4th IEEE Non-Volatile Memory Systems and Applications Symposium (NVMSA'15)*, pp. 1-6, Aug. 2015.
14. A. U. Shein, P. K. Chrysanthis and A. Labrinidis. "Processing of Aggregate Continuous Queries in a Distributed Environment." *Proc. of the 9th Int'l Workshop on Business Intelligence for the Real Time Enterprise (BIRTE'15)*, pp. 1-16, Aug. 2015 (Co-located with VLDB 2015).
15. A. Konstantinidis, G. Nikolaidis, G. Chatzimilioudis, G. Evagorou, D. Zeinalipour-Yazti and P. K. Chrysanthis. "Radiomap Prefetching for Indoor Navigation in Intermittently Connected WiFi Networks." *Proc. of the 16th Intl EEE Int'l Conference on Mobile Data Management (MDM'15)*, pp. 34-43, Jun. 2015.
16. X. Ge, P. K. Chrysanthis and A. Labrinidis. "Preferential Diversity." *Proc of the 2nd Intl Workshop on Exploratory Search in Databases and the Web (ExploreDB)*, pp. 9-14, Jun. 2015. (Co-located with ACM SIGMOD 2015).

17. R. Gheorghiu, A. Labrinidis, and P. K. Chrysanthis. "Unifying Qualitative and Quantitative Database Preferences to Enhance Query Personalization." *Proc of the 2nd Intl Workshop on Exploratory Search in Databases and the Web (ExploreDB)*, pp. 6–8, Jun. 2015. (Co-located with 2015).
18. A. Zheng, A Labrinidis, and P. K. Chrysanthis. "Architecture-Aware Graph Repartitioning for Data-Intensive Scientific Computing." *Proc. of the 1st Int'l Workshop on High Performance Big Graph Data Management, Analysis, and Mining (BigGraphDM'14)*, pp. 78–85, Oct. 2014.
19. N. Farnan, A. J. Lee, P. K. Chrysanthis, and T. Yu. "PAQO: Preference-Aware Query Optimization for Decentralized Database Systems," *Proc. of the 30th IEEE Int'l Conference on Data Engineering (ICDE'14)*, pp. 424–435, Apr. 2014.
20. J. Lange, A Labrinidis and P. K. Chrysanthis. "Towards Automated Personalized Data Storage" *Proc. of the 8th Int'l Workshop on Self-Managing Database Systems (SMDB'14)*, ICDE Workshops, pp. 278–283, Apr. 2014.
21. G. Gadola and P. K. Chrysanthis. "Harnessing Off-Grid Renewable Energy," *Proc. of the 2nd Int'l Conference on Renewable Energy Research and Applications (ICRERA'13)*, pp. 927 - 931, Oct. 2013.
22. P. Neophytou, P. K. Chrysanthis, and A. Labrinidis. "A Continuous Workflow Scheduling Framework," *Proc. of the 2nd ACM Int'l Workshop on Scalable Workflow Enactment Engines and Technologies (SWEET'13)*, June 2013.
23. T. N. Pham, P. K. Chrysanthis, A. Labrinidis. "Self-managing load shedding for data stream management systems," *Proc. of the 7th Int'l Workshop on Self-Managing Database Systems (SMDB'13)*, ICDE Workshops, pp. 70–76, Apr. 2013.
24. S. Papastavrou, P. K. Chrysanthis and G. Samaras. "Exploring Content Dependencies to Better Balance Performance and Freshness in Web Databases." *Proc. of the 13th Int'l Conference on Web Information System Engineering (WISE'12)*, pp. 512–525. Nov. 2012.
25. R. Rexit, F. Tsui, J. Espino, S. Wesaratchakit, Y. Ye and P. K. Chrysanthis. "Using a Distributed Search Engine to Identify Optimal Product Sets for Use in an Outbreak Detection System." *Proc. of the first Int'l Workshop on Collaborative Big Data (C-Big)*, pp. 1-8, Oct. 2012.
26. R. Gheorghiu, A. Labrinidis, P.K. Chrysanthis. "Database Preferences - A Unified Model." *Proc. of 6th Int'l Workshop on Personalized Access, Profile Management, and Context Awareness in Databases (PersDB)*, VLDB Workshops, pp. 1-6, Aug. 2012.
27. S. Guirguis, M. A. Sharaf, P. K. Chrysanthis, and A. Labrinidis, "Three-level Processing of Multiple Aggregate Continuous Queries." *Proc. of the 28th IEEE Int'l Conference on Data Engineering (ICDE)*, pp. 929-940, Apr. 2012.
28. L. Al Moakar, A. Labrinidis, P. K. Chrysanthis, "Adaptive Class-based Scheduling of Continuous Queries." *Proc. of the 7th Int'l Workshop on Self-Managing Database Systems (SMDB)*, ICDE Workshops, pp. 289-294, Apr. 2012.
29. S. Guirguis, M. A. Sharaf, P. K. Chrysanthis, and A. Labrinidis, "Optimized Processing of Multiple Aggregate Continuous Queries." *Proc. of the ACM Int'l Conference on Information and Knowledge Management (CIKM)*, pp. 1-10, Oct. 2011.



30. N. Farnan, A. J. Lee, P. K. Chrysanthis, and T. Yu, "Don't Reveal My Intension: Protecting User Privacy using Declarative Preferences during Distributed Query Processing." *Proc. of the 16th European Symposium on Research in Computer Security (ESORCS)*, pp. 628-647, Sept. 2011.
31. S. M. Snyder, Shimin Chen, P. K. Chrysanthis, A. Labrinidis. "QMD: Exploiting Flash for Energy Efficient Disk Arrays." *Proc. of the 7th Int'l Workshop on Data Management on New Hardware (DaMoN'11)*, SIGMOD Workshops, pp. 41-49, June 2011.
32. P. Neophytou, J. Szwedko, M. A. Sharaf, P. K. Chrysanthis, A. Labrinidis, "Optimizing the Energy Consumption of Continuous Query Processing with Mobile Clients." *Proc. of the 12th Int'l IEEE Conference on Mobile Data Management (MDM'11)*, (1):98-103, June 2011.
33. M. K. Iskander, D. W. Wilkinson, A. J. Lee, P. K. Chrysanthis, "Enforcing Policy and Data Consistency of Cloud Transactions." *Proc. of the 2nd IEEE Int'l Workshop on Security and Privacy on the Cloud (SPCC)*, ICDCS Workshops, pp. 253-262, June 2011.
34. T. N. Pham, L. Al Moakar, P. K. Chrysanthis, A. Labrinidis, DILoS: A Dynamic Integrated Load Manager and Scheduler for Continuous Queries." In *The 6th Int'l Workshop on Self-Managing Database Systems (SMDB)*, ICDE Workshops, pp. 10-15, April 2011.
35. Alexander G. Connor, P. K. Chrysanthis, A. Labrinidis, "Key-Key-Value Stores for Efficiently Processing Graph Data in the Cloud." *Proc. of the 2nd Int'l Workshop on Graph Data Management (GDM'11)*, pp. 88-93, April 2011.
36. P. Neophytou, P. K. Chrysanthis, A. Labrinidis and M. A. Sharaf. "Power Aware Operator Placement and Broadcasting of Continuous Query Results." *Proc. of the 9th Int'l ACM Workshop on Data Engineering for Wireless and Mobile Access (MobiDE'10)*, June 2010.
37. L. Al Moakar, P. K. Chrysanthis, C. Chung, S. Guirguis, A. Labrinidis, P. Neophytou, K. Pruhs. "Admission Control Mechanisms for Continuous Queries in the Cloud." *Proc. of the 26th Int'l Conference on Data Engineering (ICDE'10)*, Mar. 2010.
38. M. A. Sharaf, P. K. Chrysanthis, A. Labrinidis. "Tuning QoS in Stream Processing Engines." *Proc. of the 21st Australasian Database Conference (ADC'10)*, Jan. 2010.
39. P. Andreou, O. Spanos, D. Zeinalipour-Yazti, G. Samaras, and P. K. Chrysanthis. "FSort: External Sorting on Flash-based Sensor Devices." *Proc. of the 6th Int'l Workshop on Data Management for Sensor Networks (DMSN'09)*, Aug. 2009.
40. L. Al Moakar, T. N. Pham, P. Neophytou, P. K. Chrysanthis, A. Labrinidis, and M. A. Sharaf. "Class-based Continuous Query Scheduling for Data Streams." *Proc. of the 6th Int'l Workshop on Data Management for Sensor Networks (DMSN'09)*, Aug. 2009.
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1. X. Ge, A. Daphalapurkar, M. Shimpi, D. Kohli, K. Pelechrinis, P. K. Chrysanthis, D. Zeinalipour-Yazti. "Data-Driven Serendipity Navigation in Urban Places." *The 37th IEEE Int'l Conference on Distributed Computing Systems (ICDCS'17)*, pp. 2501-2504, Jun. 2017.
2. X. Ge, S. Panati, K. Pelechrinis, P. K. Chrysanthis, M.A. Sharaf. "In Search for Relevant, Diverse and Crowd-screen Points of Interests." *20th Int'l Conference on Extending Database Technology (EDBT'17)*, pp. 578-581, Mar. 2017.
3. N. R. Katsipoulakis, C. Thoma, E. A. Gratta, A. Labrinidis, A. J. Lee, P. K. Chrysanthis. "CE-Storm: Confidential Elastic Processing of Data Streams." *Proc. of the 2015 ACM SIGMOD Int'l Conference on Management of Data (SIGMOD'15)*, pp. 859–864, May 2015.
4. N. R. Ong, S. E. Rojcewicz, N. L. Farnan, A. J. Lee, P. K. Chrysanthis, T. Yu. "Interactive Preference-Aware Query Optimization." *Proc. of the 31st IEEE Int'l Conference on Data Engineering (ICDE'15)*, pp. 1–4, Apr. 2015.
5. N. L. Farnan, A. J. Lee, P. K. Chrysanthis, T. Yu. "PAQO: A Preference-Aware Query Optimizer for PostgreSQL." *Proc. of the Very Large Databases Conference (VLDB'13)*, 6(12):1334-1337, Aug. 2013.
6. N. L. Farnan, A. J. Lee, P. K. Chrysanthis, T. Yu. "Enabling intensional access control via preference-aware query optimization." *Proc. of the 18th ACM Symposium on Access Control Models and Technologies (SACMAT'13)*, pp. 189-192, June 2013.

7. P. Neophytou, R. Gheorghiu, R. Hachey, T. Luciani, D. Bao, A. Labrinidis, G. E. Marai, P. K. Chrysanthis. "AstroShelf: Understanding the Universe Through Scalable Navigation of a Galaxy of Annotations." *Proc. of the 31st ACM Int'l Conference on Management of Data (SIGMOD'12)*, pp. 1-4, May 2012.
8. P. Neophytou, P. K. Chrysanthis, and A. Labrinidis, "CONFLuEnCE: CONTinuous workFLow ExeCution Engine." In *30th ACM Int'l Conference on Management of Data (SIGMOD'11)*, pp. 1311-1314, June 2011.
9. J. Szwedko, C. Shaw, A. G. Connor, A. Labrinidis and P. K. Chrysanthis. "Demonstrating an evacuation algorithm with mobile devices using an e-scavenger hunt game." *Proc. of ACM Workshop on Data Engineering for Mobile and Wireless Access (MobiDE'09)*, pp. 49-52, June 2009.
10. P. Andreou, D. Zeinalipour-Yazti, M. Vassiliadou, P. K. Chrysanthis, G. Samaras. "KSpot: Effectively Monitoring the K Most Important Events in a Wireless Sensor Network." *Proc. of the 25th Int'l Conference on Data Engineering March (ICDE'09)*, pp. 1503-1506, May 2009.
11. V. Penkrot, J. Beaver, M. A. Sharaf, S. Roychowdhury, W. Li, W. Zhang, P. K. Chrysanthis, V. Liberatore, K. Pruhs. "An Optimized Multicast-based Data Dissemination Middleware: A Demonstration." *Proc. of 19th IEEE Int'l Conference on Data Engineering (ICDE'03)*, pp. 762-764, March 2003.
12. A. Massari, S. Pavani, L. Saladini, and P. K. Chrysanthis. "QBI: Query By Icons." (Demo Description) *Proc. of the 1995 ACM SIGMOD Int'l Conference on Management of Data (SIGMOD'95)*, pp. 477, San Jose, CA, May 1995.

#### REFEREED ABSTRACTS and POSTERS

1. V. Zadoroshny, P. Turchin, P. K. Chrysanthis and P. Manning. "Towards Computational Social Sustainability, Creating Historical Knowledge Socially: New Approaches." *Opportunities and Epistemological Implications of Undertaking Research with Citizen Scholars*, Oct. 2017. (Panel Discussion)
2. V. Raghu, X. Ge, P. K. Chrysanthis and P. V. Benos. "Integrated Theory- and Data-driven Dimensionality Reduction in High-throughput Gene Expression Data Analysis." *Proc. of Intelligent Systems for Molecular Biology (ISBM'17)*, July 2017. (Poster Presentation)
3. P. H. Pisciuneri, A. Zheng, A. Labrinidis, P. K. Chrysanthis and P. Givi. "Architecture-Aware Dynamic Repartitioning for Turbulent Reactors." *SIAM Sixteenth International Conference on Numerical Combustion*, p. 52, April 2017. (Regular Presentation)
4. P. H. Pisciuneri, A. Zheng, P. Givi, A. Labrinidis, and P. K. Chrysanthis. "Repartitioning Strategies for Massively Parallel Simulation of Reacting Flow." *Proc. of the 68th Annual Meeting of the APS Division of Fluid Dynamics (APS'15)*, 60(21):503, Nov. 2015.
5. A. U. Shein, P. K. Chrysanthis, and A. Labrinidis. "Scalable Processing of Aggregate Continuous Queries in a Distributed Environment." *Proc. of ACM Symposium on Cloud Computing (SoCC 2015)*, Aug. 2015.
6. P. H. Pisciuneri, E. Meneses, A. Zheng, A. Labrinidis, P. K. Chrysanthis, and P. Givi. "Load Balancing, Dynamic Repartitioning, and Data Migration in Turbulent Reactors' Simulation." *Proc. of the 15th Int'l Conference on Numerical Combustion (ICNC'15)*, April 2015.

7. P. K. Chrysanthis and A. Labrinidis. "Big Data Systems Research @Advanced Data Management Technologies Lab (ADMT), University of Pittsburgh." *NIST Cloud and Big Data workshop*, Jan. 2013.
8. S. Guirguis, P. Neophytou, P. K. Chrysanthis, A. Labrinidis, and K. Pruhs. "Expanding Continuous Queries Scope for Better Event Detection." *Workshop on Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Adhoc Networks (SSPC'09)*, pp. 1-3, Mar. 2009.
9. D. Mosse, L. Comfort, A. Amer, J. C. Brustoloni, P. K. Chrysanthis, M. Hauskrecht, A. Labrinidis, R. Melhem, and K. Pruhs. "Secure-CITI Critical Information-Technology Infrastructure." *Proc. of the 7th Annual Int'l Conference on Digital Government Research*, pp. 253-254, May 2006
10. G. Santhanakrishnan, A. Amer, P. K. Chrysanthis. "A Goal-Oriented Self-Tuning Caching Algorithm." *Proc. of 23rd IEEE Int'l Performance Computing and Communications Conference*, Apr. 2004.
11. A. Berfield, J. Beaver and P. K. Chrysanthis. "Profile and context filtering of streaming data for a mobile personal assistant." *19th ACM SAC 2004*, pp. 1615-1616, Mar. 2004.
12. Z. Liu, P. K. Chrysanthis, F.C. Tsui. "A Comparison of Two View Materialization Approaches for Disease Surveillance System." *Proc. of ACM Symposium on Applied Computing*, pp. 754-755, Mar. 2004.
13. Oleg Shigiltchoff, P. K. Chrysanthis, Evaggelia Pitoura. "Energy Efficient Access in Multiversion Broadcast Environment." *Proc. of the 5th Int'l Conference on Mobile Data Management*, pp. 168, Jan. 2004.
14. S. Papastavrou, G. Samaras, P. Evripidou, P. K. Chrysanthis. "Parse & Dispatch: Parallelizing the Generation of Dynamic Web Content." The 12th Int'l World Wide Web Conference, May 2003. (short paper, poster)
15. W. Li, W. Zhang, V. Liberatore, V. Penkrot, J. Beaver, M. A. Sharaf, S. Roychowdhury, P. K. Chrysanthis, and K. Pruhs. "An Optimized Multicast-based Data Dissemination Middleware: A Demonstration." *Proc. of 19th Int'l Conf. on Data Engineering*, Mar. 2003.
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17. H. Karimi, P. Krishnamurthy, S. Banerjee, P. K. Chrysanthis, D. Tipper and K. Pahlavan. "Distributed Mobile GIS." *GIM (Geomatics Information Magazine) International*, Vol. 14, No. 9, pp. 80-82, Sept. 2000.
18. K. Tew, P. K. Chrysanthis and Mossé. "Empirical Evaluation of Task and Resource Scheduling in Dynamic Real-Time Systems." *Proc. of the IEEE Real-Time Systems Symposium, Special Track on Work in Progress*, pp. 35-38, D.C., Dec. 1996.
19. Y. J. Al-Houmaily and P. K. Chrysanthis. "In Search for an Efficient Real-Time Atomic Commit Protocol." *Proc. of the IEEE Real-Time Systems Symposium, Special Track on Work in Progress*, pp. 51-54, D.C., Dec. 1996.

## EDITORIALS and POSITION PAPERS

1. P. K. Chrysanthis. "The Singularity of real-time analytics", *Proc. of the 10th Int'l Workshop on Enabling Real-Time Business Intelligence (BIRTE'16)*, Sept. 2016.
2. Evaggelia Pitoura and P. K. Chrysanthis. "Mobility and Big Data: adding an M to the Vs, or not?" (Panel Abstract). *16th IEEE International Conference on Mobile Data Management*, June 2015.
3. P. K. Chrysanthis and A. Labrinidis. "Resource and Human-constraint Data Processing." *Collection of White Papers of the NSF Workshop on Social Networks, Mobility and the Cloud*, Feb. 2012.
4. S. Chen, P. K. Chrysanthis and A. Labrinidis. "Exploiting Flash for Energy Efficient Disk Arrays." *Collection of White Papers of the NSF Workshop on Sustainable Energy-Efficient Data Management*, May 2011.
5. P. K. Chrysanthis. "AQSIOS - Next Generation Data Stream Management System." *CONET Newsletter (CONET)*, 1(9):1-3, June 2010.
6. P. K. Chrysanthis and K. Pruhs. "Sustainable Computing." *CNSF Congressional Exhibit*, Washington DC, April 2010.
7. P. K. Chrysanthis. "20 years of mobile data management research: vision and reality." (Panel Abstract), *Proc. of ACM Workshop on Data Engineering for Mobile and Wireless Access (MobiDE'09)*, June 2009.
8. P. K. Chrysanthis and A. Labrinidis. "Facilitating the Building of Data-Intensive Applications.", *Collection of Whitepapers of the NSF IIS-GENI Workshop*, Nov. 2006.
9. P. K. Chrysanthis. Power-Aware Data Management and the Third Law of Compu-Dynamics." (keynote Abstract) *Proc. of the 5th Hellenic Symposium on Data Management (HDMS'06)*, p. 7, Sept. 2006.
10. P. K. Chrysanthis. "Power-Aware Data Management and the Third Law of Compu-Dynamics." (Invited Talk Abstract) *Proc. of. Dagstuhl Seminar 06431 - Scalable Data Management in Evolving Networks*, Oct. 2006.
11. P. K. Chrysanthis. "Advanced Data Management Technologies Lab @ U. Pittsburgh." (Presentation Abstract) *Proc. of. Dagstuhl Seminar 06431 - Scalable Data Management in Evolving Networks*, Oct. 2006.
12. J-H Bosse, S. Bottcher, P.K. Chrysanthis, A Delis, L. Gruenwald, A. Mondal, S. Obermerier, G. Samaras and S. Viglas. "Atomicity in Mobile Networks." (Working Group Summary) *Proc. of. Dagstuhl Seminar 06431 - Scalable Data Management in Evolving Networks*, Oct. 2006.
13. P. A. Boncz, A. Bonifati; J-H. Böse, S. Böttcher, P.K. Chrysanthis, L. Gruenwald, A. Illarramendi, P. Janacik, B König-Ries, W. May, A. Mondal, S. Obermeier, A. Ouksel, and G. Samaras. "P2P, Ad Hoc and Sensor Networks . All the Different or All the Same?" (Working Group Summary) *Proc. of. Dagstuhl Seminar 06431 - Scalable Data Management in Evolving Networks*, Oct. 2006.

14. P. K. Chrysanthis. "Data in Crisis Management: An Exercise for Mobile databases, Sensor databases and Peer-to-Peer databases." *Proc. of Dagstuhl Seminar 05421: Data Always and Everywhere - Management of Mobile, Ubiquitous, Pervasive, and Sensor Data*, Oct. 2005.
15. S. Banerjee, M. Cherniack, P. K. Chrysanthis, V. Kumar, A. Labrinidis. "Report on MobiDE 2003: The 3rd Int'l ACM Workshop on Data Engineering for Wireless and Mobile Access." *SIGMOD Record*, 34(1): 70-74, March. 2005.
16. A. Zaslavsky, P. K. Chrysanthis and V. Kumar. "Mobility in databases and distributed systems: summing up achievements of the past decade (Editorial)." *Special Issue of ACM Mobile Networks Journal*, 9(5): 455-457, Oct. 2004.
17. S. Banarjee and P. K. Chrysanthis. "Special issue on Mobile Data Management: Guest editors' preface." *ACM SIGMOBILE Mobile Computing and Communications Review (MC2R)*, 8(3):1-3, July 2004.
18. P. Bernstein (Microsoft), A. Borgida (Rutgers), M. Carey (BEA), S. Chaudhuri (Microsoft), P. Chrysanthis (U. Pittsburgh), C. Clifton (Purdue), U. Dayal (HP), D. Florescu (BEA), M. Franklin (UC-Berkeley), L. Gasser (UIUC), J. Gehrke (Cornell), S. Ghandeharizadeh (USC), A. Halevy (U. Washington), H.V. Jagadish (U. Michigan), H. Korth (Lehigh), R. Ramakrishnan (U. Wisconsin), A. Rosenthal (Mitre), S. Sripada (Boeing), J. Srivastava (U. Minnesota), J. Su (UCSB), D. Suci (U. Washington), S. Thatte (Microsoft), B. Thuraisingham (NSF), V. Tsotras (UCR), J. Widom (Stanford), M. Winslett (UIUC), O. Wolfson (UIC), J. Yuan (Boeing), and M. Zemankova (NSF). "Science of Design for Information Systems - Report of the NSF Workshop, Seattle, 2003." *SIGMOD Record*, 33(1): 133-137, Mar. 2004. (Co-author the actual NSF report as well.)
19. P. K. Chrysanthis, M. Sloman and A. B. Zaslavsky. "Mobile Data Management (Editorial)." *IEEE Distributed Systems Online*, Special issue on 4th Int'l Conference on Mobile Data Management (MDM 2003), Oct. 2003.
20. P. K. Chrysanthis, M. Sloman and A. B. Zaslavsky. "Report on the 4th Int'l Conference on Mobile Data Management." *SIGMOD Record*, 32(3): 103-106, Sept. 2003.
21. P. K. Chrysanthis, V. Kumar and E. Pitoura. "Overview of the IEEE Tutorial on Data Engineering for Mobile and Wireless Access." *Proc. of the 16th IEEE Int'l Conference on Data Engineering*, Mar. 2003.
22. S. Banerjee and P. K. Chrysanthis. "Peer Support in a Mobile World" *Proc. of the NSF Workshop on Context-Aware Data Management*, Jan. 2002.
23. P. K. Chrysanthis and E. Pitoura. "Overview of the IEEE Tutorial on Mobile and Wireless Database Access for Pervasive Computing." *Proc. of the 16th IEEE Int'l Conference on Data Engineering*, Mar. 2000.
24. P. K. Chrysanthis. "CAREER: Developing Pragmatic Mobile Data Management Systems." *Proc. of the NSF Information and Data Management Workshop*, Mar. 1998, Mar. 1999, and Mar. 2000.
25. S. Banerjee and P. K. Chrysanthis. "Reliable Data Sharing in Wide Area Gigabit Networked Databases." *Proc. of the NSF Information and Data Management Workshop*, Mar. 1999, Mar. 2000, Apr. 2001 and May 2002.

26. P.K. Chrysanthis and J. Klavans. "Executive Summary of the 1998 NSF Information and Data Management Workshop." *Proc. of the 2000 NSF Information and Data Management Workshop*, Mar. 2000.
27. P. K. Chrysanthis. "Data Management in Mobile Computing." *Session on Mobile Computing, 1997 AAAS Annual Conference*, Feb. 1997.
28. Y. Al-Houmaily, S. Levitan and P.K. Chrysanthis. "Commit Processing in Distributed, Heterogeneous and Multidatabase Systems." *Fifth Annual Graduate Research Review*, Electrical Engineering Department, University of Pittsburgh, Apr. 1996.
29. S. Frezza, S. Levitan and P.K. Chrysanthis. "Requirements-Based Design Evaluation." *1995 N.S.F. Design and Manufacturing Grantees Conference*, Jan. 1995.
30. P. K. Chrysanthis. "Transaction and Activity Management in Massive Digital Data Systems" *Massive Digital Data Systems Workshop*, Intelligence Community, Feb. 1994.
31. P. K. Chrysanthis and K. Ramamritham. "A Status Report of the ACTA Transaction Modeling Framework," *DARPA Open OODB Workshop II: Workshop on Open OODB Module Interfaces*, Sept. 1991.

#### OTHER PUBLICATIONS

1. M. Castellanos and P. K. Chrysanthis. "A Message From Chairs." *Proceedings of the Int'l Workshop on Real-Time Business Intelligence and Analytics (BIRTE'17)*, Aug. 2017.
2. A. B. Zaslavsky, P. K. Chrysanthis, C. Becker, J. Indulska, M. F. Mokbel, D. Nicklas, C-Y Chow (Eds.). "Chairs Message." *Proc of IEEE 15th Int'l Conference on Mobile Data Management (MDM'14)*, Volume 1&2, July 2014.
3. A. Zaslavsky, P. K. Chrysanthis and D. Lee. "General Chairs Message." *IEEE Int'l Conference on Mobile Date Management*, *Proc. of the 12th Int'l IEEE Conference on Mobile Data Management (MDM'11)*, June 2011.
4. A. P. Buchmann and P. K. Chrysanthis. "PC Co-chairs Message. OTM Conferences", *Proc. of the Int'l Conference on Ontologies, DataBases, and Applications of Semantics (ODBASE'10)*, p. 918, Oct. 2010.
5. P. K. Chrysanthis, C. Jensen, A. Labrinidis, and V. Kumar. "Preface." *Proc. of the 5th Int'l ACM Workshop on Data Engineering for Wireless and Mobile Access*, pp. iii, June 2006.
6. P. K. Chrysanthis and G. Samaras. "General Chair's Welcome Message." *Proc. of the 6th Int'l Conference on Mobile Data Management*, pp. iii, May 2005.
7. P. K. Chrysanthis and E. Pitoura. "Special issue on Pervasive Computing and Communications: Guest Editors' preface," *ACM Wireless Networks*, 10(6):629-630, Nov. 2004.
8. P. K. Chrysanthis, S. Banerjee and M. Cherniack. "MobiDE'03 Conference Chairs Preface." *Proceedings of the ACM Int'l Workshop on Data Engineering for Wireless and Mobile Access*, pp. iii-iv, Sept. 2003.
9. M.S. Chen, P. K. Chrysanthis, M. Sloman and A. Zaslavsky. "Editors Preface to the Proceedings of the 4th Int'l Conference on Mobile Data Management", Jan. 2003.

10. K. Ramamritham, P. K. Chrysanthis and E. Pitoura. "Introduction to the Proceedings of the Second ACM Int'l Workshop on Data Engineering for Mobile and Wireless Access.", May 2001.
11. A. Zaslavsky, P. K. Chrysanthis and V. Kumar. "Introduction to the Proceedings of the 3rd DEXA Int'l Workshop on Mobility in Distributed and Database Systems," Sept. 2000.
12. A. Zaslavsky and P. K. Chrysanthis. "Introduction to the Proceedings of the 2nd DEXA Int'l Workshop on Mobility in Distributed and Database Systems," Sept. 1999.
13. P. K. Chrysanthis and E. Pitoura. "Introduction to the Proceedings of the ACM Int'l Workshop on Data Engineering for Mobile and Wireless Access", Aug. 1999.
14. P. K. Chrysanthis. "Guest Editor's Introduction to Special Issue on Workflow Systems." *Distributed Systems Engineering*, 3(4):211–212, Dec. 1996.

#### KEYNOTE PRESENTATIONS

- The Twenty-Ninth International Conference on Software Engineering and Knowledge Engineering*, "User-centric Techniques for Big Data Exploration," July 5, 2017
- 2016 Joint Conference on Medical Informatics in Taiwan – Active Aging with Smart Technology*, "User-centric Techniques for Big Data Exploration," June 11, 2016
- IEEE Data and Services Management in Mobile Environments workshop*, "20 Years of Mobile Data Management Research: Vision and Reality," April 7, 2008.
- Hellenic Symposium on Data Management*, "Power-Aware Data Management and the Third Law of Compu-Dynamics," September 7, 2006.

#### INVITED PRESENTATIONS

- Indian Institute of Technology, Bombay*, "Processing Aggregated Continuous Queries," Sept. 14, 2016
- University of Cyprus*, "Recommending Interesting Visualizations for Data Exploration," June 1, 2016.
- University of Cyprus*, "Preference-based Big Data Exploration," August 1, 2015.
- University of Massachusetts, Amherst*, "AQSIOS: Handling Big Streaming Data" (Symposium on Computer Science and Engineering), May 2, 2015.
- University of Cyprus*, "Load Management for Big Streaming Data," August 31, 2014.
- University of Maryland*, "Handling the Three Vs of Big Data with DILoS", May 2013.
- University of Cyprus*, "Efficient Scheduling of Heterogeneous Continuous Queries in AQSIOS," Feb. 16, 2007.
- University of Ioannina, Greece*, "Data Management Techniques for Sensor Networks", Dec. 11, 2006.
- Dagstuhl Seminar 06431, Scalable Data Management in Evolving Networks*, "Power-Aware Data Management and the Third Law of Compu-Dynamics," Oct. 24, 2006.
- Dagstuhl Seminar 05421 on Data Always and Everywhere - Management of Mobile, Ubiquitous, Pervasive, and Sensor Data*, "Data in Crisis Management: An Exercise in Mobile databases, Sensor databases and Peer-to-Peer databases," Oct. 17, 2005.
- Carnegie Mellon University*, "Efficient Data Dissemination to Mobile Clients in E-Commerce Applications," July 8, 2001.



*HP Labs, Paolo Alto, CA*, "Efficient Data Dissemination to Mobile Clients in E-Commerce Applications," June 20, 2001.

*University of Massachusetts, Amherst*, "Improving Access Time to Air Caches While Saving Energy," May 14, 2001

*Georgetown University*, "Efficient Data Dissemination to Mobile Clients in E-Commerce Applications," April 25, 2001.

*Case Western Reserve University*, "Efficient Data Dissemination to Mobile Clients in E-Commerce Applications," March 30, 2001.

*Carnegie Mellon University*, "Scaling to Mega Data Servers without using Application Semantics," June 23, 2000.

*University of Ioannina, Greece*, "Scaling to Mega Data Servers without using Application Semantics," May 31, 2000.

*Carnegie Mellon University*, "Object-Relational Databases," March 9, 2000.

*Carnegie Mellon University*, "Data Management for Mobile Computing," Oct. 12, 1999.

*Honors College, University of Pittsburgh* "Y2K: Myths, Merits and Misunderstandings of an Otherwise Ordinary Year," Feb. 19, 1999.

*New Mexico Institute of Technology*, "PRO-MOTION: Database Access While in Motion," Nov. 2, 1998.

*New Mexico Institute of Technology*, " High Performance Data Servers in Wide Area Gigabit Networks," May 2, 1998.

*Polytechnic University of New York City*, " High Performance Database Servers in Wide Area Gigabit Networks," Nov. 24, 1997.

*University of Pittsburgh, Department of Electrical Engineering*, "Modeling Activities and Workflows Using ACTA," Oct. 9, 1995.

*Universita di Roma "La Sapienza," Italy*, "Systemantic Synthesis of Extended Transactions using ACTA," July 18, 1994.

*Universita di Roma "La Sapienza," Italy*, " An Overview of the Object Data Management Standardization," July 12, 1994.

*ETH Zurich, Zurich, Switzerland*, "Modeling Workflows Using ACTA," Oct. 1993.

*Oracle Corporation, Redwood City, CA*, "Modeling Activities Using ACTA," June 1993.

*Texas University A&M, TX*, "ACTA, A Framework for Specifying and Reasoning about Extended Transactions," April 1991.

*AT&T Bell Labs, Murray Hill, NJ*, "ACTA, A Framework for Specifying and Reasoning about Extended Transactions," April 1991.

*Bellcore, Morristown, NJ*, "ACTA, A Framework for Specifying and Reasoning about Extended Transactions," April 1991.

*University of Chicago, Chicago, IL*, "ACTA, A Framework for Specifying and Reasoning about Extended Transactions," March 1991.

*Boston University, Boston, MA*, "ACTA, A Framework for Specifying and Reasoning about Extended Transactions," March 1991.

## PANELIST

- “Mobility and Big Data: adding an M to the Vs, or not?” in *the 16th IEEE International Conference on Mobile Data Management*, Pittsburgh, PA, June 2015 (Co-Chair)
- “BigData - Challenges and Opportunities” in *the 10th Int’l Conference on Collaborative Computing: Networking, Applications and Worksharing*, Miami, FL, Oct. 2014.
- “Collaboration and Social Networks” in *the 7th Int’l Conference on Collaborative Computing: Networking, Applications and Worksharing*, Orlando, FL, Oct. 2011.
- “Mobile Peer-to-Peer Computing Challenges” in *the 5th Int’l Conference on Mobile Data Management*, Cyprus, May 2005.
- “Lowell Report on Future of Data Management” in *the 3rd Hellenic Symposium on the Management of Data*, Greece, Sept. 2004.
- “Transactions and Objects” in *OOPSLA/ECOOP Workshop*, Canada, Oct. 1990.
- “Being a Foreign Teaching Assistant” in *Human Relations Workshop for New Foreign Teaching Assistants*, Office of Human Relations, University of Massachusetts, Amherst, Sept. 1987.

## TUTORIALS, ADVANCED SEMINARS and SHORT COURSES

- “Graph Partitioning in Distributed Graph Computation,” University of Diaspora at University of Cyprus, June 2016.
- “Scheduling continuous queries in data stream management systems” (co-taught with M. A. Sharaf and A. Labrinidis), VLDB 2008, August 2008.
- “Network-Aware Wireless Sensor Data Management.” (co-taught with V. Zadoroshny), Advanced Seminar, MDM 2006, May 2006.
- “Data Engineering for Mobile and Wireless Access” (Co-taught with E. Pitoura, V. Kumar), half-day tutorial, ICDE 2003, March 2003.
- “Mobile and Wireless Database Access for Pervasive Computing” (Co-taught with E. Pitoura), half-day tutorial, ICDE 2000, February 2000.
- “Concurrency Control and Transaction Processing” (Co-Taught with K. Ramamritham), 1 day tutorial, Part of the 6th International Conference on Management of Data, December 1994.
- “Object Data Management Systems,” half-day tutorial, University of Salerno, Italy, July 1994.
- “Extended Transaction Models,” half-day tutorial, University of Salerno, Italy, July 1994.
- “Object-Oriented Database Management Systems,” 3 days short course, Institute of Systems Science, National University of Singapore, June 1994. (National Science Foundation’s APEC)

## RESEARCH FUNDING and AWARDS

### Funded Grant Awards: Principle Investigatorships

1. “Transaction Support for Advanced Database Applications,” *DEC Equipment Allowance*, Oct. 1991.
2. “Consistency in Multidatabase Systems – Specification and Maintenance,” *Research Development Fund, University of Pittsburgh*, June 1992 - June 1994.
3. “Understanding Autonomy and Consistency in Multidatabase Systems,” *National Science Foundation, Research Initiation Award*, Aug. 1992 - Jan. 1996.

4. "Disconnected Mobile Database Operations," *B-Right Trucking Company*, Sept. 1994 - Aug. 1995.
5. "Developing Pragmatic Mobile Data Management Systems," *National Science Foundation, CAREER Award*, July 1995 - Aug. 2000.
6. "Data Access and Recovery in High Speed Wide Area Networked Databases," *National Science Foundation*, with Sujata Banerjee of IS&Telecomm, Sept. 1998 - Aug. 2001.
7. "Intelligent Workflow Management," *DARPA* (Supplement to AFOSR Grant "Agents for Dynamic Plan Management) with M. Pollack (PI) and Chrysanthis (co-PI), Apr. 1999 - Nov. 1999.
8. "Plan Management Capabilities for Autonomous Agents: Extending the Basic Mechanisms," AFOSR-DARPA (Contract # F30602-00-0547), with M. Pollack, Mar. 2000 - June 2001.
9. "Continued Development of a Health-System-Resident Detection Component for National Electronic Disease Surveillance," *National Center for Disease Control* with Rich Tsui of the Center of Bioinformatics (PI), Oct. 2001 - Oct. 2002.
10. "Building an Early Warning Public Health Surveillance System", *Pennsylvania Department of Health* with Michael M. Wagner (PI) and Rich Tsui (Co-PI) of the Center of Bioinformatics and Chrysanthis (Co-PI), July 2002 - June 2005.
11. "Collaborative Research: Middleware Support for Multicast Data Dissemination," *NSF, ANI-0123705*, with Kirk Pruhs and Vincenzo Liberatore of Case Western Reserve University, Oct. 2002 - Aug 2005.
12. "A Demonstration of the Integrated, Interactive, Spatial Information System, with Additional Modules of Decision Support," *Mountaintop Technologies*, PI with L. Comfort of GSPIA and A. Labrinidis, Aug. 2005 - Dec. 2005.
13. "Modeling Immunity for Biodefense," *National Institute of Health-NIAD*, Co-PI with P. Morel of School of Medicine (PI), Oct. 2005 - Nov. 2011.
14. "Algorithms and Metrics for New Generation Data Stream Management Systems," *NSF, ANI-0534531*, with A. Labrinidis and K. Pruhs (co-PIs), Mar. 2006 - Feb 2011.
15. "CDI-Type II: Understanding the Universe through Scalable Navigation of a Galaxy of Annotations", *NSF-CCF, OIA-1028162*, Co-PI with A. Labrinidis (PI), L. Marai (Co-PI) and two Co-PIs from Pitt Physics and Astronomy, Sept. 2010 - Aug. 2016.
16. "EAGER: Energy-Efficient Transaction Processing," *NSF, IIS-1050301*, with A. Labrinidis (co-PI), Sept. 2010 - Aug. 2012.
17. "Data Management and Visualization in Petascale Turbulent Combustion Simulation," *NSF, CDS&E-1250171*, Co-PI with Peyman Givi (PI), A. Labrinidis (Co-PI), L. Marai (Co-PI) and S. Yilmaz (Co-PI), Sept. 2012 - Aug. 2017.
18. "Center for Causal Modeling and Discovery of Biomedical Knowledge from Big Data (CCD)," *NIH Big Data to Knowledge (BD2K)*, Co-I with G. Cooper of DBMI (PI), Sept. 2014 - Aug. 2018.
19. "Parallel Data Stream & Graph Processing," *Amazon Cloud Credits*, Co-PI with A. Labrinidis (PI) and A. Lee (Co-PI), March 2016.
20. "Appraisal of Subgrid Scale Closures in Reacting Turbulence via DNS Big Data," *NSF, CDS&E-1609120*, Co-PI with Peyman Givi (PI), A. Labrinidis (Co-PI), and W. Layton (Co-PI), Sept. 2016 - Aug. 2019.

21. "Systems Level Causal Discovery in Heterogeneous TOPMed Data," *NIH-NATIONAL HEART, LUNG, AND BLOOD INSTITUTE, U01*, CI with Takis Benos and Frank Sciruba of Pitt SoM (PIs), Apr. 2017 - Mar 2019.

### **Funded REU – Research Experience for Undergraduates**

1. "Transaction-Oriented Computing," *National Science Foundation, Research Experiences for Undergraduates*, Aug. 1994 - Jan. 1996.
2. "Developing Pragmatic Mobile Data Management Systems," *National Science Foundation, Research Experiences for Undergraduates*, June 1996 - Aug. 2000.
3. "Data Access and Recovery in High Speed Wide Area Networked Databases," *National Science Foundation*, with Sujata Banerjee of IS&Telecomm, Sept. 1998 - Aug. 2001.
4. "Collaborative Research: Middleware Support for Multicast Data Dissemination," *NSF, ANI-0123705*, with Kirk Pruhs and Vincenzo Liberatore of Case Western Reserve University, Oct. 2002 - Aug. 2005.
5. "Web Databases and Services," *University of Pittsburgh, A&S Freshmen Research Experience*, with Alexandros Labrinidis, Spring term 2004.
6. "Algorithms and Metrics for New Generation Data Stream Management Systems," *NSF, IIS-0534531*, with A. Labrinidis and K. Pruhs (co-PIs), Aug 2009 - Feb 2011.
7. "Increasing the energy proportionality of hard disk drives at the array level (RAID)" *NSF, IIS-1050301*, with A. Labrinidis (co-PIs), May 2011 - Aug 2012.

### **Funded Collaborative Grand Awards & Co-Investigatorships**

1. "MATHON: Location Management for Mobile Agents." (Research Collaboration among Universities of Cyprus, Ioannina and Pittsburgh.), *Research Council of Republic of Cyprus*, with G. Samaras of U. Cyprus (PI), Jan. 2001 - Jun. 2002.
2. "Intelligent Assistance for Activity Planning in Space Facilities," *Metrica Inc.-NASA* with Richard Simpson of Public Health, Feb. 2001 - April 2002.
3. "Augmented Manufacturing using a Context Aware Computing Infrastructures", *Pennsylvania Infrastructure Technology Alliance (PITA)*, with Smailagic of CMU (PI) and Siewiorek, Surbu, Chrysanthis (Co-PIs), Nov. 2001 - Dec. 2002.
4. "Technology Enhanced Team Based Design: Collaboration across time and spacing using a pervasive computing infrastructure" *Pennsylvania Infrastructure Technology Alliance (PITA)*, with Smailagic of CMU (PI) and Siewiorek, Hills, Chrysanthis (Co-PIs), Nov. 2001 - Dec. 2002.
5. "Developing a Unified Message Management System", *Research Council of Republic of Cyprus, PENEK*, with P. Evripidou (PI), Nov. 2003 - May 2004.
6. "Secure CITI: A Secure Critical Information Technology Infrastructure for Disaster Management", *NSF-ITR*, with D. Mossé (PI), Sept. 2003 - Aug. 2008.
7. "NSF IDM Workshop Web Repository," *National Science Foundation*, with with A. Labrinidis and P. Agouris of U. of Maine, Apr. 2005 - May 2006.
8. "Data Managements in Mobile Ad Hoc Networks," *Greek Secretary of Research & Technology: Pythagoras*, US Collaborator with I. Manolopoulos of U. Thessaloniki (PI) and A. Labrinidis (US Collaborator), Sept 2005 - July 2007.

9. "DanDy: Data Quality in Dynamic Networks," *Greek Secretary of Research & Technology*, with E. Pitoura of U. of Ioannina (PI), Jan. 2006 - Dec. 2007.

### **Funded Workshop Grand Awards Principle Investigatorships**

1. "1998 NSF Information and Data Management Workshop: Research Agenda for the 21st Century," *National Science Foundation-IDM*, with J. Klavans of Columbia University, Mar. 1998 - Feb. 2000.
2. "Travel Grant for Graduate Students to Attend the Third ACM International Workshop on Data Engineering for Wireless and Mobile Access (MobiDE'03)," *National Science Foundation-IDM* with A. Labrinidis, April 2003 - May 2004.
3. "NSF Workshop on Data Management for Mobile Sensors (MobiSensors)", *National Science Foundation-IIS* with A. Labrinidis, Sept 2006 - Aug 2007.
4. "NSF Workshop on Sustainable Energy-Efficient Data Management", *NSF, IIS-1050302*, Sept. 2010 - Aug 2011.
5. "Student Travel Grant for the 11th International Workshop on Real-Time Business Intelligence & Analytics (BIRTE 2017)," *NSF-IIS-III, PI*, May 2017- Apr. 2018.

### **STUDENT ADVISING & MENTORING**

#### **PhD Theses Supervised:**

- Chien-Tsai Liu (CS), August 1994 (Co-advised S.K. Chang)  
*Database Schema Evolution through the Specification and Maintenance of Changes on Entities and Relationships.*
- Yousef J. Al-Houmaily (EE), April 1997 (Co-advised S. Levitan)  
*Commit Processing in Distributed, Heterogeneous and Multidatabase Systems.*
- Susan Weissman (CS), August 2001  
*The View Holder Approach: Utilizing Customized Materialized Views to Create Database Services Suitable for Mobile Database Applications.*
- Jonathan Beaver (CS), April 2006 (Co-advised K. Pruhs)  
*An Improved Hybrid Data Dissemination Model.*
- Mohamed A. Sharaf (CS), August 2007 (co-advised A. Labrinidis)  
*Metrics and algorithms for processing multiple continuous queries*
- Mohamed Aly (CS), April 2009 (co-advised with Kirk Pruhs)  
*Load Balancing Hotspots in Sensor Storage Systems.*
- Stavros Papastavrou (CS, U. Cyprus), June 2009 (co-advised with George Samaras)  
*Materialization Algorithms for Dynamic Web Database Applications.*
- Shenoda Giurgius (CS), December 2011 (co-advised with Alexandros Labrinidis)  
*Scalable Processing of Multiple Aggregate Continuous Queries.*
- Panayiotis Neophytou, December 2011 (co-advised with Alexandros Labrinidis)  
*Continuous Workflows: From Model to Enactment System*
- Lory Al Moakar, August 2013 (co-advised with Alexandros Labrinidis)  
*Class Based Continuous Query Scheduling in Data Stream Management Systems.*

Qinglan Li, August 2013 (co-advised with Alexandros Labrinidis)

*A user-driven annotation framework for scientific data.*

Roxana Gheorghiu, May 2014 (co-advised with Alexandros Labrinidis)

*Unifying Qualitative and Quantitative Database Preferences to Enhance Query Personalization.*

Thao N. Pham, May 2016 (co-advised with Alexandros Labrinidis)

*'Exploiting the Synergy between Scheduling and Load Shedding to Facilitate Differentiated Levels of Service for Continuous Queries.*

### **Current PhD Theses Advising:**

Anatoli Shein (area: Data Streams)

Xiaoyu Ge (area: Big Data)

Nick Katsipoulakis (area: Data Streams) (co-advising with Alexandros Labrinidis)

Vineet Raghu (area: Bioinformatics) (co-advising with Takis Benos)

### **PhD Committees Member:**

C. Gong (CSD, Dec. 1994), Stephen Freeza (EE, Dec. 1995), Lory Molesky, (UMass CSD, University of Massachusetts, Amherst, Aug. 1996), Robert Kramer (CSD, Apr. 1996), Fahad H Hoymany (CSD, Aug. 1997), P.W. Chen, (CSD, Comps, Mar. 1998), A.R. Al-Jadhai (CS, Apr. 1999), Clara C. Jaramillo (CSD, Aug. 2000), Miguel Labrador Perez (Telcomm, Dec 2000), Yannis Tsamardinis (ISP, June 2001), Shuju Wu (Telcomm, Aug. 2004) Kamol Kaemarungsi (Telcomm, Feb. 2005), Stavros Harizopoulos (CSD, Carnegie-Mellon University, Sept 2005) Anandha Gopalan (CSD, Comps, Nov. 2005), Ralph Sprang (COE, Proposal, Feb. 2006), David McWherter (CSD, Carnegie-Mellon University, proposal, May 2006), Darin Chan (CSD, Flinders University, Australia, Aug. 2006) Greg Kapfhammer (CSD, Apr. 2007), Huiming Qu (CSD, Aug. 2007), Jie Xu (CSD, Proposal, Dec 2007), David Essary (CSD, Apr. 2008), Mohammad Al-Amari (CSD, University of Sydney, Australia, Mar 2009), Christine Chung (CSD, Aug. 2010), Panayiotis Andreou (CSD, University of Cyprus, June 2011), Jonathan Misurda (CSD, Dec. 2011), Marina Drosou (CSD, University of Ioannina, Greece, Dec. 2013), Nicholas Farnan (CSD, Dec. 2015), Akon Dey (CSD, University of Sydney, Australia, Oct. 2015), William Garrison (CSD, Dec. 2015), Jie Guo (EE, May 2016).

### **MS Thesis Supervised:**

Di Bao, Dec. 2013 (co-advising with Alexandros Labrinidis)

*SNET - Computer-Assisted Supernovae Tracking*

Alex Conor, Dec. 2012 (co-advising with Alexandros Labrinidis)

*Ariadne: A Novel High Availability Cloud Data Store with Transactional Guarantees*

### **MS Projects Supervised:**

Jose Michael Joseph, May 2016

*Efficient Processing of Aggregate Continuous Queries*

Samanvoy Reddy Panati, May 2016

*Mobile Personal Guide: The Case of Preferential Diverse Routing*

- Jeff Kaminski, August 2014  
*Personal Book Library and Journal System on the Web*
- Wen Gao, April 2014  
*Open Access ADMT Library*
- Ruhsary Rexit, April 2014  
*Using a Distributed Search Engine to Identify Optimal Product Sets for Use in an Outbreak Detection System*
- Daniel Walker, December 2013  
*GPU Database Systems*
- Panayiotis Neophytou, April 2012  
*Optimizing the Energy Consumption of Continuous Query Processing with Mobile Clients*
- Sean Snyder, April 2011  
*QMD: Exploiting Flash for Energy Efficient Disk Arrays*
- Jesse Szwedko, April 2011  
*Visualization of Energy Consumption of Continuous Query Processing with Mobile Clients*
- Ganesh Santhanakrishna, August 2005 (with Ahmed Amer)  
*Self-tuning Caching Algorithms*
- Andreea Munteanu, August 2005 (with Alexandros Labrinidis)  
*Schemes for Fault-Tolerance in Sensor Networks*
- Swati Gupta, April 2004  
*Performance evaluation of Broadcast Indexing Schemes*
- Jonathan Beaver, April 2004  
*Document Selection and Bandwidth Division in Multicast-based Data Dissemination*
- Oleg Shigiltchhoff, December 2003  
*Multiversion Data Dissemination: Broadcast Organizations and Caching*
- Patrick Herron,, December 2003  
*Multi-channel Data Broadcasting*
- Zhen Liu, April 2003  
*Evaluating Caching Schemes for High Volume Updates and Queries*
- Joshua Gould, April 2003  
*Multi-channel Proxy Clients for Web Browsers*
- Vince Penkrot, December 2002  
*Interfacing Real-time Outbreak and Disease Surveillance with Multicast Data Dissemination Middleware*
- Thalis Kalfigopoulos, August 2002  
*Utilizing XML in e-Service Marketplaces*
- Siddhartha Roychowdhury, August 2002  
*NAL: A Network Adaptation Layer*
- Mohamed A. Sharaf, August 2002  
*STOBS: Summary Tables On-Demand Broadcast Scheduler.*

Chad Visino, December 2001

*Developing Services and Utilities for Coordinating and Accessing Data from a Mobile Device Running Windows CE.*

Ruchi Agrawal, December 2000

*Accessing Broadcast Data on Multiple Channels in Mobile Environment more Efficiently.*

Anand Deshpande, April 2000 (Co-Advisor S. Banerjee)

*Read-only Optimization for the Group Two-Phase Locking Protocol.*

George Kyrrou, December 2000

*DTPSim: Distributed Transaction Processing Simulator.*

Stavros Papastavros, April 2000

*An Evaluation of the Java-based Approaches to Web Database Access.*

Jeff Pike, December 1999.

*Evaluation of Atomic Commit Protocols in Wide-Area Network Environments.*

Kasi Somayajula, December 1996.

*Mobile Query Materialization.*

Ken Tew, September 1996 (Co-Advisor D. Mossé)

*Process Scheduling with Temporal and Memory Constraints.*

Ramesh Seshadri, April 1996.

*Implementation of Scheduling Tool as a Workflow Application using CORBA.*

Susan Weissman, April 1995.

*Changing Query by Icons to Improve Query Processing for Mobile Users.*

Gary D. Walborn, April 1994

*Disconnected Mobile Database Operations.*

Rakesh K. Aggarwal, April 1994.

*Development of a Client with an X-Window Interface to Access a Remote Database.*

John Candee, April 1994.

*Exploration and Adaptation of a Commercially Available Network Interface for Remote Database Access across Heterogeneous Operating Systems.*

Shubhangi Karandikar, August 1993.

*Menu Driven Construction of Dynamic Database Queries.*

Neeta Borle, June 1993.

*Computer Science Department's Publication Database.*

#### **MS Committees:**

Loukas Paraskeva (CSD, University Cyprus, May 2007)

*Heart Disease Sensor Monitoring System*

Brian Wongchaowart (CSD, Aug. 2010)

*Oblivious Enforcement of Hidden Information Release Policies Using Online Certification Authorities*

Panagiotis Tzirakis (CSD, University of Crete, Greece, October 2015)

*Implementing Feature Selection Algorithms for Big Data*

#### **BS Thesis/Projects Completed:**

Andreas Pamporis, CSD, University of Cyprus, May 2007 (Co-Adviser with G. Samaras)



*ETC: Optimizing the Construction of Query Routing Trees in Sensor Networks for Energy Efficiency and Quality of Data*  
Anna Sialarou, CSD, University of Cyprus, May 2007 (Co-Adviser with G. Samaras)  
*E-Voting: Implementing Democracy using the Internet*

### **BS Internships Supervised:**

Ben Ailes (Fall 2003), C. Cohen (Summer 1993), A. Ferguson III (Summer 1994), R. Seshadri (Summer 1994) R. Colwell (REU 1995-96), H. Gelman (REU, 1995), L. Theophanous (from GMU, Summer 1995), P. Tomsick (1996), A. Wind (Fall 1998), G. Santin (REU 1998-99), M. McHale (Summer 2002), R. McLaughlin (REU 1999), S. Wood (REU 1999-00), F. Giarratani (from U. Toronto, REU, Summers 2000 & 2002), A. M. Krayvo (Summer 2000), J. N Krau (REU, 2000), J. Beaver (REU, 2000-01), R. Taylor (Summer 2001), M. Shore (Fall 2001), M. Schill (Spring 2002), S. Chandra (REU, 2003), N. Morsillo (REU, 2004-05), A. Zana (REU, 2005), A. Bentsionov (REU 2005), W. Goodman (REU, 2005), A. Connors (REU, Fall 2007, Spring 2008), D. Oliphant (REU, Spring & Summer 2010), K. Daniluk (Spring & Summer 2010)

### **Mentoring Activities:**

Kenneth P. Dietrich School of Arts & Sciences Honors College Advisory Board, 2014-2016  
IEEE ICDE PhD Symposium, Apr 2014  
NSF/ICDE Mentor, April 2012: Entong Shen (NCSU), Yuchen Zhao (UIC)

## **TEACHING EXPERIENCE**

### **Graduate Courses**

Principles of Database Systems (CS2550), Spring '92, '94, '98, '10 -'15 / Fall '96, '00, '02, '08

Transaction-Oriented Computing (CS2555), Spring '95

PhD Seminars (CS3110, CS3550, CS3551):

- Mobile Computing, Spring '97, '01, '04
- Internet Middleware, Fall '00
- Network-Centric Data Base Servers, Spring '99
- Advances in Management of Data, Fall '92
- Data in Crisis Management, Fall '05
- Data Stream Management Systems, Fall '08
- Data Management on the Cloud, Fall '10
- In-Memory Data In-Memory Distributed Data Processing, Fall '15

Topics in Computer Science: Series of Short Courses (CS2001)

- Advanced Database Applications, Spring '92
- Reliable Distributed Systems, Spring '93, '94
- E-Commerce Data Management Technology, Fall '00, '01
- Mobile and Pervasive Data Management, Fall '02, '03
- Streams and Sensor Databases, Fall '04
- Data in Crisis Management, Fall '09

- Stream Data Management, Fall '11
- Big Data, Fall '13
- Processing of Aggregated Continuous Queries, Fall '15
- Processing of Aggregated Continuous Queries, Fall '16

### **Undergraduate Courses**

Programming in C and Introduction to UNIX (CS0132), Every Fall 1992–97 / Spring '93

Database Management Systems (CS1555), Spring '92–'99, '02–'06, '08–'09, '11–'13, '15 /  
Summer '98 / Fall '05, '07–'08, '11–'13, '16

Introduction to Computer Graphics (CS1566), Fall '01, '02

Data Structures in Pascal (UMass, COINS287, TA), Spring '84 – Spring '85

Problem Solving using Pascal (UMass, ECE103, Designed the Labs), Summer '84

Introduction to Computers and Basic language (UMass, COINS105), Fall '83

## PROFESSIONAL ACTIVITIES

### Editor

Distributed and Parallel Databases (**DAPD**) (Special Issue Coordinator, 2017-)  
The Int'l Journal of Next-Generation Computing (**IJNGC**) (Editorial Board, 2011-)  
Distributed and Parallel Databases (**DAPD**) (Editorial Board, 2011-2017)  
IEEE Transactions on Data and Knowledge Engineering (**TKDE**) (Editorial Board, 2012-2017)  
VLDB Journal (**VLDBJ**) (Editorial Board, 2001-2007)  
Encyclopedia of Database Systems, Springer – (1st edition, 2007-2010) (2nd edition, 2013-2015  
(Major Area Editor for the “Extended transaction models (III.c)”)  
Int'l Journal of Internet Technology and Secured Transactions (Editorial Board, 2005-)

### Guest Editor

ACM Wireless Networks, Special Issue on Pervasive Computing and Communicatios, 10(6),  
Nov. 2004 (with E. Pitoura, Co-Editor)  
ACM Mobile Networks, Special Issue on Mobility in Databases and Distributed Systems, 9(5),  
Oct. 2004. (with A. Zaslavsky, Co-Editor)  
ACM SIGMOBILE Mobile Computing and Communications Review (MC2R), Special Issue on  
Mobile Data Management, 8(3), July 2004. (with S. Banerjee)  
Distributed Systems Engineering Journal, Special Issue on Workflow Management Systems,  
IEE/BCS, Dec. 1996

### General Chair

11th Int'l Workshop on Enabling Real-Time Business Intelligence and Analytics (BIRTE'17), 2017.  
14th Int'l Conference on Mobile Data Management, Jul. 2014.  
1st Int'l Workshop on Collaborative Big Data (C-Big), Oct. 2012  
11th Int'l Conference on Mobile Data Management, Jun. 2011.  
6th Int'l Conference on Mobile Data Management, Jan. 2005.  
3rd ACM Int'l Workshop on Data Engineering for Wireless and Mobile Access, (in conjunction  
with ACM Sigmobility) May 2003.

### Program Chair/Co-Chair

34th IEEE Int'l Conference on Data Engineering (ICDE'18), 2018.  
10th Int'l Workshop on Enabling Real-Time Business Intelligence (BIRTE'16), 2016.  
Int'l Workshop on Enabling Real-Time Business Intelligence (BIRTE'15), 2015.  
29th IEEE Int'l Conference on Data Engineering (ICDE'13), PC Vice Chair (cloud infrastructure,  
mobile, distributed, and peer-to-peer data management), 2013.  
NSF Workshop on Sustainable Data Management (SEEDM), 2011  
Int'l Conference on Extended Data Base Technologies (EDBT'11), PC Leader, 2011.  
9th Int'l Conference on Ontologies, DataBases, and Applications of Semantics, 2010.  
9th Hellenic Symposium on the Management of Data (HDMS'10), 2010.  
NSF Workshop on Data Management for Mobile Sensors (MobiSensors), 2007.  
5th ACM Int'l Workshop on Data Engineering for Wireless and Mobile Access (MobiDE'06), 2006.  
20th IEEE Int'l Conference on Data Engineering (ICDE'04), PC Vice Chair (Distributed, Parallel  
and Mobile Databases), 2004.  
4th Int'l Conference on Mobile Data Management (MDM'03), 2003.  
4th Int'l DEXA Workshop on Mobility in Databases and Distributed Systems (MDDS'01), 2001.

2nd ACM Int'l Workshop on Data Engineering for Wireless and Mobile Access (MobiDE'01), 2001.  
3rd Int'l DEXA Workshop on Mobility in Databases and Distributed Systems (MDDS'00), 2000.  
ACM Int'l Workshop on Data Engineering for Wireless and Mobile Access (MobiDE'99), 1999.  
2nd Int'l DEXA Workshop on Mobility in Databases and Distributed Systems (MDDS'99), 1999.  
Information and Data Management Research in 21st Century. A workshop of the NSF Database and Expert Systems PIs (IDM'98), 1998.

### **Demonstration and Panel Chair/Co-Chair**

IEEE Int'l Conference on Data Engineering – Panel Co-Chair (2014)  
Int'l Conference on Very Large Data Bases – Panel Co-Chair (2012)  
IEEE Int'l Conference on Data Engineering – Demo Chair (2003)

### **Program Committee Member**

#### *Conferences & Symposiums*

Int'l Conference on Very Large Data Bases (2000, 2004, 2005, 2006, 2009, 2017)  
IEEE Int'l Conference on Data Engineering (1998-2001, 2005, 2006, 2010, 2011, 2015, 2017)  
ACM Sigmod Int'l Conference on the Management of Data (1999, 2002, 2008, 2010, 2011)  
IEEE Int'l Conference on Mobile Data Management (2001, 2004, 2006, 2008, 2009, 2010, 2012)  
Int'l Conference on Extended Data Base Technologies (2004, 2010, 2016)  
ACM Int'l Conference on Information and Knowledge Management (2000, 2003, 2013)  
IEEE Int'l Conference on Distributed Computing Systems (2005, 2016)  
The 25th Australasian Database Conference (2014)  
IEEE Int'l Conference on Pervasive Services (2005, 2006)  
Int'l Conference on Advances in Social Networks Analysis and Mining (2009)  
ACM Symposium on Applied Computing: Ubiquitous Computing Applications (2004)  
Hellenic Symposium on the Management of Data (2002, 2003, 2004, 2006, 2009, 2014, 2016)  
The 3rd Int'l Conference on Mobile and Ubiquitous Systems: Networks and Services (2006)  
The 2nd Int'l Human.Society@Internet Conference (2003)  
Int'l Conference on Database and Expert Systems Applications (2000, 2001, 2002, 2003)  
9th IFIP 2.6 Working Conference on Database Semantics: E-Commerce (2001)  
The Hellenic Conference on Informatics (1999, 2001, 2003)  
Int'l Conference on the Management of Data (2000)  
ADBIS-DASFAA Symposium on Advances in Databases and Information Systems (2000)  
2nd Int'l Conference on Data Warehousing and Knowledge Discovery (2000)  
The 33rd Hawaii Int'l Conference on System Sciences: International Electronic Commerce, (2000)  
The 5th IEEE Mediterranean Conference on Control and Systems (1997)  
Int'l Conference on Parallel and Distributed Computing Systems (1996, 1998)  
The 5th Int'l Conference on Computer Communications and Networks (1996)  
The 7th Int'l Conference on Software Engineering and Knowledge Engineering (1995)

#### *Workshops*

Int'l Workshop on Mobile Ubiquitous Systems, Infrastructures, Communications, and Applications (2016)  
Int'l Workshop on Data Management for Sensor Networks (2004, 2005, 2010)  
ACM Int'l Workshop on Data Engineering for Wireless and Mobile Access (2010)  
VLDB Workshop on Technologies for E-Services (2000, 2001)  
1st Int'l Workshop on Pervasive Computing (2000)  
International Workshop on Data Semantics in Web Information Systems (2001)  
The 3rd Intl Workshop On Human Mobility Computing And Privacy (2015)

Int'l Workshop on E-Commerce and Web-based Information Systems (2001)  
IEEE Int'l Workshop on Research Issues on Data Engineering (1996, 1999)  
NSF Workshop on Integrated Spatial Databases: Digital Images and GIS (1999)  
The 1st Int'l DEXA Workshop on Mobility in Databases and Distributed Systems (1998)

*Ph.D Forums / Symposiums*

IEEE Int'l Conference on Data Engineering / PhD Symposium (2014, 2017)  
IEEE Int'l Conference on Mobile Data Management / PhD Forum (2015)

**Session Chair**

Int'l Conference on Very Large Data Bases (2016)  
VLDB Int'l Workshop on Enabling Real-Time Business Intelligence (2016)  
IEEE Int'l Conference on Data Engineering (2016)  
Int'l Conference on Extended Data Base Technologies (2016)  
Int'l Conference on Collaborative Computing (2014)  
Hellenic Data Management Symposium (2014)  
ACM Int'l Workshop on Data Engineering for Wireless and Mobile Access (2010)  
Int'l Conference on Intelligent Systems and Computing: Theory and Applications (2006)  
Int'l Conference on Mobile Data Management (2006)  
NSF Workshop on Context-Aware Data Management (2002)  
ACM Sigmod Int'l Conference on the Management of Data (1999, 2001)  
Workshop on E-Commerce and Web Information Systems (2001)  
IEEE Int'l Conference on Data Engineering (1999, 2000)  
IEEE Int'l Workshop on Research Issues on Data Engineering (1996, 1999)  
Int'l DEXA Workshop on Mobility in Databases and Distributed Systems (1998)  
Int'l Conference on Parallel and Distributed Computing Systems (1992, 1996)  
NECUSE Forum on Parallel Computing Curricula (1995)

**Steering Committee Member**

IEEE Workshop on Self-Managing Databases (2012-) IEEE Int'l Conference on Mobile Data Management (2006-)  
ACM Int'l workshop on Data Engineering for Wireless and Mobile Access (2006-2013)  
Int'l Workshop on Data Management for Sensor Networks (2004-2006)  
NSF Workshop on Context-Aware Data Management (2002)  
Int'l DEXA Workshop on Mobility in Databases and Distributed Systems (2002-2005)  
Information and Data Management Research in 21st Century. A workshop of the NSF IIS-IDM PIs (1999, 2001)

**Conference Organization**

18th IEEE Int'l Conference on Data Engineering – Publicity Chair (2002)  
7th Int'l Conference on Software Engineering and Knowledge Engineering – Publicity Chair (1995)

**Association Memberships & Officer**

ACM (Association for Computing Machinery) (since 1983)  
IEEE (Institute of Electrical and Electronics Engineers) (since 1980)  
Vice President Special Interest Group on Self-Management Database Systems (since 2012)  
Sigma Xi, The Scientific Research Society, U.S.A. (1986-2000)  
Hellenic Society of Computer and Information Scientists (since 1986)  
Hellenic Scientist Association of Boston (1984–1991)  
USENIX Association – University Liaison at Pitt.(1996-2012)

## Referee and Reviewer

### *Proposals and Books*

National Science Foundation (IIS/IDM, ITR, STI) 1993-present  
Swiss National Science Foundation, 2016  
General Secretariat for Research and Technology of Greece  
Fundamentals of Database Systems, Elmasri & Navathe, 2nd Edition  
Morgan Kaufmann (Advanced Database Topics)  
Kluwer Academic Publishers (Mobile Computing)

### *Journals*

ACM Transactions on Database Systems  
IEEE Transactions on Knowledge and Data Engineering  
IEEE Transactions on Parallel and Distributed Systems  
IEEE Transactions on Computers  
IEEE Transactions on Mobile Computing  
ACM-BALTZER Mobile Networks and Applications  
ACM-BALTZER Wireless Networks  
Distributed and Parallel Databases Journal  
Parallel Computing Journal  
VLDB Journal  
The Journal of Cooperative Informarion Systems  
The Journal of Real-Time Systems  
The Journal of Software Engineering and Knowledge Engineering  
The Journal of Systems and Software

### *Conferences & Workshops*

VLDB 2008  
ADBIS 2005  
ACM PODS Symposium (1997)  
ACM SIGMOD Conference (1987, 1992, 1995)  
Int'l Conference on Data Engineering (1989, 1992, 1998)  
Int'l Conference on Parallel and Distributed Computing Systems (1992,1995,1996)  
Int'l Conference on Parallel and Distributed Information Systems (1992)  
IEEE INFOCOM (1991, 2000)  
Int'l Conference on Distributed Computing Systems (1987, 1989)  
Workshop on Experiences with Distributed and Multiprocessor Systems (1989)  
Real Time System Symposium (1986, 2005)

## ADMINISTRATIVE ACTIVITIES

Chair of CSD Graduate Programs and Exams Committee (2016-2018)  
CSD Graduate Admissions and Financial Aid Committee (1992-1996, 2005-2006, 2016-2017)  
Chair of CSD Web Site & Public Relations (2008-2015)  
Graduate Evaluation, Assignment & Training Committee: (2014-2015)  
Director of Graduate Studies (2007-2008, 2013-2014)  
Chair of CSD Admissions, Awards and Financial Aid (2000-2005, 2013-2014)  
Chair of CSD Admissions and Financial Aid (2007-2008)

Chair of CSD Database System (1997-2006)  
CSD Outreach Committee (2000-2006)  
CSD Graduate Programs and Exams Committee (1991-1999, 2000-2004)  
CSD New Building Moving Committee (2001-2002)  
CSD Faculty Search Committee (1997-1999)  
CSD Undergraduate Program Committee (1996-1997)  
NASA/MTAC Review Board, University of Pittsburgh (1992-1993)  
CSD Chair Review Committee (1995-1996)  
Art & Science Tenure Council (2000-2017)  
School of Information Science Tenure Council (2003)  
University Electronic Course Reserves Advisory Group (ULS) (1994-1996)  
Electrical Engineering PhD Prelim Exam Committee (Fall 1993, 1994)  
Curriculum Committee, Pitt-CMU Computational Biology PhD Program (2005-)  
Senate Budget Policies Committee (2016-2019)