

Curriculum Vitae

Personal information

Spyridon (Spiros) Papadimitriou
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Education

- September 2005 Ph.D. Degree, Computer Science Department, Carnegie Mellon University.
June 2001 M.Sc. Degree, Computer Science, Carnegie Mellon University.
July 1998 B.Sc. Degree, Computer Science, University of Crete, Greece.

Employment history

- October 2005–present IBM Thomas J. Watson Research Center, Hawthorne, NY, USA.
Research Staff Member
June–December 2000 IBM Almaden Research Center, San Jose, CA, USA.

Conference publications

1. Hanghang Tong, Spiros Papadimitriou, Philip S. Yu, Christos Faloutsos, *Proximity Tracking on Time-Evolving Bipartite Graphs*, SDM 2008, Atlanta, USA (**winner of best paper award**).
2. Xiaohui Gu, Spiros Papadimitriou, Philip S. Yu, Shu-Ping Chang, *Toward Predictive Failure Management for Distributed Stream Processing Systems*, ICDCS 2008, Beijing, China (to appear).
3. Spiros Papadimitriou, Feifei Li, George Kollios, Philip S. Yu, *Time Series Compressibility and Privacy*, VLDB 2007: 459–470, Vienna, Austria.
4. Jimeng Sun, Spiros Papadimitriou, Philip S. Yu, Christos Faloutsos, *GraphScope: Parameter-Free Mining of Large Time-Evolving Graphs*, KDD 2007: 687–696, San Jose, USA.
5. Tsuyoshi Idé, Spiros Papadimitriou, Michail Vlachos, *Computing Correlation Anomaly Scores using Stochastic Nearest Neighbors*, ICDM 2007, Omaha, USA.
6. Xiaohui Gu, Spiros Papadimitriou, Shu-Ping Chang, Philip S. Yu, *Online Failure Forecast for Fault-Tolerant Data Stream Processing*, ICDE 2008, Cancun, Mexico.
7. Feifei Li, Jimeng Sun, Spiros Papadimitriou, George Mihaila, Ioana Stanoi, *Hiding in the Crowd: Privacy Preservation on Evolving Streams through Correlation Tracking*, ICDE 2007: 686–695, Istanbul, Turkey.
8. Spiros Papadimitriou, Jimeng Sun, Philip S. Yu, *Local Correlation Tracking in Time Series*, ICDM 2006: 456–465, Hong Kong.

9. Jimeng Sun, Spiros Papadimitriou, Philip S. Yu, *Window-based Tensor Analysis on High-dimensional and Multi-aspect Streams*, ICDM 2006: 1076–1080, Hong Kong.
10. Spiros Papadimitriou, Philip S. Yu, *Optimal Multi-Scale Patterns in Time Series Streams*, SIGMOD 2006: 647–658, Chicago, USA.
11. Michail Vlachos, Spiros Papadimitriou, Zografoula Vagena, Philip S. Yu, *Indexing and Visualization of High-Dimensional Data via Dimension Reorderings*, PKDD 2006: 407–420, Berlin, Germany.
12. Jimeng Sun, Spiros Papadimitriou, Christos Faloutsos, *Distributed Pattern Discovery in Multiple Streams*, PAKDD 2006: 713–718, Singapore.
13. Deepak S. Turaga and Michail Vlachos and Spiros Papadimitriou and Philip S. Yu, *SLIDE: Streaming and Load-Adaptive Periodicity Estimation*, ICASSP 2006: III-1000–1003, Toulouse, France.
14. Spiros Papadimitriou, Jimeng Sun, Christos Faloutsos, *Streaming Pattern Discovery in Multiple Time-Series*, VLDB 2005: 697–708, Trondheim, Norway.
15. Spiros Papadimitriou, Aristides Gionis, Panayiotis Tsaparas, Risto A. Väisänen, Christos Faloutsos, Heikki Mannila, *Parameter-Free Spatial Data Mining Using MDL*, ICDM 2005: 346–353, Houston, USA.
16. Aristides Gionis, Alexander Hinneburg, Spiros Papadimitriou, Panayiotis Tsaparas, *Dimension Induced Clustering*, KDD 2005: 51–60, Chicago, USA.
17. Kyriakos Mouratidis, Dimitris Papadias, Spiros Papadimitriou, *Medoid Queries in Large Spatial Databases*, SSTD 2005: 55–72, Angra dos Reis, Brazil.
18. Yasushi Sakurai, Spiros Papadimitriou, Christos Faloutsos, *BRAID: Stream Mining through Group Lag Correlations*, SIGMOD 2005: 599–610, Baltimore, USA.
19. Yasushi Sakurai, Spiros Papadimitriou, Christos Faloutsos, *AutoLag: Automatic Discovery of Lag Correlations in Stream Data*, ICDE 2005: 159–160, Tokyo, Japan.
20. Deepayan Chakrabarti, Spiros Papadimitriou, Dharmendhra Modha, Christos Faloutsos, *Fully Automatic Cross-Associations*, KDD 2004: 79–88, Seattle, USA.
21. Cui Zhu, Hiroyuki Kitagawa, Spiros Papadimitriou, Christos Faloutsos, *OBE: Outliers By Example*, PAKDD 2004: 222–234, Sydney, Australia.
22. Spiros Papadimitriou, Anthony Brockwell, Christos Faloutsos, *Adaptive, Hands-Off Stream Mining*, VLDB 2003: 560–571, Berlin, Germany.
23. Spiros Papadimitriou, Christos Faloutsos, *Cross-Outlier Detection*, SSTD 2003: 199–213, Santorini, Greece.
24. Spiros Papadimitriou, Hiroyuki Kitagawa, Phillip B. Gibbons, Christos Faloutsos, *LOCI: Fast Outlier Detection Using the Local Correlation Integral*, ICDE 2003: 315–327, Bangalore, India.
25. Mengzhi Wang, Tara M. Madhyastha, Ngai Hang Chan, Spiros Papadimitriou, Christos Faloutsos, *Data Mining Meets Performance Evaluation: Fast Algorithms for Modelling Bursty Traffic*, ICDE 2002: 507–516, San Jose, USA.
26. Agma Traina, Caetano Traina, Spiros Papadimitriou, Christos Faloutsos, *Tri-Plots: Scalable Tools for Multidimensional Data Mining*, KDD 2001: 184–193, San Francisco, USA.

27. Rakesh Agrawal, Roberto Bayardo, Daniel Gruhl, Spiros Papadimitriou, *Vinci: A Service-Oriented Architecture for Rapid Development of Web Applications*, WWW-10: 355–365, Hong Kong.

Journal publications

28. Jimeng Sun, Dacheng Tao, Spiros Papadimitriou, Philip S. Yu, Christos Faloutsos, *Incremental Tensor Analysis: Theory and Applications*, ACM TKDD (to appear).
29. Kyriakos Mouratidis, Dimitris Papadias, Spiros Papadimitriou, *Tree-based Partition Querying: A Methodology for Computing Medoids in Large Spatial Databases*, VLDB Journal (to appear).
30. Spiros Papadimitriou, Anthony Brockwell, Christos Faloutsos, *Adaptive, Unsupervised Stream Mining*, VLDB Journal 13(3):222–239, 2004 (**invited to best papers of VLDB 2003 issue**).
31. Rakesh Agrawal, Roberto Bayardo, Daniel Gruhl, Spiros Papadimitriou, *Vinci: A Service-Oriented Architecture for Rapid Development of Web Applications*, Computer Networks 39(5):523–539, 2002 (**invited to best papers of WWW-10 issue**).

Book chapters

32. Kyriakos Mouratidis, Dimitris Papadias, Spiros Papadimitriou, *Medoid Queries in Large Spatial Datasets*, in: *Geographic Data Mining and Knowledge Discovery*, 2nd ed., CRC Press (to appear).
33. Spiros Papadimitriou, *Anomaly Detection on Streams*, in: *Encyclopedia of Database Systems*, Springer (to appear).
34. Jimeng Sun, Spiros Papadimitriou, Philip S. Yu, *Tensor Analysis on Multi-Aspect Streams*, in: João Gamma, Mohamed Medhat Gaber (eds.), *Learning from Data Streams*, Springer, 2007.
35. Spiros Papadimitriou, Jimeng Sun, Christos Faloutsos, *Dimensionality Reduction and Forecasting on Streams*, in: Charu Aggarwal (ed.), *Data Streams: Models and Algorithms*, Springer, 2007.
36. Sailesh Krishnamurthy, Spiros Papadimitriou, Bianca Schröder, Anastassia Ailamaki, *PostgreSQL*, in: Abraham Silberschatz, Henry F. Korth, S. Sudarshan, *Database System Concepts*, 5th ed., McGraw Hill.

Tutorials

37. *Hands-On Time-Series Analysis with Matlab* (with Michalis Vlachos), ICDM 2006, Hong Kong.

Other (selected)

38. Jimeng Sun, Spiros Papadimitriou, Christos Faloutsos, *Online Latent Variable Detection in Sensor Networks*, demo in ICDE 2005: 1126–1127, Tokyo, Japan.

Patents

1. *System and Method for Multiple Scale, Data Driven Time Series Stream Summarization*, with Philip S. Yu (filed, IBM docket no. YOR920060244).
2. *Systems and Methods for Visualizing and Indexing High Dimensional Data via Reordering*, with Zografoula Vagena, Michail Vlachos, and Philip S. Yu (filed, IBM docket no. YOR920060578).

3. *Systems and Methods for Simultaneous Summarization of Datacube Streams*, with Jimeng Sun and Philip S. Yu (filed, IBM docket no. YOR920060647)
4. *Method of Privacy-Preserving Data Stream Publishing using Dynamic Correlations*, with Yuan Chi Chang, Feifei Li, George Mihaila, Ioana Stanoi, Jimeng Sun, Philip S. Yu (filed, IBM docket no. YOR920060786).
5. *Method of Privacy-Preserving Data Stream Publishing using Dynamic Autocorrelations*, with Yuan Chi Chang, Feifei Li, George Mihaila, Ioana Stanoi, Jimeng Sun, Philip S. Yu (filed, IBM docket no. YOR920060787).
6. *Systems and Methods for Predictive Failure Management*, with Shu-Ping Chang, Xiaohui Gu and Philip S. Yu (filed, IBM docket no. YOR920060859).
7. *Method and Apparatus for Sensor Validation and Change Analysis*, with Tsuyoshi Idé (IBM docket no. JP820070157).
8. *Systems and Methods for Online and Adaptive Perturbation of Data Streams*, with Philip S. Yu (IBM docket no. YOR820070447).

Visiting positions

- August–September 2004 Basic Research Unit (BRU), Helsinki Institute for Information Technology (HIIT), Finland.
- June 2004 Department of Computer Science, Hong Kong University of Science and Technology.

Teaching experience

- Spring 2003 Teaching Assistant, 15-415 Database Applications, Carnegie Mellon University, Computer Science Department.
- Fall 2001 Teaching Assistant, 15-721 Database Management Systems, Carnegie Mellon University, Computer Science Department.
- Spring 1999 Teaching Assistant, 15-213 Introduction to Computer Systems, Carnegie Mellon University, Computer Science Department, Spring 1999.

Professional activities and service

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| Program committees | <ol style="list-style-type: none"> 1. 10th Intl. Conf. on Extending Database Technology (EDBT 2006) – demo committee 2. 12th ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining (KDD 2006) 3. 10th European Conference on Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD 2006) 4. 6th IEEE International Conference on Data Mining (ICDM 2006) 5. 1st Workshop on Spatial and Spatio-temporal Data Mining (SSTD 2006, in conjunction with ICDM 2006) 6. 23rd IEEE International Conference on Data Engineering (ICDE 2007) 7. 10th International Symposium on Spatial and Temporal Databases (SSTD 2007) |
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8. 13th ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining (KDD 2007)
9. 11th European Conference on Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD 2007)
10. 7th IEEE International Conference on Data Mining (ICDM 2007)
11. 14th ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining (KDD 2008)
12. 12th European Conference on Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD 2008)
13. 25rd IEEE International Conference on Data Engineering (ICDE 2009) – demo committee

Other

1. NSF panelist (IIS division), 2007.
2. IBM Campus Relationship Manager for Carnegie Mellon.

Honours

Siebel scholarship recipient (2005).

Class valedictorian (1998), School of Sciences, University of Crete, Greece.

Bronze medal, International Olympiad in Informatics V (1993), Mendoza, Argentina.

References

Available upon request.

White Plains, April 23, 2008