

Panagiotis Papapetrou

Citizenship : Greek - Date of birth : 24 July 1981

Contact Information

Address: Aalto University, School of Science, Department of Information and Computer Science,
Konemiehentie 2, Espoo, Finland,
P.O. Box 15400, FI-00076.
Tel : +358-947023282
Fax: +358-947023277
e-mail : panagiotis.papapetrou@aalto.fi
Website: <http://users.ics.tkk.fi/panagpap>

Current position

Sep 2009 - present **Postdoctoral Researcher**
Department of Information and Computer Science, Aalto University, Finland.
Superior: Prof. Heikki Mannila.

Degrees

January 2010 **Doctor of Philosophy (Ph.D.) in Computer Science**
Issued by the Department of Computer Science, Boston University, MA, USA.
January 2007 **Master of Arts (M.A.) in Computer Science**
Issued by the Department of Computer Science, Boston University, MA, USA.
July 2003 **Bachelor of Science (B.Sc.) in Computer Science**
Issued by the Department of Computer Science, University of Ioannina, Greece.

Education

Sep 2003 - Jul 2009 **Doctoral student**
Department of Computer Science, Boston University, MA, USA.
Ph.D. thesis title: *“Embedding-based Subsequence Matching in Large Sequence Databases”*.
Supervisor: Prof. George Kollios.

Sep 2003 – Sep 2006 **Graduate student**
Department of Computer Science, Boston University, MA, USA.
M.A. thesis title: *“Constrained-based Mining of Frequent Arrangements of Temporal Intervals”*.
Supervisor: Prof. George Kollios.

Sep 1999 - Jul 2003 **Undergraduate student**
Department of Computer Science, University of Ioannina, Greece.
B.Sc. thesis title: *“Discovering Aggregate Usage Profiles Using Clustering Methods”*.
Supervisor: Prof. Dimitrios Fotiadis.

Publications

Citation count is listed based on Google Scholar as of January 2012.

International Journal Articles:

1. **Panagiotis Papapetrou**, Gary Benson, and George Kollios, "Mining Poly-regions in DNA". In the International Journal of Data Mining and Bioinformatics (**IJDMB**), **2012** (To Appear).
2. **Panagiotis Papapetrou**, Vassilis Athitsos, Michalis Potamias, George Kollios, Dimitrios Gunopulos: Embedding-based subsequence matching in time-series databases. In ACM Transactions on Database Systems (**TODS**), Vol. 36, Issue 3, Article 17, **2011**.
3. Alexios Kotsifakos, **Panagiotis Papapetrou**, Jaakko Hollmén, and Dimitrios Gunopulos, "A Subsequence Matching with Gaps-Range-Tolerances Framework: A Query-By-Humming Application". In Proceedings of the Very Large DataBases Endowment (**PVLDB**), Vol. 4, Issue 11, pages 761-771, **2011**.
4. **Panagiotis Papapetrou**, George Kollios, Stan Sclaroff, and Dimitrios Gunopulos, "Mining Frequent Arrangements of Temporal Intervals". In Knowledge and Information Systems (**KAIS**), Vol. 21, Issue 2, pages 133-171, **2010**. (**citations: 14**)
5. **Panagiotis Papapetrou**, Vassilis Athitsos, George Kollios, and Dimitrios Gunopulos, "Reference-Based Alignment in Large Sequence Databases", In Proceedings of the Very Large DataBases Endowment (**PVLDB**), Vol. 2, Issue 1, pages 205-216, **2009**. (**citations: 6**)

Book Chapters:

6. Kai Puolamäki, Alessio Bertone, Roberto Theron, Otto Huisman, Jimmy Johansson, Silvia Miksch, **Panagiotis Papapetrou**, and Salvo Rinzivillo, "Mastering the Information Age Solving Problems with Visual Analytics, chapter Data Mining, pages 39–56. Eurographics Association, **2010**. (**citations: 22**)

Peer-reviewed Conferences/Workshops:

7. **Panagiotis Papapetrou**, Aristides Gionis, Heikki Mannila, "A Shapley Value Approach for Influence Attribution". In Proceedings of the European Conference of Machine Learning and Principles and Practices of Knowledge Discovery in Databases (**ECML/PKDD**), pages 549-564, September **2011**, Athens, Greece.
8. Jeffrey Lijffijt, **Panagiotis Papapetrou**, Kai Puolamäki, Heikki Mannila, "Analyzing Word Frequencies in Large Text Corpora Using Inter-arrival Times and Bootstrapping". In Proceedings of the European Conference of Machine Learning and Principles and Practices of Knowledge Discovery in Databases (**ECML/PKDD**), pages 341-357, September **2011**, Athens, Greece.
9. Orestis Kostakis, **Panagiotis Papapetrou**, Jaakko Hollmén, "ARTEMIS: Assessing the Similarity of Event-Interval Sequences". In Proceedings of the European Conference of Machine Learning and Principles and Practices of Knowledge Discovery in Databases (**ECML/PKDD**), pages 229-244, September **2011**, Athens, Greece.
10. Alexios Kotsifakos, Vassilis Athitsos, **Panagiotis Papapetrou**, Jaakko Hollmén, and Dimitrios Gunopulos, "Model-based search in large time series databases". In Proceedings of Pervasive Technologies Related to Assistive Environments (**PETRA**), May **2011**, Herakleion, Greece.
11. Orestis Kostakis, **Panagiotis Papapetrou**, and Jaakko Hollmén, "Distance Measure for Querying Arrangements of Temporal Intervals". In Proceedings of Pervasive Technologies Related to Assistive Environments (**PETRA**), May **2011**, Herakleion, Greece.
12. Kai Puolamaki, **Panagiotis Papapetrou**, and Jeffrey Lijffijt. "Visually-Controllable Data Mining Methods". In Proceedings of the IEEE International Conference on Data Mining Workshops (**ICDM VAKD**), December **2010**, Sydney, Australia.
13. Jeffrey Lijffijt, **Panagiotis Papapetrou**, Jaakko Hollmén, Vassilis Athitsos. "Benchmarking dynamic time warping for music retrieval". In Proceedings of Pervasive Technologies Related to Assistive Environments (**PETRA**), June **2010**, Samos, Greece.
14. Jeffrey Lijffijt, **Panagiotis Papapetrou**, Jaakko Hollmén. "Tracking your steps on the track: Body sensor recordings of a controlled walking experiment". In Proceedings of Pervasive Technologies Related to Assistive Environments (**PETRA**), June **2010**, Samos, Greece.
15. **Panagiotis Papapetrou**, Paul Doliotis and Vassilis Athitsos, "Towards Faster Activity Search Using Embedding-based Subsequence Matching", In Proceedings of Pervasive Technologies Related to Assistive Environments (**PETRA**), June **2009**, Corfu, Greece.
16. Vassilis Athitsos, **Panagiotis Papapetrou**, Michalis Potamias, George Kollios, and Dimitrios Gunopulos, "Approximate Embedding-Based Subsequence Matching of Time Series". In Proceedings of the ACM Special Interest Group on Management of Data (**SIGMOD**), June **2008**, Vancouver, Canada. (**citations: 25**)
17. Vassilis Athitsos, Michalis Potamias, **Panagiotis Papapetrou**, and George Kollios, "Nearest Neighbor Retrieval Using Distance-Based Hashing". In Proceedings of the IEEE International Conference on Data Engineering (**ICDE**), April **2008**, Cancun, Mexico. (**citations: 31**)

18. **Panagiotis Papapetrou**, Gary Benson, and George Kollios, "Discovering Frequent Poly-Regions in DNA Sequences". In Proceedings of the IEEE International Conference on Data Mining Workshop on Data Mining in Bioinformatics (**ICDM DMB**), December **2006**, Hong Kong. (**citations: 5**)
19. **Panagiotis Papapetrou**, George Kollios, Stan Sclaroff, and Dimitrios Gunopulos, "Discovering Frequent Arrangements of Temporal Intervals". In Proceedings of the IEEE International Conference on Data Mining (**ICDM**), November **2005**, Houston, Texas, USA. (**citations: 35**)

Technical Reports:

20. Jeffrey Lijffijt, **Panagiotis Papapetrou**, Niko Vuokko, and Kai Puolamäki. "The smallest set of constraints that explains the data: a randomization approach". TKK-ICS-R31, TKK Reports in Information and Computer Science, Espoo, **2010**.
21. **Panagiotis Papapetrou**, Gary Benson, and George Kollios, "Generalized Methods for Discovering Frequent Poly-Regions in DNA Sequences". Technical Report, Department of Computer Science, Boston University, October 21, **2008**.
22. Ching Chang, Raymond Sweha, **Panagiotis Papapetrou**, "Extending snBench to Support a Graphical Programming Interface for a Sensor Network Tasking Language (STEP)". Technical Report, Department of Computer Science, Boston University, July 14, **2006**.

Theses:

23. **Panagiotis Papapetrou**, "Embedding-based Subsequence Matching in Large Sequence Databases", Ph.D. Thesis, **2010**.
24. (**Panagiotis Papapetrou**, "Constraint-based Mining of Frequent Arrangements of Temporal Intervals", M.A. Thesis, **2007**.
25. **Panagiotis Papapetrou**, "Discovering Aggregate Usage Profiles using Clustering Methods", B.Sc. Thesis, **2003**.

Funding History

Sep 2009 - present **Funding for Postdoctoral research**

Finnish Centre of Excellence for Algorithmic Data Analysis Research (ALGODAN), funded by the Academy of Finland.

Jan 2004 - Jul 2009 **Funding for Ph.D. studies**

United States National Science Foundation (NSF)

Grant Numbers: IIS-0330481, IIS-0705749, IIS-0308213, IIS-0329009, and IIS-0812309.

Honors and Awards

2004 - 2008 **Teaching Fellow Award** for academic years: 2004-2005 and 2007-2008.

Department of Computer Science, Boston University, MA, USA.

1999 - 2002 **Award for Academic Excellence** for three academic years from 1999 until 2002.

Greek National Foundation (IKY).

Professional Experience

2011 **Conference/Workshop Organization**

- International Workshop on Mining Communities and People Recommenders (COMMPER) – in conjunction with the IEEE International Conference on Data Mining (ICDM) **2011**.

2010-2011 **Program Committee Memberships**

- European Conference on Machine Learning and Principles and Practice on Knowledge Discovery in Databases (ECML PKDD) **2011 / 2012**.

- ACM Conference on Knowledge Discovery and Data Mining (SIGKDD) **2011 / 2012**.
- International Conference on Discovery Science (DS) **2011**.
- SIGMOD/PODS PhD Workshop on Innovative Database Research (IDAR) **2011**.
- ACM International Conference on Information and Knowledge Management (CIKM) **2010**.
- IEEE ICDM Workshop on Visual Analytics and Data Mining (VAKD), **2010**.
- ACM International Conference on Information and Knowledge Management (CIKM) **2010**.
- IEEE Conference on Scientific and Statistical Database Management (SSDBM), **2010**.

2007 - present Reviewer for the following Journals

- Transactions on Database Systems (TODS).
- Transactions on Knowledge Engineering (TKDE).
- Transactions on Data Mining and Knowledge Discovery (TKDD).
- Knowledge And Information Systems (KAIS).
- Data Mining and Knowledge Discovery (DMKD).

2004 - 2010 External Reviewer for the Peer-review evaluation of submissions of the following conferences

- IEEE Symposium on Visual Analytics Science and Technology (VAST).
- ACM Special Interest Group on Management of Data (SIGMOD).
- ACM Special Interest Group on Knowledge Discovery from Data (SIGKDD).
- IEEE International Conference on Data Mining (ICDM).
- International Conference on Very Large Databases (VLDB).
- International Conference on Information and Knowledge Management (CIKM).

2001 - 2004 Project Developer

- Unit of Medical Technology and Intelligent Information Systems (MEDLAB),
University of Ioannina, Greece.

Teaching Experience

Fall 2011 Lecturer

Aalto University, Department of Information and Computer Science
Course: T61.5060 – Algorithmic Methods of Data Mining.

Fall 2010 Lecturer

Aalto University, Department of Information and Computer Science
Course: T61.5060 – Algorithmic Methods of Data Mining.
Student evaluations available at:
<http://users.ics.tkk.fi/panagpap/evaluations.html>.

Summer 2008 Lecturer

Boston University, Boston, MA, USA.
Course: CAS CS101 - Introduction to Computer Science for Summer periods I and II.
Student evaluations available at:
<http://cs-people.bu.edu/panagpap/evaluations.html>.

International Visits and Invited Talks

October 2011 **Yahoo! Research, Barcelona**

2-week research visit

Invited talk: "Time Series Subsequence Matching: A Query-by-humming Application".

Host: Dr. Aristides Gionis.

October 2010 **GFZ German Research Centre for Geosciences**

2-day research visit

Invited talk: "Visually Controllable Data Mining Methods".

Host: Dr. Mike Sips.

March 2010 **University of Antwerpen**

2-day research visit

Host: Prof. Bart Goethals.

Miscellaneous

Language skills Greek (native)
English (Fluent)
German (Good working knowledge)
Spanish (Basic)

Music skills Organ (7 years of experience)
Theory of Music (Complete)