

Georgios (George) Valkanas

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EDUCATION

2009 - 2014: Ph.D. in Computer Science, Dept. of Informatics & Telecom., University of Athens, Athens, Greece

- Thesis: *Mining and Managing User-Generated Content and Preferences*
- Advisor: Professor Dimitrios Gunopulos

Feb. 2009: M.Sc. in Computer Science, Dept. of Informatics, Aristotle University of Thessaloniki, Thessaloniki, Greece

- Thesis: *Parallel Computation of Skyline Queries*
- Advisor: Assistant Prof. Apostolos N. Papadopoulos
- GPA: *10.0 / 10.0 (ranked 1st)*

Jun. 2007: B.Sc. in Computer Science, Dept. of Informatics & Telecom., University of Athens, Athens, Greece

- Thesis: *Application for Video Annotation according to the MPEG-7 standard using ontologies*
- Advisor: Associate Prof. Stathes Hadjiefthymiades
- GPA: *8.02 / 10.0 (ranked 3rd)*

WORK EXPERIENCE

Detectica, NY, USA
Research Engineer March 2016 -

Stevens Institute of Technology, Hoboken, NJ, USA
Postdoctoral Researcher Jan 2015 - Mar 2016
Adjunct Instructor Sep 2015 - Dec 2015

Dept. of Informatics & Telecom., University of Athens, Athens, Greece
Graduate Researcher, E.U. project INSIGHT Oct 2012 - Dec 2014
Graduate Researcher, E.U. project MODAP Sep 2009 - Dec 2012
Graduate Researcher, E.U. project SemSorGrid4Env Jun 2010 - Aug 2011
Graduate Researcher, E.U. project IPAC Apr 2009 - Feb 2011
Teaching Assistant 2009 - 2014
Research Assistant, GSRT project POLYSEMA Sep 2006 - Jun 2007

Yahoo! Research Barcelona, Barcelona, Spain
Research Intern Mar - Apr 2014, Jun - Aug 2013

MOBICS Ltd, 27 Kifissias Ave, Athens, Greece
External Software Engineer (project-based) Jun - Aug 2008

LPNet Advanced Software Solutions, Kalamaki, Greece
Software Developer Sep 2006 - May 2007

RESEARCH INTERESTS **Main:** Data / Web / Text Mining, Social Media Analysis, User Behavior
Secondary: Data management, Pervasive Computing

JOURNALS &
BOOK CHAPTERS

Lappas T., **Valkanas G.**, Sabnis G. *The Impact of Fake Reviews on Online Visibility: A Vulnerability Assessment of the Hotel Industry*, in *Information Systems Research (ISR) journal* [conditional accept], 2016

Tiakas E., **Valkanas G.**, Papadopoulos N.A., Manolopoulos Y., Gunopulos D. *Processing Top-k Dominating Queries in Metric Spaces*, in *Transactions on Database Systems (TODS)* [invited as best papers from EDBT 2014]

Valkanas G., Gunopulos D. *Event Detection from Social Media Data*, in *IEEE Data Eng. Bulletin*, Vol. 36(3), 2013, pp. 51–58

Kolomvatsos K., **Valkanas G.**, Hadjiefthymiades S. *Debugging Applications Created by a Domain Specific Language: The IPAC Case*, in *Elsevier Journal of Systems and Software*, 85(4):932-943, 2012

Kolomvatsos K., **Valkanas G.**, Patelis P., and Hadjiefthymiades S. *Creating, Debugging and Testing Mobile Applications with the IPAC Application Creation Environment*, book chapter in *Formal and Practical Aspects of Domain-Specific Languages: Recent Developments*, ed. Dr M. Mernik, IGI Global, 2012.

PEER-REVIEWED
CONFERENCES

Saravanou A., **Valkanas G.**, Gunopulos D., Andrienko G., *Twitter Floods when it Rains: A Case Study of the UK Floods in early 2014*, in *WWW (Companion) 2015*

Arapakis I., Lalmas M., **Valkanas G.** *Understanding Within-Content Engagement through Pattern Analysis of Mouse Gestures*, in *ACM CIKM 2014*

Valkanas G., Katakis I., Gunopulos D., Stefanidis A., *Mining Twitter Data with Resource Constraints*, in *Web Intelligence 2014*

Galpin I., Stokes B. A., **Valkanas G.**, Gray J.G. A., Paton W. N., Fernandes A.A. A., Sattler K., Gunopulos D. *SensorBench: Benchmarking Approaches to Processing Wireless Sensor Network Data*, in *SSDBM 2014*

Tiakas E., **Valkanas G.**, Papadopoulos N.A., Manolopoulos Y., Gunopulos D. *Metric-Based Top-k Dominating Queries*, in *EDBT 2014*

Valkanas G., Gunopulos D. *How the Live Web Feels About Events*, in *ACM CIKM 2013*

Papataxiarhis V., Tsetsos V., **Valkanas G.**, Kassapoglou-Faist C., Piguet D., Hadjiefthymiades S. *A Reconfigurable Middleware for Context-Aware Applications in Autonomous Computing*, in *IEEE PIMRC 2013*

Valkanas G., Gunopulos D. *A UI Prototype for Emotion-Based Event Detection in the Live Web*, in *SouthCHI 2013*

Valkanas G., Papadopoulos N.A., Gunopulos D. *SkyDiver: A Framework for Skyline Diversification*, in *EDBT 2013*

Valkanas G., Gunopulos D. *Location Extraction from Social Networks with Commodity Software and Online Data*, in *IEEE ICDM Workshops 2012*

Lappas T., **Valkanas G.**, Gunopulos D. *Efficient and domain-invariant competitor mining*, in *ACM SIGKDD 2012*

Valkanas G., Ntoulas A., Gunopulos D. *Rank-Aware Crawling of Hidden-Web sites*, in *WebDB 2011*

Valkanas G., Gunopulos D., Galpin I., Gray J.G.A., Fernandes A.A.A. *Extending Query Languages for In-Network Query Processing*, in *MobiDE 2011*

Valkanas G., Papadopoulos N.A. *Efficient and Adaptive Distributed Skyline Computation*, in *SSDBM 2010*

OTHER
REFEREED
PUBLICATIONS

- Valkanas G.**, Saravanou A., Gunopulos D. *A Faceted Crawler for the Twitter Service*, in *WISE 2014*
- Valkanas G.**, Gunopulos D., *Predicting Download Directories for Web Resources*, in *WIMS 2014*
- Valkanas G.**, Papadopoulos N.A., Gunopulos D. *Skyline Ranking á la IR*, in *ExploreDB 2014*
- Valkanas G.**, Galpin I., Gray J.G. A., Fernandes A.A. A., Paton W. N., Gunopulos D. *Declarative In-Network Sensor Data Analysis*, in *LML 2013*
- Valkanas G.**, Gunopulos D., Boutsis I., Kalogeraki V. *An Architecture for Detecting Events in Real-Time using Massive Heterogeneous Data Sources*, in *BigMine 2013*
- Valkanas G.**, Kotsifakos A., Gunopulos D., Galpin I., Gray J.G.A., Fernandes A.A.A., Paton W.N. *Deploying In-Network Data Analysis Techniques in Sensor Networks*, in *MDM 2011*
- Valkanas G.**, Natsiavas P., Bassiliades N. *A collision detection and resolution multi agent approach using utility functions*, in *BCI 2009*
- Valkanas G.**, Tsetsos V., Hadjiefthymiades S. *The POLYSEMA MPEG-7 Video Annotator*, in *SAMT 2007*

WORKING
PAPERS

- Lappas T., **Valkanas G.**, Gunopulos D. *Mining Competitors from Large Unstructured Datasets*, Under Submission, 2015
- Valkanas G.**, Gunopulos D., *The Right Tool for Which Job? Extracting Best Uses of Items from Reviews*, Under revision 2015
- Filippas A., **Valkanas G.**, Lappas T. *Strength in Numbers: Can Big Data Eliminate the Need for Complex Opinion-mining Algorithms?*, Under preparation, 2015

AWARDS &
RECOGNITION

- Doctoral Research Fellowship** “Heraclitus II” (EU & Greek funds), 2011 - 2014
- 1 of the 850 nation-wide funded proposals, after peer review
- Best Reviewer Award**, SocInfo 2014
- Outstanding Reviewer**, IJCAI 2016
- Invited paper to TODS**, best of EDBT 2014
- *Processing Top-k Dominating Queries in Metric Spaces*
- MSc Honors Degree**
- Tuition fee waiver for ranking 1st every semester
- LinkedIn Tour Award**, during 22nd ACM CIKM, San Francisco, California, Oct 2013

PROFESSIONAL
ACTIVITIES

- Program Committees**
- ICWSM 2016
 - IJCAI (AI and the Web) 2016
 - SocInfo 2014, 2016
- Reviewing**
- Transaction on Services Computing 2016
 - INFORMS Journal on Computing 2016
 - WSDM 2014, 2016

External Reviewer (partial list)
SIGKDD, WSDM, WWW, ASONAM, ICDM, AAAI, IEEE DEB
VLDB, SIGMOD, ICDE, EDBT

TALKS &
PRESENTATIONS

- “Mining and Managing User Generated Content and Preferences”
UCSB Aug. 2014
- “Mining Potpourri: Competitiveness, Diversification and Event Detection in Social Media”, Yahoo! Labs Barcelona Jul. 2013
- “SNEE-A: A Sensor Network Query Engine for In-Network Data Analysis”
MADgIK group, Greece Dec. 2011
- “Skyline Query Processing in Distributed Environments”
MADgIK group, Greece Nov 2009

OPEN SOURCE
ACTIVITY

Software & Datasets

1. **SensorBench:** A benchmark for data processing techniques in Wireless Sensor Networks. Available from here: <https://code.google.com/p/sensebench/>.
2. **GIRAPH:** Implemented the multiple concurrent random walks in the GIRAPH graph processing framework. Feature request and submitted patch can be found here: <https://issues.apache.org/jira/browse/GIRAPH-824>.
3. **Twitter Emotions Data:** A dataset with manually annotated tweets, regarding the emotion that they convey. The dataset was used to train a classifier for several publications. The dataset has been made available to the community.
4. **SNEE:** Project committer (<https://code.google.com/p/snee/>), bug fixes, and implementation of the SNEE-A prototype, which introduces data analysis techniques to the SNEE project.
5. **Aurora simulator:** Pointed out a bug and presented a potential fix. More info at: <http://lists.ucla.edu/pipermail/aurora/2011-August/001518.html>.
6. **Polysema Annotator:** My BSc thesis was open sourced. It is a framework to annotate video according to the MPEG-7 standard. Available from SourceForge.

LANGUAGES

Greek (*Native*), English (*Fluent*), French (*Intermediate*), Spanish (*Beginner*)

TECHNICAL
SKILLS

Programming Languages: C, C++, Java, Python, VB6, .NET suite (VB, C#, ASP), Prolog, Pascal, Basic, Shell Scripting, nesC / TinyOS
“Big Data” Frameworks: Hadoop, PIG, GIRAPH, Spark
Web Technologies: HTML, PHP, JavaScript, JSP, Web services
Database: SQL (ANSI, T-SQL), ER Model, SQL Server, MySQL, PostgreSQL
Operating Systems: Linux, Microsoft Windows family, Solaris
Other: Multi-threading, SunSPOTs, Client / Server Programming, UML

REFERENCES

Prof. **Dimitrios Gunopulos**

- Dept. of Informatics & Telecom., University of Athens
- email: dg@di.uoa.gr
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Assistant Prof. **Theodoros Lappas**

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Assistant Prof. **Apostolos N. Papadopoulos**

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Associate Prof. **Stathes Hadjiefthymiades**

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