

Georgios (George) Valkanas

CONTACT INFORMATION	31 Karaiskaki st. Ilioupolis, 16342 Athens, Greece Year of Birth: 1984 Citizenship: Greek	<i>Mobile:</i> +30-697-27-96-714 <i>Email:</i> gvalk@di.uoa.gr <i>Homepage:</i> www.di.uoa.gr/~gvalk
EDUCATION	2009 - 2014: Ph.D. in Computer Science, Dept. of Informatics & Telecom., Univ. of Athens, Athens, Greece • Thesis Title: <i>Knowledge Extraction from Distributed Environments, with Applications to Web and Streams</i> • Advisor: Professor Dimitrios Gunopulos Feb. 2009: M.Sc. in Computer Science, Dept. of Informatics, Aristotle University of Thessaloniki, Thessaloniki, Greece • Thesis Title: <i>Parallel Computation of Skyline Queries</i> • Advisor: Assistant Prof. Apostolos N. Papadopoulos • GPO: 10.0 / 10.0 (ranked 1st) Jun. 2007: B.Sc. in Computer Science, Dept. of Informatics & Telecom., University of Athens, Athens, Greece • Thesis Title: <i>Application for Video Annotation according to the MPEG-7 standard using ontologies</i> • Advisor: Associate Prof. Stathes Hadjiefthymiades • GPO: 8.02 / 10.0 (ranked 3rd)	
AWARDS	Heraclitus Fellowship - Enhancing Human Research Potential through Doctoral Research, 2011 - 2014 LinkedIn Tour Award , during 22nd ACM CIKM, San Francisco, California, Oct 2013	
RESEARCH INTERESTS	Main: Web & Text Mining, Social Media Analysis, Multi-Criteria Analysis Secondary: Data management, Pervasive Computing	
PUBLICATIONS	Arapakis I., Lalmas M., Valkanas G. <i>Understanding Within-Content Engagement through Pattern Analysis of Mouse Gestures</i> , in <i>Proc. of 23rd ACM CIKM, Shanghai, China, Nov 2014</i> (to appear) Galpin I., Stokes B. A., Valkanas G. , Gray J.G. A., Paton W. N., Fernandes A.A. A., Sattler K., Gunopulos D. <i>SensorBench: Benchmarking Approaches to Processing Wireless Sensor Network Data</i> , in <i>Proc. of 26th SSDBM, Aalborg, Denmark, Jun 2014</i> Valkanas G. , Katakis I., Gunopulos D., Stefanidis A., <i>Mining Twitter Data with Resource Constraints</i> , in <i>Proc. of Web Intelligence, Warsaw, Poland, Jul 2014</i> Valkanas G. , Papadopoulos N.A., Gunopulos D. <i>Skyline Ranking á la IR</i> , in <i>Proc. of ExploreDB, workshop of EDBT, Athens, Greece, Mar 2014</i> Tiakas E., Valkanas G. , Papadopoulos N.A., Manolopoulos Y., Gunopulos D. <i>Metric-Based Top-k Dominating Queries</i> , in <i>Proc. of 17th EDBT, Athens, Greece, Mar 2014</i> Valkanas G. , Gunopulos D. <i>Event Detection from Social Media Data</i> , in <i>IEEE Data Eng. Bulletin</i> , Vol. 36(3), 2013, pp. 51–58	

- Valkanas G.**, Gunopulos D. *How the Live Web Feels About Events*, in *Proc. of 22nd ACM CIKM, San Francisco, California USA, Oct 2013*
- Valkanas G.**, Galpin I., Gray J.G. A., Fernandes A.A. A., Paton W. N., Gunopulos D. *Declarative In-Network Sensor Data Analysis*, in *Proc. of LML, workshop of ECML/PKDD, Prague, Czech Republic, Sep 2013*
- Valkanas G.**, Gunopulos D., Boutsis I., Kalogeraki V. *An Architecture for Detecting Events in Real-Time using Massive Heterogeneous Data Sources*, in *Proc. of BigMine-13, workshop of 19th ACM SIGKDD, Chicago, Illinois USA, Aug 2013*
- Papataxiarhis V., Tsetsos V., **Valkanas G.**, Kassapoglou-Faist C., Piguet D., Hadjiefthymiades S. *A Reconfigurable Middleware for Context-Aware Applications in Autonomic Computing*, in *Proc. of 24th IEEE PIMRC, London, UK, Sep 2013*
- Valkanas G.**, Gunopulos D. *A UI Prototype for Emotion-Based Event Detection in the Live Web*, in *SS-KDD-HCI @ SouthCHI, Maribor, Slovenia, Jul 2013*
- Valkanas G.**, Papadopoulos N.A., Gunopulos D. *SkyDiver: A Framework for Skyline Diversification*, in *Proc. of 16th EDBT, Genoa, Italy, Mar 2013*
- Lappas T., **Valkanas G.**, Gunopulos D. *Efficient and domain-invariant competitor mining*, in *Proc. of 18th ACM SIGKDD, Beijing, China, Aug 2012*
- Valkanas G.**, Gunopulos D. *Location Extraction from Social Networks with Commodity Software and Online Data*, in *Proc. of IEEE ICDM Workshops, Brussels, Belgium, Dec 2012*
- 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
- Valkanas G.**, Ntoulas A., Gunopulos D. *Rank-Aware Crawling of Hidden-Web sites*, in *Proc. of 14th WebDB, workshop of ACM SIGMOD, Athens, Greece, Jun 2011*
- Valkanas G.**, Gunopulos D., Galpin I., Gray J.G.A., Fernandes A.A.A. *Extending Query Languages for In-Network Query Processing*, in *Proc. of 10th MobiDE, workshop of ACM SIGMOD, Athens, Greece, Jun 2011*
- Valkanas G.**, Papadopoulos N.A. *Efficient and Adaptive Distributed Skyline Computation*, in *Proc. of 22nd SSDBM, Heidelberg, Germany, Jul 2010*
- 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 *Proc. of 15th IEEE MDM, Luleå, Sweden, Jun 2011*
- Valkanas G.**, Tsetsos V., Hadjiefthymiades S. *The POLYSEMA MPEG-7 Video Annotator*, in *Proc. of 2nd SAMT, Genova, Italy, Dec 2007*
- Valkanas G.**, Gunopulos D., *Predicting Download Directories for Web Resources*, in *Proc. of 4th WIMS, Thessaloniki, Greece, Jun 2014*
- 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.
- Valkanas G.**, Natsiavas P., Bassiliades N. *A collision detection and resolution multi agent approach using utility functions*, in *Proc. of 4th BCI, Thessaloniki, Greece, Sep 2009*

DEMO
PUBLICATIONS

OTHER
PUBLICATIONS

PROFESSIONAL
EXPERIENCE

Yahoo! Research Barcelona, Barcelona, Spain

Web Mining Group Intern

- **Mar - Apr 2014:** Query log mining and analysis. [Hadoop, PIG, GIRAPH]
- **Jun - Aug 2013:** 1) Query log mining and analysis, User intent extraction. [Hadoop, PIG, GIRAPH]
2) Mouse gesture analysis for cognitive processes.

Dept. of Informatics & Telecom., University of Athens, Athens, Greece,

Research Assistant

- **Oct 2012 - today:** E.U. funded project **INSIGHT**. Real-time event detection from massive streaming heterogeneous data.
- **Sep 2009 - 2012:** E.U. funded project **MODAP**. Broad dissemination of information related to Mobility, Data Mining and Privacy
- **Jun 2010 - Aug 2011:** E.U. funded project **SemSorGrid4Env**. Design, implementation and integration of Data Analysis Techniques in a Query Execution engine for Wireless Sensor Network.
- **Apr 2009 - Feb 2011:** E.U. funded project **IPAC**. Implementation of an infrastructure for ubiquitous services and applications.
- **Sep 2006 - Jun 2007:** GSRT funded project **POLYSEMA**. Implementation of a framework for video annotation with high-level semantics, according to the MPEG-7 standard and the use of ontologies. Integration of shot detection algorithms as part of scene detection. The annotator has been open-sourced and is available at [SourceForge](#)

MOBICS Ltd, 27 Kifissias Ave, Athens Greece

External Software Developer

- **Jun - Aug 2008:** Design and implementation of an incremental 2D wavelet transformation of images to use in cellphones, for both the server and the client.

LPNet Advanced Software Solutions, Kalamaki, Greece

Software Developer

- **Sep 2006 - May 2007:** Design and implementation of a suite of applications for the full computerization of companies (clientele, storage management, etc).

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. **Avrora simulator:** Pointed out a bug and presented a potential fix. More info at: <http://lists.ucla.edu/pipermail/avrora/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](#).

TEACHING
EXPERIENCE

Dept. Informatics & Telecom., University of Athens, Athens, Greece

Teaching Assistant

- **Spring 2010, Spring 2011:** Coursework instructor & grader for “Database Systems Implementation”. Lectures on undergraduate students’ coursework on database access methods (B-tree, hashing). Developed supplementary material: <http://cgi.di.uoa.gr/~k18/ex2/LinearHash.pdf>
- **Winter 2009, Winter 2010:** Instructor for “(Database) Software Development”. 2-hour lectures weekly. Supervision and grading of undergraduate students’ implementation of a database system.
- **Winter 2009, Winter 2010:** Grader for “Operating Systems”. Coursework on inter-process communication (IPC), semaphores, shared memory, process synchronization.
- **Winter 2009, Winter 2010:** Lab Instructor for “Human-Computer Interaction”. Three 3-hour lectures on technical aspects and tools for the creation of web-based content.

ATTENDED
SEMINARS

27/08/2010 - 01/09/2010: *MODAP Summer School*. Summer school as part of the European project MODAP, at Rhodes Island, Greece.
November 2007: *DIEPTELO Seminar*, titled “Component-based Software Development” seminar, as part of project DIEPTELO. Duration: 58h

LANGUAGES

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

TECHNICAL
SKILLS

Programming

- *Languages:* C, C++, Java (J2SE, J2ME, J2EE), Python, VB6, .NET suite (VB, C#, ASP), Prolog, Pascal, Basic, Shell Scripting, nesC / TinyOS
- *Systems:* Hadoop, PIG, GIRAPH
- *Web Technologies:* HTML, PHP, JavaScript, VBScript, JSP, JSF, Web services
- *Database:* SQL (ANSI, T-SQL), ER Model, SQL Server, MySQL, PostgreSQL
- *Other:* Multi-threading, SunSPOTs, Client / Server Programming, UML

Operating Systems

- Linux
- Microsoft Windows family
- Solaris

REFERENCES

Prof. **Dimitrios Gunopulos**

- Dept. of Informatics & Telecom., University of Athens
- email: dg@di.uoa.gr
- phone: +30 210 727 5227

Assistant Prof. **Apostolos N. Papadopoulos**

- Dept. of Informatics., University of Thessaloniki
- email: apostol@delab.csd.auth.gr
- phone: +30 2310 99 1918

Associate Prof. **Stathes Hadjiefthymiades**

- Dept. of Informatics & Telecom., University of Athens
- email: shadj@di.uoa.gr
- phone: +30 210 727 5148

Prof. **Norman Paton**

- School of Computer Science, University of Manchester
- email: npaton@manchester.ac.uk
- phone: +44 161 275 6910