

## STEFANOS VROCHIDIS

RESEARCHER, INFORMATION TECHNOLOGIES INSTITUTE, CERTH

### ◆ EDUCATION

---

- 1/2009 – 3/2013 Ph.D. Electronic Engineering Department of Queen Mary University of London. Thesis: "Interactive video retrieval using Implicit user feedback".
- 10/2000 – 10/2001 MSc in Radio Frequency Communication Systems, Department of Electronics and Computer Science, University of Southampton. Grade: 70%. Thesis subject: Simulation of a telecommunication system for sound transmission. PCM and DPCM coding, channel coding and decoding with Viterbi algorithm. Implementation of Niquist filters for pulse shaping. BPSK, 4-QAM and 16-QAM modulation.
- 10/1993 – 7/2000 Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki. Electronics and Computers Division. Graduation grade: 7/10 "Very Good". Diploma thesis subject: "Applications of the Finite Difference Time Domain (FDTD) method, combined with the Perfectly Matched Layers (PML)".

### ◆ PROFESSIONAL EXPERIENCE

---

- 2/2006 – Today Researcher, Information Technologies Institute / Centre for Research and Technology Hellas (ITI/CERTH).
- 4/2008 – 10/2008 & 5/2005 – 12/2006 Electrical Engineer. Desing of 3d toor in a museum and data processing / Teloglion Foundation of Art.
- 10/2005 – 2/2006 Teaching the courses of Computer Networks and Telecommunications in Public Vocational Training Institutes (Epanomi, Eusmos Thessalonikis)

### ◆ RESEARCH PROJECTS

---

- 2013 – Today "MULTISENSOR", FP7 ICT, STREP, 2013-2016, Deputy project coordinator
- 2013 – Today "HOMER", FP7 SEC, STREP, 2013-2016, Work Package Leader
- 2010 – 2012 "PESCaDO: Personalized Environmental Service Configuration and Delivery Orchestration", FP7 ICT STREP, 2010-2012. Work Package Leader
- 2008 – 2009 "CHORUS: Coordinated approach to the EurOpean effoRt on aUdio-visual Search engines", FP6 IST Coordination Action 2007-2009.
- 2007 – 2008 "PATExpert", FP6 IST STREP, 2006-2008. Work Package Leader.
- 2007 "K-Space: Knowledge Space of Semantic Inference for Automatic Annotation and Retrieval of Multimedia Content", FP6 IST NoE, 2006-2008.
- 2006 – 2008 "COST292: Semantic Multimodal Analysis of Digital Media", European Cooperation in the Field of Scientific and Technical Research, 2004 - 2008.
- 2006 – 2008 "ELU: Enhanced Learning Unlimited", FP6 IST STREP, 2006 – 2008, Representative of ITI-CERTH
- 2006 – 2007 "REACH", General Secreteriat for Research and Technology Hellas, 2005 – 2007, Work Package Leader

### ◆ TECHNICAL ACTIVITIES

---

**Workshop Organizer:** 1<sup>st</sup> International Workshop on Environmental Multimedia Retrieval 2014 (EMR 2014), Glasgow, April 1, 2014

**Session Chair:** 3rd Information Retrieval Facility Symposium 2010, Vienna, Austria, June 1-4, 2010

#### Invited Talks

- S. Vrochidis, Towards Patent Image Retrieval, presented at International Patent Information Conference and Exposition (IPI-ConfEx 2009), Venice, Italy, March 1-5, 2009.
- S. Vrochidis, Patent Image Retrieval, (video) presented at Information Retrieval Facility Symposium (IRFS 2008), Vienna, Austria, November 5-8, 2008.

**Program Committee Member or Reviewer:** IEEE International Conference on Image Processing, ACM

International Conference on Multimedia Retrieval, European Conference on Information Retrieval, 1st International Workshop on Advances in Patent Information Retrieval, IEEE transactions in Multimedia, Multimedia and Applications Journal (complete list available at [http://mklab.iti.gr/mklab\\_people/stefanos](http://mklab.iti.gr/mklab_people/stefanos)).

### **Participation in professional bodies – committees**

- Member of the Technical Chamber of Greece since 2001.

### **♦ SCIENTIFIC INTERESTS**

---

Image and video analysis, interactive search, media monitoring content-based and semantic image and video retrieval, environmental applications, search engines, ontologies, patent search.

### **♦ PUBLICATIONS**

---

**Journal Papers: 10**

**Book Chapters: 5**

**Conference Papers: 46**

**Indicative publications** (complete list available at [http://mklab.iti.gr/mklab\\_people/stefanos](http://mklab.iti.gr/mklab_people/stefanos)):

- (1) A. Moutzidou, S. Vrochidis, E. Chatzilari and I. Kompatsiaris. "Discovery of Environmental Resources based on Heatmap Recognition", IEEE International Conference on Image Processing (ICIP 2013), Melbourne, Australia, September 15-18, 2013.
- (2) D. Hilbring, A. Moutzidou, J. Mossgraber and S. Vrochidis. "Usage of the 52north Open Source SOS implementation for Accessing Heterogeneous Environmental Data Sources for a Personalized Information System", The Global Conference for Open Source Geospatial Software, Nottingham, UK, September 17-21, 2013, accepted for publication.
- (3) S. Vrochidis, H. Bosch, A. Moutzidou, F. Heimerl, T. Ertl, I. Kompatsiaris, "An Environmental Search Engine based on Interactive Visual Classification", in Proceedings of the ACM International Workshop on Multimedia Analysis for Ecological Data (MAED 2012), November 2, 2012, Nara, Japan.
- (4) P. Sidiropoulos, S. Vrochidis, I. Kompatsiaris, "Content-Based Binary Image Retrieval using the Adaptive Hierarchical Density Histogram", Pattern Recognition Journal, Elsevier, accepted for publication, 2010.
- (5) S. Vrochidis, C. Doulaverakis, A. Gounaris, E. Nidelkou, L. Makris and I. Kompatsiaris, "A Hybrid Ontology and Visual-based Retrieval Model for Cultural Heritage Multimedia Collections", International Journal of Metadata, Semantics and Ontologies, Vol.3, No. 3, pp. 167-182, 2008.
- (6) S. Vrochidis, I. Kompatsiaris and I. Patras, "Optimizing Visual Search with Implicit User Feedback in Interactive Video Retrieval", in Proceedings of the ACM International Conference on Image and Video Retrieval (CIVR 2010), pp 274-281, Xi'an, China, 5-7 July 2010.
- (7) A. Moutzidou, V. Epitropou, S. Vrochidis, S. Voth, A. Bassoukos, K. Karatzas, J. Mossgraber, I. Kompatsiaris, A. Karppinen and J. Kukkonen, "Environmental Data Extraction from Multimedia Resources", in Proceedings of the ACM International Workshop on Multimedia Analysis for Ecological Data (MAED 2012), November 2, 2012, Nara, Japan.
- (8) L. Wanner, S. Vrochidis, M. Rospocher, J. Mossgraber, H. Bosch, A. Karppinen, M. Myllynen, S. Tonelli, N. Bouayad-Agha, U. Bugel, G. Casamayor, T. Ertl, D. Hilbring, K. Karatzas, I. Kompatsiaris, T. Koskentalo, S. Mille, A. Moutzidou, E. Pianta, H. Saggion, L. Serafini, V. Tarvainen, "Personalized environmental service orchestration for quality of life improvement", in Proceedings of the 3rd Intelligent Systems for Quality of Life information Services Workshop (ISQL 2012), September 29, 2012, Halkidiki, Greece.
- (9) S. Vrochidis, V. Epitropou, A. Bassoukos, S. Voth, K. Karatzas, A. Moutzidou, J. Mossgraber, I. Kompatsiaris, A. Karppinen, J. Kukkonen, "Extraction of environmental data from on-line environmental information sources", in Proceedings of the 3rd Intelligent Systems for Quality of Life information Services Workshop (ISQL 2012), September 29, 2012, Halkidiki, Greece.
- (10) A. Moutzidou, S. Vrochidis, S. Tonelli, I. Kompatsiaris and E. Pianta, "Discovery of Environmental Nodes in the Web", in Proceedings of the 5th IRF Conference, Austria, Vienna, July 2-3, 2012