

Dimitris Spiliotopoulos

Curriculum Vitae

(Last update: August 2011)

PERSONAL INFORMATION

Permanent home address: Riga Feraiou 2, Pefki, 151 21, Greece.
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Web pages: <http://www.spiliotopoulos.org>
Work address: Speech and Accessibility Group,
Department of Informatics and Telecommunications,
University of Athens, Panepistimiopolis, Ilissia, 157 84, Athens, Greece.
Work tel. number: +30 210-7275345 (University of Athens).
Date of birth: 14-12-1973
Family status: Married, 2 children.

RESEARCH INTERESTS

Human Computer Interaction, Spoken Dialogue Systems, Usability methodologies, Speech Synthesis, Prosody, Intonation, Computational Linguistics, Design-for-All, Universal Accessibility, Phonetics, Phonology, Natural Language Processing and Generation, Document-to-Audio, Speech Acoustics and Evaluation, Digital Signal Processing.

TEACHING

- Visiting Professor, University of Peloponnese, for the academic year 2010-2011.
Teaching the undergraduate course, "Introduction to Informatics". Undergraduate course, about 50 students.
Teaching the undergraduate course, "Theoretical Linguistics". Undergraduate course, about 60 students.
- Teaching the Postgraduate course in "Speech Technologies", Department of Informatics and Telecommunications, University of Athens, for the following academic years, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, and 2010-2011.
Teaching includes lectures in speech and natural language processing, spoken dialogue management, usability and evaluation of spoken dialogue management systems using synthetic speech.
- Taught the Undergraduate course "Real Time Digital Signal Processing", Department of Informatics and Telecommunications, University of Athens, for the following academic years, 2003-04, 2004-05 and 2005-06.

Teaching included lectures and laboratory tutorials in real-time digital signal processing, the use of LabView for a mean 30 student tutorials in DSP for the full semesters and exam work, processing and marking.

- Assistant teaching and tutorial work in the Postgraduate courses in «Phonetics» and «Intonation» by Prof. Alan Cruttenden, Department of Linguistics, University of Manchester, for the 1998-1999 academic year.

Teaching included tutorials and special topics in Phonetics and Phonology to a mean 10 student attending the courses. Work on exam marking for the course in Phonetics was also included.

EDUCATION

- **Philosophical Degree (PhD) in Language Technology, 2009.**
Department of Informatics and Telecommunications, University of Athens, Greece
Thesis: Language analysis and prosodic feature annotation for high quality speech synthesis.
- **Master of Philosophy (MPhil) in Computation, 1999.**
University of Manchester, Institute of Science & Technology (UMIST), Manchester, UK.
Thesis: Building workflow technology based on CORBA.
- **Master of Arts (MA) in Linguistics, 1998.**
University of Manchester, Department of Linguistics, Manchester, UK.
Dissertation: Laryngeal elements: Cases of voicing in Modern Greek.
- **Bachelor of Science (BSc) in Computation, 2.1 Class (Honours), 1995.**
University of Manchester, Institute of Science & Technology (UMIST), Manchester, UK.
Dissertation: Software Implementation of Transcendental Functions.

WORK

- **September 2010 – Today**
University of Peloponnese, Greece.
Visiting Lecturer in Computer Science and Linguistics departments.
- **August 2002 – Today**
Senior Researcher, Speech and Accessibility Group, Department of Informatics and Telecommunications, University of Athens.
Worked for the research project Rhetor “Voice dialogue interface using acoustic rendering of visual document meta-information for a design-for-all access to printed matter.” National GSRT project. (2006-2008)
Involved in the Project “Sintichies”, Lexicon processing and synthetic speech for Greek Cypriot, University of Cyprus (2009-2010)

Also worked for the European Community funded research project M-PIRO “Multilingual generation of personalized exhibit descriptions in virtual museums”, for the work package titled: “Using generated XML-encoded information for automatically generated texts to improve speech synthesis for the Greek Language”. EU HLT/IST (2000-2003)

The PhD was funded by the HERAKLITUS Scholarship “Synthetic speech improvement using high-level prosodic feature annotation” (2003-2007).

- **September 2010 – Today**

Athens Technology Centre, Athens, Greece.

Project Manager, currently being responsible for several work packages for three current EU Research projects and involved in relevant proposals for ICT call 7, EU.

- **November 2008 – September 2009**

OMILIA LTD. Technical Director, Development of Voice User Interface for Vodafone GR Customer Care Services.

- **March 2000 – July 2002**

Research associate, Software and Knowledge Engineering Laboratory, Institute of Informatics and Telecommunications, NCSR “Demokritos”.

Worked for the European Community funded research project “M-PIRO”, for the work package titled: “Design and implementation of an authoring tool for symbolic authoring of multilingual resources and relevant knowledge base, and exporting of those resources for use in generating personalized multilingual descriptions for objects”. The implementation was in Java.

Worked for the Nationally funded (PENED’99) research project “HYGEIOROBOT”, for the work package titled “Design and implementation of the spoken dialog subsystem for the input-output system, speech recognition and natural language processing component, for the Hygeiorobot” Robotic Assistant.

Also involved in SCHEMATOPIESIS, EPET II/98GT27 Project “Integrated environment for the development and exploitation of Greek controlled languages” (1999-2001)

RESEARCH PROJECTS

- ARCOMEM. EU-FP7-ICT, Large-Scale Integrating Project (IP), “Collect-All Archives to Community Memories – Leveraging the Wisdom of the Crowds for intelligent Preservation” (2011-2013), www.arcomem.eu.
- SUMAT. EU-FP7-ICT-PSP, “An online service for Subtitling by Machine Translation” (2011-2014), www.sumat-project.eu.
- CASAM, EU-FP7, “Computer-aided semantic annotation of multimedia content”, www.casam-project.eu
- Enviro-Tex-Design, EU-FP7-Cooperation research project, “Knowledge Based Collaborative 3D Virtual Design” dedicated to the Clothing & Leather/Footwear SMEs, www.envirotexdesign.eu
- Project “Sintichies”, Lexicon processing and synthetic speech for Greek Cypriot, University of Cyprus (2009-2010)

- Project “Vodafone Customer Care Voice Services”, business project (2008-2009)
Design of a Natural Language Dialogue Interface for fully automated customer care call-routing and self-services for Vodafone-GR. Research on a machine learning approach for a dialogue interpretation module for automatic categorization of calls according to corresponding services and top-level customer care department categorization, based on the spoken user input.
- RHETOR, GSRT IS Program: "Image, Sound and Language Processing", Project title: "Systematic Approach for a Voice Dialog Interface with Audification of the Meta-information and Visual Structure of Documents, Aiming to Total Access to Printed Material" (2006-2008)
- HERAKLITUS, EPEAEK Program. “ Synthetic speech improvement using high-level prosodic feature annotation” (2003-2007)
- M-PIRO, IST (Information Society Technologies) of the EU (European Union) 5th Research Framework , Multilingual Personalized Information Objects (2000-2003)
- YGEIOROBOT, PENED Program. “Spoken Dialogue Navigation and Control of a prototype mobile robot for hospital services, with spoken dialogue capabilities” (1999-2001)
- SCHEMATOPIESIS, EPET II/98GT27 Project “Integrated environment for the development and exploitation of Greek controlled languages” (1999-2001)

PROGRAMMING

Several years experience in object oriented programming and excellent knowledge of the Java programming language. Very good knowledge of the Tcl/Tk and Pascal programming languages and good knowledge of the Visual Basic programming language.

EVALUATOR / REVIEWER / PC MEMBER for CALLS, JOURNALS & CONFERENCES

- Evaluator for the Programme “Social Sciences”, action “Socio-Economic Sciences and Humanities”, Framework Programme for Research, Technological Development and Innovation (2009-2010), Republic of Cyprus.
- Reviewer for the book: Tiwary, U.S. (Ed) Speech, Image and Language Processing for Human Computer Interaction: Multi-modal Advancements, IGI Global, 2011.
- Reviewer for the 14th International Conference on Human-Computer Interaction, 9-14 July 2011, Orlando, Florida, USA
- Reviewer for the book: Ceccarelli, M. (Ed) Service Robots and Robotics: Design and Application, IGI Global, 2011.
- Reviewer for the Journal of Computers & Mathematics with Applications, Elsevier.
- Program Committee Member for the Workshop in Adaptation and Personalization in E-B/Learning using Pedagogic Conversational Agents (APLeC), a satellite event of the Conference in User Modeling, Adaptation and Personalization (UMAP 2011).
- Member of the Technical Committee of the 17th International Conference on Digital Signal Processing (DSP2011), Corfu, Greece, 6-8 July 2011.

- Co-organizer and Co-chair of the CASAM Special Session at the 5th International Conference on Semantic and Digital Media Technologies (SAMT 2010), Saarbrücken, Germany, 1-3 December 2010.
- Reviewer for the Special Issue of the International Journal on Artificial Intelligence Tools (IJAIT) on AI Tools for HCI Modeling, vol. 19, n5, October 2010.
- Program Committee Member for the Workshop in Adaptation and Personalization in E-B/Learning using Pedagogic Conversational Agents (APLeC), a satellite event of the Conference in User Modeling, Adaptation and Personalization (UMAP 2010), Big Island of Hawaii, 20-24 June 2010.
- Reviewer for the 16th International Conference on Digital Signal Processing (DSP2009), Santorini, Greece, 5-7 July 2009.

PUBLICATIONS

Journal papers

- Kouroupetroglou, G., Spiliotopoulos, D. (2010): Usability Methodologies for Real-Life Voice User Interfaces. International Journal of Information Technology and Web Engineering, accepted for publication.
- Spiliotopoulos, D., Xydas, G., Kouroupetroglou, G., Argyropoulos, V., Ikospentaki, K. (2009): Auditory Universal Accessibility of Data Tables using Naturally Derived Prosody Specification. Univ. Access Inf. Soc., vol.9, no.1, Springer Berlin Heidelberg.
- Xydas, G., Spiliotopoulos, D., Kouroupetroglou, G. (2005): Modeling Improved Prosody Generation from High-Level Linguistically Annotated Corpora. IEICE Trans. of Inf. and Syst., Special Section on "Corpus-Based Speech Technologies", vol. E88-D, no 3, March 2005, pp. 510-518.

Book chapters

- Spiliotopoulos, D., Pino, A., Stavropoulou, P., Kouroupetroglou, G. (2011): Universal Accessibility in HCI using speech-based and haptic interfaces. Chapter in the book: Speech, Image and Language Processing for Human Computer Interaction: Multi-modal Advancements, 2011, Information Science Reference Press (IGI Global), Pennsylvania, USA, (to appear)
- Stavropoulou, P., Spiliotopoulos, D., Kouroupetroglou, G. (2011): Voice Interaction for Service Robots – Design and Evaluation. Chapter in the book: Service Robots and Robotics: Design and Application, 2011, Information Science Reference Press (IGI Global), Pennsylvania, USA, (to appear)
- Spiliotopoulos, D., Kouroupetroglou, G., Stavropoulou, P. (2011): VoiceWeb: Spoken Dialogue Interfaces and Usability. Chapter in the book: Web Engineered Applications for Evolving Organizations: Emerging Knowledge, 2010, Information Science Reference Press (IGI Global), Pennsylvania, USA.
- Stavropoulou, P., Spiliotopoulos, D., Kouroupetroglou, G. (2010): Design and Development of an Automated Voice Agent: Theory and Practice Brought Together. Chapter in the book: Conversational Agents and Natural Language Interaction: Techniques and Effective Practices, 2010, Information Science Reference Press (IGI Global), Pennsylvania, USA.

- Spiliotopoulos, D., Kouroupetroglou, G. (2009): Usability Methodologies for Spoken Dialogue Web Interfaces. Chapter in the book: Integrating Usability Engineering for Designing the Web Experience: Methodologies and Principles, 2009, Information Science Reference Press (IGI Global), Pennsylvania, USA, ISBN: 1605668966.

Conferences

- Stavropoulou, P., Spiliotopoulos, D., Kouroupetroglou, D., (2011): Acoustic modeling of dialogue elements for document accessibility, Universal Access in Human-Computer Interaction. Applications and Services, Lecture Notes in Computer Science, 2011, Volume 6768/2011, 175-184, DOI: 10.1007/978-3-642-21657-2_19
- Kinoktimon, G., Spiliotopoulos, D., et al (2010): CASAM: A prototype system for computer-aided semantic annotation of multimedia, Proc. 5th International Conference on Semantic and Digital Media Technologies (SAMT 2010), Saarbrücken, Germany, 1-3 December 2010.
- Pino, A., Kouroupetroglou, G., Kacorri, H., Sarantidou, A., Spiliotopoulos, D. (2010): An Open Source / Freeware Assistive Technology Software Inventory. Proc. 12th Int. Conf. on Computers Helping People with Special Needs, ICCHP 2010, Part I, LNCS 6179, Springer-Verlag Berlin Heidelberg, pp. 178–185, 2010.
- Stavropoulou, P., Spiliotopoulos, D., Kouroupetroglou, G. (2010): Integrating Contrast in a Framework for Predicting Prosody. Lecture Notes in Computer Science 6008, Computational Linguistics and Intelligent Text Processing, Springer Berlin Heidelberg, pp. 748-758, 2010, ISBN 3978-3-642-12115-9.
- Spiliotopoulos, D., Stavropoulou, P., Kouroupetroglou, G. (2009): Spoken Dialogue Interfaces: Integrating Usability. Lecture Notes in Computer Science 5889, HCI and Usability for e-Inclusion, Springer Berlin Heidelberg, pp. 484-499, 2009, ISBN 0302-9743.
- Spiliotopoulos, D., Stavropoulou, P., Kouroupetroglou, G. (2009): Acoustic Rendering of Data Tables using Earcons and Prosody for Document Accessibility. Lecture Notes on Artificial Intelligence 5616, Universal Access in HCI, Springer Berlin Heidelberg, pp. 587-596, 2009.
- Stavropoulou, P., Spiliotopoulos, D. (2009): Prosodic Realisation of Topics. Proc. 19th Int. Symp. Theoretical and Applied Linguistics, Thessaloniki, 3-5 April 2009, Greece.
- Spiliotopoulos, D., Petasis, G., Kouroupetroglou, G. (2008): A Framework for Language-Independent Analysis and Prosodic Feature Annotation of Text Corpora. Lecture Notes in Artificial Intelligence 5246, Text Speech and Dialogue, Springer-Verlag Berlin Heidelberg, pp. 517-524, 2008.
- Spiliotopoulos, D., Petasis, G., Kouroupetroglou, G. (2005): Prosodically Enriched Text Annotation for High Quality Speech Synthesis. Proc. Int. Conf. Speech and Computer (SPECOM-2005), 17-19 October 2005, Patras, Greece, pp. 313-316.
- Spiliotopoulos, D., Xydias, G., Kouroupetroglou, G. (2005): Diction Based Prosody Modeling in Table-to-Speech Synthesis. Lecture Notes in Artificial Intelligence 3658, Text Speech and Dialogue, Springer-Verlag Berlin Heidelberg, pp. 294-301, 2005, ISBN 3-540-28789-2.
- Spiliotopoulos, D., Xydias, G., Kouroupetroglou, G., Argyropoulos, V. (2005): Experimentation on Spoken Format of Tables in Auditory User Interfaces. Universal Access in HCI, Vol. 8, Proc. Int. Conf. Human-Computer Interaction (HCI-2005), Las Vegas, USA, 22-27 July, 2005.

- Xydias, G., Spiliotopoulos, D., Kouroupetroglou, G. (2004): Modeling Prosodic Structures in Linguistically Enriched Environments. Lecture Notes in Artificial Intelligence 3206, Text Speech and Dialogue, Springer-Verlag Berlin Heidelberg, pp. 521-528, 2004, ISBN 3-540-23049-1.
- Xydias, G., Spiliotopoulos, D., Kouroupetroglou, G. (2003): Building Prosodic Structures in a Concept-to-Speech System. Proceedings of Workshop on Balkan Language Resources and Tools, 1st Balkan Conference on Informatics (BCI-2003), 21-23 November 2003, Thessaloniki, Greece, pp. 105-111.
- Xydias, G., Spiliotopoulos, D., Kouroupetroglou, G. (2003): Prosody Prediction from Linguistically Enriched Documents Based on a Machine Learning Algorithm. Proc. Workshop on Text Processing for Modern Greek: from Symbolic to Statistical Approaches, 6th Int. Conf. Greek Linguistics (ICGL-2003), Rethymno, Crete, Greece, 18-21 September, 2003.
- Xydias, G., Spiliotopoulos, D., Kouroupetroglou, G. (2003): Modelling Emphatic Events from Non-Speech Aware Documents in Speech Based User Interfaces. In Stephanidis C., and J. Jacko (Eds), Human-Computer Interaction, Theory and Practice, Proc. Int. Conf. Human-Computer Interaction (HCI-2003), 22-27 June, 2003, Crete, Greece. Mahwah, NJ, Lawrence Erlbaum Associates, Inc., 2003, Vol. 2, pp. 806-810.
- Androutsopoulos, I., Spiliotopoulos, D., Stamatakis, K., Dimitromanolaki, A., Karkaletsis, V., Spyropoulos, C.D. (2002): Symbolic Authoring for Multilingual Natural Language Generation. Lecture Notes in Artificial Intelligence 2308, Springer-Verlag Berlin Heidelberg, pp. 131-142, 2002.
- Spiliotopoulos, D., Androutsopoulos, I., Spyropoulos, C.D. (2001): Human-Robot Interaction Based on Spoken Natural Language Dialogue. European Workshop on Service and Humanoid Robots (ServiceRob-2001), Santorini, Greece, 25-27 June, 2001.

Technical Reports

- (in Greek) Δ. Σπηλιωτόπουλος, Δ. Τσώνος, Γ. Ξύδας, Σ. Βουράκης, Μ. Μπαλταζάνη, Δ. Βάσσοι, Γ. Δεβελέκος και Γ. Κουρουπέτρογλου: "Αξιολόγηση Συστήματος από Ομάδες Χρηστών" έργο ΡΗΤΩΡ, ΓΓΕΤ, 2008.
- (in Greek) Γ. Ξύδας, Μ. Μπαλταζάνη, Δ. Σπηλιωτόπουλος, Σ. Βουράκης και Γ. Κουρουπέτρογλου: "Ολοκληρωμένη μεθοδολογία ακουστικοποίησης δομών και μεταδεδομένων εγγράφων με συνθετική ομιλία και άλλους ήχους" έργο ΡΗΤΩΡ, ΓΓΕΤ, 2008.
- Spiliotopoulos, D., Androutsopoulos, I. (2000): A Survey of Spoken Dialogue Management Techniques, Technical Report DEMO 2000/15, NCSR "Demokritos".

LANGUAGES

English, Greek.

INTERESTS

Long distance running, music, reading, photography.