



Software Engineering and Intelligent Information Systems Research Lab

<http://seiis.cut.ac.cy/>

Profile

March 2014

The Software Engineering and Intelligent Information Systems Research Lab (SE&IIS-RL) was established at the Department of Computer Engineering and Informatics of the Cyprus University of Technology in 2009. The lab carries out research and studies primarily in the area of Software Engineering but also in the area of Intelligent Information Systems.

The coordinator of the SE&IIS-RL is Associate Professor Andreas S. Andreou. The lab currently hosts three (3) PhD students and two (2) undergraduate students (Diploma thesis), as well as two (2) part-time post-doc researchers and two (2) research collaborators. The research subjects of the lab are involved with Software Cost Estimation, Software Project Management, Software Testing, Requirements Engineering, Web Engineering, and Intelligent Decision Support Systems. More recently, members of the lab have also focused on Recommender Systems and Cloud Computing.

Research efforts of members, collaborators and former researchers of the lab have produced a number of journal and conference publications, as well as theses for the award of both undergraduate and postgraduate degrees, and have resulted in the participation in a number of projects (both at national and European level), international conferences and workshops (for more information please visit <http://seiis.cut.ac.cy/>).

Research work has concentrated on the two axes mentioned above, that is, Software Engineering and Intelligent Information Systems. More specifically:

1. Software Engineering areas of research:

- Software Testing based on Dynamic Program Analysis and Automatic Test-Cases Generation
- Software Cost Estimation applying Computational Methods
- Analysis and Forecasting of Software Reliability Datasets
- Design and Development of Quality Web Applications and Electronic/Mobile Commerce Services and Applications
- Software Project Management
- Intelligent Classification and Retrieval of Software Components
- Software Risk Management

- Requirements Engineering
- Cloud computing (software and services perspective)

II. Intelligent Information Systems areas of research:

- Genetically Evolved Fuzzy Cognitive Maps
- Multilayered Fuzzy Cognitive Maps
- Intelligent Decision Support Systems

The SE&IIS Research Lab members have participated in various EU and locally funded projects. Indicatively:

- “**EMERGENCY-112**: An Integrated Portable Medical Device for Emergency Telemedicine – HC4027” <http://www.biomed.ntua.gr/emergency112>
- “**HEALTHNET**: Health Telematics Training Network”
- “**e-MINDER**: Electronic Commerce Leveraging Network for Developing European Regions” <http://www.eminderproject.com>
- “**ENLARGE**: Entrepreneurship Laboratory for Eastern European Regions” <http://www.enlargenet.org>
- “**NAVSAV**: La Navigation du Savoir: Network of Multimedia Poles for the Transmission of Marine Knowledge Nature-GIS (IST-2001-34641)” <http://www.navigationsavoir.net>
- “**Nature-GIS**: A European thematic network for Protected Areas/Nature Preservation and Geographical Information” <http://www.gisig.it/nature-gis/>
- “**GENESIS**: Enterprise Application Interoperability - Integration for SMEs, Governmental Organizations and Intermediaries in the New European Union” <http://www.genesis-ist.eu/>

The role that SE&IIS Research Lab usually undertakes in funded projects revolve around (i) innovative software development (desktop, web-based, mobile applications), (ii) development of intelligent models for prediction, decision making and support, (iii) software testing and validation activities, project management, (iv) pilot case-studies setup and execution, and (v) dissemination (scientific workshops, research papers, press releases).

The members of the lab have significant experience in writing and submitting proposals in a wide range of scientific disciplines that utilize ICT (e.g. Environmental, Financial Health, and Socio-Humanities) and for a number of different calls (FP6, FP7, Med, FACCE/JPI, etc.)

The SE&IIS Research Lab welcomes research collaborations with other universities and research institutes worldwide aiming at transferring knowledge and expertise to/from the collaborating bodies. Currently, the lab is collaborating with a large number of universities or research centres in the context of EU proposal submissions. Indicatively, collaborators of the lab are the National Technical University of Athens, the University of Patras, the Aristotle University of Thessaloniki, the University Pablo de Olavide, the Centre for the Research and Technology of Agro-Environmental and Biological Sciences, the INESC-ID / Instituto Técnico of the University of Lisbon, the Research Development Institute for Plant Protection Bucharest, the University of Agronomic Sciences and Veterinary Medicine, the Institute of Microbiology, Bulgarian Academy of Sciences. Also, the lab collaborates with a number of local R&D SMEs and IT related companies in Cyprus, like Logisoft, Infoscreen, AMDOCS, TSYS, Powersoft and CRM.