

Call for Papers

1st International Workshop on Dynamics and Evolution in Intelligent Systems (DEIS¹)

http://semanticweb.org/wiki/DEIS_2012

Co-located with: 8th International Conference on ICT in Education, Research, and Industrial Applications: Integration, Harmonization, and Knowledge Transfer (<http://icteri.org/>)

Conference Venue: Kherson, Ukraine

Conference Dates: June 6-10, 2012

Workshop Date: to be announced

Important Dates

- 30.03.2012** – paper submission (all submission types)
- 30.04.2012** – notification about acceptance or rejection of workshops
- 05.05.2012** – submission of the camera ready versions of the accepted papers
- 01.06.2012** – registration deadline

Workshop and Theme

World changes – so the reflections of the world in information and knowledge representations have to change adequately. Currently the correct and timely changes in knowledge representations and in intelligent knowledge-based systems become increasingly important. Indeed, intelligent systems are used more and more often in different domains, for example in those where intelligent integration of information is an essential requirement – ranging from heterogeneous sensor network data processing through the Web of things to linked data management and use. In those domains the environments of software systems and distributed information artifacts change sporadically and intensively. However, the software components are not adapted and knowledge descriptions are not changed in line with the changes in the World. Typically intelligent software systems and their knowledge are adapted or refined semi-automatically or manually and are available in a sequence of discrete revisions, which results in expanding and amplified distortion between the World and its reflection in intelligent software and knowledge representations.

DEIS solicits contributions aiming at bridging the outlined gap – i.e. the solutions that help adapting and refining intelligent systems and their knowledge representations in dynamics, facilitating to their evolution and resulting in the artifacts that better and more adequately reflect the changes in the World.

Keynote Talk

DEIS will be opened by the keynote talk given by **Prof. Grigoris Antoniou**. Grigoris is a Professor at the [Department of Computer Science](#) of the [University of Crete](#), Greece, and the Head of the [Information Systems Laboratory](#) at the [Institute of Computer Science](#) of FORTH in Greece. Prof. Antoniou is an ECCAI Fellow and an active member of the [Ontology Dynamics](#) initiative. He is the co-author of the book “A Semantic Web Primer”². Research interests of Prof. Antoniou are in the field of knowledge and semantic technologies, in particular: how to represent knowledge using logic; and how to automatically deduce conclusions from knowledge. His specialisation is nonmonotonic reasoning, dealing with incomplete and inconsistent information. He is also interested in applying knowledge systems to practical problems, in particular in Electronic Commerce, the World Wide Web (the Semantic Web), and Ambient Intelligence.

DEIS Wiki

DEIS targets at becoming a forum for the community of researchers interested in the theme of dynamics and change in intelligent systems. DEIS Wiki is planned as our collaborative Web 2.0 platform and information resource. For instance the abstracts of accepted papers with the links to the full texts in on-line proceedings as well as the presentations made at the workshop will be published on this Wiki if the authors will be willing to do so. The Wiki will be made available before the workshop.

¹ Deis – old French for dais – a platform raised above the surrounding level in a hall to give prominence to the person (speaker) on it.

² Antoniou, G. and Van Harmelen, F.: A Semantic Web Primer -2nd ed. The MIT Press, 2008 (1st ed. also published in Chinese, Japanese, Korean, Greek)

Scope and Topics

The workshop aims at bringing together the researchers from different research groups, both academics and practitioners, working on the aspects of dynamics, change, and evolution in software systems and infrastructures built of intelligent components and based on the use of knowledge in its formal representation.

The workshop focuses on dynamics and change in:

- Dynamic or Evolving Intelligent Software Components and Systems; and
- Engineering, Representing, and Managing Dynamic or Evolving Knowledge for Intelligent Software

Under the category of **Dynamic or Evolving Intelligent Software Components and Systems** DEIS invites papers reporting on approaches, concepts, frameworks, solutions for coping with dynamics and adaptability in intelligent software, in particular for autonomous and decentralized settings. The following topics are of relevance:

- Adaptability and dynamics in (intelligent) grid infrastructures
- Adaptable or reconfigurable agent-based systems and their interoperability in dynamic environments
- Dynamically reconfigurable processes and services, their runtime composition and orchestration
- Dynamic aspects in data warehousing and business intelligence
- Dynamics and evolution in cloud computing infrastructures

Under the category of **Engineering, Representing, and Managing Dynamic or Evolving Knowledge for Intelligent Software** DEIS focuses on the dynamics and evolution of knowledge representations particularly in, but not limited to, the form of ontologies. The following topics related to this scope category are of interest:

- Knowledge evolution frameworks
- Methodologies for KE and KM with a focus on change, refinement, and lifecycle
- Knowledge based collaboration, knowledge distribution, and evolution of knowledge
- Advanced knowledge modeling languages and tools with a focus on representing and reasoning about change
- Distributed AI, intelligent agents, multi-agent systems for ontology refinement in KE and change management in KM
- Biologically and socially inspired approaches for coping with the aspects of change and adaptability in machine intelligence

Submission Guidelines

The language of the workshop is **English**. Four types of submissions are solicited:

a) Full research papers

The papers in this category are the reports on the accomplished research work. They present a novel method, technique or analysis with appropriate empirical or other type of evaluation as a proof of validity. The main evaluation criteria for this category are originality, technical soundness and the soundness of evaluation.

Page limit: 15 pages

b) Short research papers

The papers in this category are the short reports of the preliminary results or describing the work in progress. The main evaluation criteria for this category are originality, technical correctness and potential value of the results in a short to mid-term perspective.

Page limit: 8 pages

c) Discussion, survey, or problem analysis papers

The papers solicited in this category will not present any novel method, technique or approach to solving a problem, but help understand the problem itself. Within the genre we expect receiving reasonable reviews placing a problem onto the state-of-the-art landscape and analyzing how far current solutions fall short. We also expect in-depth discussions and analysis of a certain problem, with clear definitions and argumentation in terms of qualitative or quantitative representation of the main characteristics of the problem. Papers will be evaluated with respect to how general and technically sound their problem analysis is and how useful it will be for other researchers working on the same problem.

Page limit: 15 pages

d) Industry experience reports or case studies

The papers reporting on industrial deployments or case studies are solicited in this category. The papers will be evaluated according to the significance and practical relevance of the results as well as with respect to the technical soundness of the described solution and accompanying evaluation or industrial validation.

Page limit: 15 pages

The papers in all the categories should describe **original results** that have not been accepted or submitted for publication elsewhere.

All submissions shall be annotated by providing two alternative sets of key phrases:

- The key terms taken from the list of ICTERI subject descriptors available at <http://isrg.kit.znu.edu.ua/icteriwiki/index.php/ICTERI-Terms>
- The key words/phrases freely chosen by the authors

At least three items have to be provided in each set.

All draft submissions must comply with the Springer LNCS format guidelines: <http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>. A submission template for MS Word 2003 is also provided at the ICTERI web site for your convenience: http://www.icteri.org/sites/default/files/Formatting-Guidelines-ICTERI-2012-Manuscript_0.doc

Submissions should be made electronically in PDF or DOC/DOCX (MS/Open Word) format via the electronic submission system at <https://www.easychair.org/conferences/?conf=deis2012>.

The authors of the accepted papers will be requested to **revise their submissions** in a way that takes into account the comments and suggestions by reviewers.

Publication

All submissions will be evaluated by at least three members of the international program committee. **Accepted papers** will be published as CEUR-WS proceedings (<http://ceur-ws.org/>).

Depending on the quality of submissions, the best selected papers will be invited to be published in extended versions in a Special Issue of an International Journal.

Workshop Organizers

Costin Badica, University of Craiova, Romania

Vadim Ermolayev, Zaporozhye National University, Ukraine

Vagan Terziyan, Jyväskylä University, Finland