

Foreword

It is our pleasure to offer you the section containing a paper we have selected for the 1-st instance of our International Workshop on Dynamics and Evolution in Intelligent Systems (DEIS 2012) which has been organized as a session in the technical the 8-th International Conference on ICT in Education, Research, and Industrial Applications: Integration, Harmonization, and Knowledge Transfer (ICTERI 2012) held at Kherson, Ukraine on June 6-10, 2012.

DEIS focuses on the aspects of dynamics and evolution in knowledge-based systems and technologies. 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. those helping to adapt and refine 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.

We were especially seeking for forward looking contributions which may open the frontiers for new research directions in the future. This is why we were very selective. The paper on the Quality of an Ontology as a Dynamic Optimisation Problem we finally accepted is exactly of that genre and we are looking forward to see this promising research direction implemented in the future.

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Costin Bădică
Vadim Ermolayev
Vagan Terziyan