

Preface

Antoni Ligeza and Grzegorz J. Nalepa

Institute of Automatics
AGH University of Science and Technology
Kraków, Poland
ligeza@agh.edu.pl, gjn@agh.edu.pl

Evaluation, Verification, Validation and Refinement have been important issues from the very beginning of the applications of Intelligent systems. These issues were an important research area and engineering aspect in 80' and 90'. A number of conceptual approaches as well as practical tools was developed then.

With time, the focus of research in the design of intelligent systems moved away from these topics, towards knowledge representation and processing, the Semantic Web technologies, and a number of AI-inspired areas. However, recently a number of researches has realized that the lack of systematic methods and formal techniques for the design, evaluation and refinement is often an important reasons for limited applications of even mature intelligent systems. Therefore, there is a growing need to return to some of the basic issues in this field.

In fact today, the classic approach to the Evaluation, Verification, Validation and Refinement have to be assessed from the new perspectives. The practical design issues are of prime importance. The integration of Intelligent Systems with mainstream technologies and design approaches from Software Engineering is especially important. The quality issues need to be considered as early as possible during the design phase of the system.

One of the goals of the workshop was to rebuild the community interested in topics of Evaluation, Verification, Validation and Refinement, as well as attract new researchers to the field. The objective was to focus on the contributions in the above fields and to provide an environment for communicating different paradigms and approaches, thus hopefully stimulating future cooperation and synergistic activities.

Topics of interest were mainly located in the area of Evaluation, Verification, Validation and Refinement and include but are not limited to:

- Principles in knowledge systems and ontology design
- Detecting and handling inconsistencies and other anomalies within knowledge bases
- Fundamentals and formal methods for verification of AI systems
- Fundamentals and formal methods and techniques of validity assessment of AI systems, AI principles, and intelligent behavior in general
- Special approaches to verify and/or validate certain kinds of AI systems: rule-based, case-based
- Special approaches or tools to evaluate systems of a particular application field
- Knowledge base refinement by using the results of evaluation

- Development and evaluation of ontologies
- Maintenance and evolution of knowledge systems and ontologies
- Methods for the evaluation of distributed knowledge bases
- Evaluation of semi-formal knowledge bases
- Problems in system certification
- Ontology and knowledge capture
- Evaluation of Semantic Web applications
- Formal methods in Verification and Evaluation of Intelligent Systems

During the workshop 8 papers have been presented, including 6 regular papers and 2 short papers. Each submission was reviewed by 2 programme committee members.

The organizers would like to thank all who contributed to the success of the workshop. We thank all authors for submitting papers to the workshop, and we thank the members of the program committee for reviewing and collaboratively discussing the submissions. For the submission and reviewing process we used the EasyChair system, for which the organizers would like to thank Andrei Voronkov, the developer of the system.

Antoni Ligęza
Grzegorz J. Nalepa

Kraków, November 28, 2009

Workshop Organization

DERIS2009:
International Workshop on
Design, Evaluation and Refinement of Intelligent Systems
was held as a one-day event
on November 28, 2009 in Kraków, Poland.

Workshop Chairs and Organizers

Antoni Ligęza, AGH UST, Kraków, Poland
Grzegorz J. Nalepa, AGH UST, Kraków, Poland

Programme Committee

Martin Atzmüller, University of Würzburg, Germany
Joachim Baumeister, University Würzburg, Germany
Klaus P. Jantke, Fraunhofer IDMT, Germany
Rainer Knauf, TU Ilmenau, Germany
Antoni Ligęza, AGH UST Kraków, Poland
Grzegorz J. Nalepa, AGH UST, Kraków, Poland
Mieczysław L. Owoc, Wrocław University of Economics, Poland
Silive Spreeuwenberg, LibRT B.V., Amsterdam, The Netherlands
Derek H. Sleeman, University of Aberdeen, United Kingdom

