26th International Workshop on Qualitative Reasoning

The world is full of systems that have continuous aspects, and about which we have incomplete, qualitative knowledge. Humans are amazingly effective at working with such knowledge, and many science, engineering, and educational applications could benefit greatly from similar capabilities. In seeking to understand, develop, and exploit the ability to reason qualitatively, the QR community pursues research at the intersection of Artificial Intelligence, Cognitive Science, Engineering, and Science. Some QR researchers study, from a cognitive modeling perspective, how humans represent and use incomplete knowledge. Others develop algorithms and systems for constructing, simulating, and applying qualitative and semi-quantitative models. Still others exploit these insights to develop powerful methods for system modeling, explanation, diagnosis, and design, and in applications in science, engineering, and education.

The 26th International Workshop on Qualitative Reasoning provides a forum for researchers from all of these perspectives. The workshop will be held at the Institute for Creative Technologies in Playa Vista, California, USA, from July 16th to 18th 2012.

QR12 is co-located with 2nd Deep Knowledge Representation Challenge (DKRC2012).

TOPICS

- Qualitative modeling in physical, biological and social sciences, and in engineering.
- Representations and techniques for qualitative reasoning.
- Methods of integrating qualitative reasoning with other forms of knowledge, including quantitative methods and other formalisms.
- The use of qualitative reasoning for diagnosis, design, and monitoring of physical systems.
- Applications of qualitative reasoning, including education, science, and engineering.
- Cognitive models of qualitative reasoning, including the use of existing QR formalisms for cognitive modeling and results from other areas of cognitive science for qualitative reasoning.
- Using qualitative reasoning in understanding language, sketches, images, and other kinds of signals and data sources.
- Formalization, axiomatization, and mathematical foundations of qualitative reasoning.

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Regular Papers

Late Breaking Papers

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Program Chairs

Morteza Dehghani (Institute for Creative Technologies)
Matthew Klenk (PARC)

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