Special Track:

Design, Evaluation, and Refinement of Intelligent Systems

The lack of systematic methods and formal techniques for verification and validation (V&V) has often been a reason for not using AI systems in practice. The first contributions in this field were limited to classical AI systems. Now, more and more papers on verification and validation of nonclassical kinds of systems (like case-based systems, for example), knowledge processing principles (such as learning principles), and intelligent behavior are being published. In some fields, this research came to stage, at which we were able to clearly indicate invalid items of knowledge bases. Consequently, the refinement issue became another focus of this special track. At some point, developing refinement technologies is also a design issue. Therefore, we generalized the track name to "Design, Evaluation, and Refinement of Intelligent Systems."

The objective of this track is to focus on the contributions in these fields and to provide an environment for communicating different paradigms and approaches, thus hopefully stimulating future cooperation and synergistic activities. Typical contributions focus on detecting and handling anomalies within knowledge bases and ontologies, fundamentals and formal methods of system verification, fundamentals and formal methods of validity assessment, approaches to verifying or validating intelligent systems using a particular technique, such as rule-based, case-based, or ontology-based, and refinement techniques to overcome revealed invalidities.