Modeling the Real World through Contexts

Humans can communicate with each other very concisely and efficiently because the context recognized by the communicants carries significant information that need not be explicitly mentioned in the course of the conversation. A number of forms of reasoning about the real world (diagnosis, interpretation, decision making, problem solving, recognition, and so on) can be addressed partly or completely through the use of contexts as a modeling paradigm. The role of the context in an increasing number of technologies is now clearly recognized. However, there remain a number of challenges to be addressed concerning an effective use of context in the real world, such as contextual dynamics, context granularity, relationships with the knowledge, and others. This special track meets different aspects of contexts useful in AI, such as how to represent context as knowledge in the real world for carrying out real-world reasoning with an emphasis on applications of contexts and modeling for applications through the use of contexts.