



Special Track on

Spatio-Temporal Reasoning

Reasoning about space and time is a major field of interest in many areas of theoretical and applied AI, especially in the theory and application of temporal and spatial models in planning, high-level navigation of autonomous mobile robots, natural language understanding, temporal databases, and concurrent and distributed programming.

The special track on spatio-temporal reasoning focuses on research and development aspects in the area of reasoning about models of space and time. It has a long history at the FLAIRS conferences, starting with an initiative of the late Frank Anger in 1999. Over the years, the track has received a steady interest from researchers around the world.

Recent years have witnessed remarkable advances in some of the longstanding problems of the field of spatio-temporal reasoning. For instance, there are new results about tractability for spatial calculi, explicit construction of models, characterization of important subclasses of relations, integrated spatio-temporal calculi, development of multidimensional spatial calculi, and much more. Likewise, proposals have been made to remedy some of the weak points of the symbolic approach, by introducing fuzzy versions of classical calculi, or importing non-monotonic techniques for dealing with incomplete information. At the same time, leaders in AI have sounded the need for solving real problems and making the work on representation and reasoning relevant to the real world.

Typical papers of the track address issues such as representation of and reasoning about spatial or temporal information, spatial and spatio-temporal cognition, granularity of different representation formalisms, ontologies for spatio-temporal reasoning, reasoning with imprecise or incomplete spatio-temporal knowledge, spatio-temporal data mining, and spatial and temporal databases.