

Ph.D. programme in Mathematics and Computer Science

Title: Stream Reasoning with Answer Set Programming: Introduction and State of the Art

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Abstract:

Increasingly, applications including the fields of smart cities, industry and social networks analysis require real-time processing of heterogeneous data streams together with large background knowledge bases. Stream reasoning studies the application of inference techniques to data characterised by being highly dynamic.

The field evolved from the general area of stream processing around 10 years ago. While stream processing ultimately targets answering different kind of queries, stream reasoning is concerned with more involved data processingin particular inferring new information from the data at hand and some background knowledge. In this seminar, main concepts, problems and challenges of stream reasoning will be introduced are discussed with a focus on ASP-based reasoning.

Existing approaches and state-of-the-art in Stream reasoning with ASP will be presented.