

Lehr- und Forschungsgebiet Informatik 5

### **EINLADUNG**

Zeit: Dienstag, 09.11.2010, 16:00 Uhr

Ort: AH I, Ahornstr. 55

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Titel: Parallel Belief Revision

Abstract:

Belief revision is the area of KR that is concerned with how a rational agent may change it's beliefs in the face of new informatin. A recalcitrant problem is that, after first revising by a formula and then by a formula that is inconsistent with the first formula, all information in the original formula is lost. As noted by various researchers, this phenomenon is made explicit in the second postulate (C2) of the well-known Darwiche-Pearl framework, and so this postulate has been a point of criticism of this and related approaches.

In contrast, we argue that the true culprit of this problem arises from a basic assumption of the (central) AGM framework, that new information is represented by a formula. We propose a more general framework for belief revision (called parallel belief revision) in which individual items of new information are represented by a set of formulas. In this framework, if one revises by a set of formulas, and then by the negation of some members of this set, then other members of the set are still believed after the revision.

Hence the aforecited problem is resolved. We present first a basic approach to parallel belief revision, and next an approach that combines the basic approach with that of Jin and Thielscher. Postulates and semantic conditions characterizing these approaches are given, and representation results provided.

We conclude with a re-evaluation of the role of belief revision in a dynamic environment.

Es laden ein: Die Dozenten der Informatik