

Einladung

zum Informatik-Kolloquium des
AB Programmiersprachen und Übersetzer am
Mittwoch, den 14. April 2010, um 17 Uhr c.t.
im EI 10 Fritz Paschke Hörsaal, Elektrot. Institutsg., EG, Gußhausstr. 25-29, 1040 Wien

Es spricht

Prof. Dr. Dr.h.c. Dines Bjørner

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über

Mereologies in Computing Science

Mereology is the study, knowledge and practice of part-hood relations: of the relations of part to whole and the relations of part to part within a whole. By parts we shall here understand simple entities – of the kind illustrated in this talk.

In this talk we solve the following problems:

- we give a formal model of a large class of mereologies, with simple entities modelled as parts and their relations by connectors;
- we show that that class applies to a wide variety of societal infrastructure component domains;
- we show that there is a class of CSP channel and process structures that correspond to the class of mereologies where mereology parts become CSP processes and connectors become channels; and where simple entity attributes become process states.

We have yet to prove the (full) extent to which the models satisfy the axiom systems for mereologies of, for example, (Casati&Varzi1999) and a calculus of individuals (Bowman&Clarke1981).

Manifest simple entities of domains are either continuous (fluid, gaseous) or discrete (solid, fixed), and if the latter, then either atomic or composite. It is how the sub-entities of a composite entity are “put together” that “makes up” a mereology of that composite entity – at least such as we shall study the mereology concept. In this talk we shall study some ways of modelling the mereology of composite entities. One way of modelling mereologies is using sorts, observer functions and axioms (McCarthy style), another is using CSP.

Biography: Dines Bjørner has been a professor at the Technical University of Denmark (DTU) in Lyngby, close to Copenhagen, Denmark from 1976 to 2007. He specializes in research into domain engineering, requirements engineering and formal methods. Prof. Bjørner is a knight of the Order of the Dannebrog and won the John von Neumann Medal in Budapest, Hungary in 1994. He received the Ths. Masaryk Gold Medal, Brno, Czech Republic in 1996 and a Dr.h.c. from the Masaryk University, Brno, Czech Republic in 2004. He is a Fellow of the IEEE (2004) and ACM (2005). (<http://www2.imm.dtu.dk/~db>)

Zu diesem Vortrag lädt der *Arbeitsbereich für Programmiersprachen und Übersetzer am Institut für Computersprachen* herzlich ein.

Tea: 16:30 Uhr in der Bibliothek E185.1, Argentinierstr. 8, 4. Stock (Mitte), 1040 Wien.
Nach dem Vortrag Stehempfang mit Gelegenheit zu Diskussion und Austausch.