

THE CENTER OF COMPUTER SCIENCE CORDIALLY INVITES YOU

– Inaugural Lecture –

Prof. Dr. Thomas Zeume
Professorship for Logic and Formal Verification
Faculty of Mathematics



“Sketches of Dynamic Descriptive Complexity”

Abstract

Logical formalisms are at the core of many modern areas of computer science. Probably one of the most prominent examples can be found in databases, where the core of SQL — a query language for relational databases — is a syntactic variation of first-order logic. In the first part of this talk I will outline why an in-depth understanding of logics is a prerequisite for answering many questions arising for database query languages as well as in computer science in general.

The second part of the talk will outline how logical methods can help to understand modern data management scenarios where data is subject to frequent changes. Answering queries in this context is a major challenge.

One approach for avoiding costly re-computing query answers from scratch after each small change is to try to re-use helpful data that has been computed before. In this part of the talk, I will gently introduce dynamic descriptive complexity theory, which studies this approach from a logical perspective. Here the focus will be on current research on the power of first-order logic in dynamic contexts.

When? 16th of December 2020, 04:00 PM

Where? Via [Zoom](#) (Meeting-ID: 949 6884 3467, Password: 540950)

Anyone interested is warmly welcome to the lecture. No registration is necessary.
We are looking forward to your participation!