Prof. Nicole Schweikardt



Faculty of Mathematics and Natural Sciences
Department of Computer Science
Logic in Computer Science

Expertise

The Logic in Computer Science group focuses on theoretical computer science, with emphasis on logic, database theory, and complexity theory. Particular attention is paid to the relations between these areas. For example, logics serve as a basis for database query languages and specification languages used for automatic verification, and many aspects of complex systems can be modeled by logical structures. Thus, properties of complex systems can be specified by logical formulas. The overall aim of our group is to gain better understanding of the complexity inherent in a problem or a system. Here, we are interested in various measures of complexity, including the computational complexity ("How difficult is it to algorithmically solve the problem?") and the descriptive complexity ("How difficult is it to describe the problem in a suitable formalism?"). Particular attention is paid to the connection between logical description of problems and efficient algorithmic solutions.

Topics / Trends

Big Data & Data Management
Knowledge Management

Industries

Education

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