Doctorate School PLUS

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PARIS LODRON UNIVERSITÄT SALZBURG

MARS

Models, Algorithms, Computers and Systems

Series of Talks
WS 2023/24

A cooperation with SMC

Department of Mathematics
Department of Computer Science

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PARIS LODRON UNIVERSITÄT SALZBURG | Mathematics

PARIS LODRON UNIVERSITÄT SALZBURG | Computer Science

MARS – Models, Algorithms, Computers, and Systems

Modern high tech research in science and technology requires to a great extent an interdisciplinary approach. This applies particularly to wide areas of the methodological sciences mathematics and computer science, where generally one or more aspects of a chain of consecutive closely interlocked fields of research are considered. These start with a mathematical model, continue with algorithmic problems and finally cover aspects of the implementation on computers or high performance computing environments and therefore also issues on the efficiency of computer systems.

MARS is a doctoral programme at the Doctorate School PLUS (DSP Programme), which is organized by the departments of mathematics and computer sciences of the Paris Lodron University Salzburg. Its objective is to educate doctoral students in the research fields models, algorithms, computers, and systems and also to achieve new insights and research findings especially with regard to the inter-dependency of these fields of research. The focus will be on important topics relevant for the Salzburg research site. MARS fields of research form particularly from a methodological point a cohesive and closely linked line of research and cover a wide spectrum of scientific interests.

Joint activities constitute the structured doctoral program in MARS. These include seminars with external guest speakers, one day workshops with external guests and multi day retreats away from the university, as well as summer schools on the topics of MARS.

Program

Thursday, 15:00-15:45
Lecture room 414, 1st floor

Polynomials over $\mathbb{Z}$ and $\mathbb{Q}$: counting and freeness.
Timothy Browning (ISTA, Klosterneuburg),
November 16, 2023

Abstract:
Humans have been thinking about polynomial equations over the integers, or over the rational numbers, for many years. Despite this, their secrets are tightly locked up and it is hard to know what to expect, even in simple looking cases.

In this talk I'll discuss recent efforts to understand the frequency of integer solutions to cubic polynomials, before turning to the much more evolved picture over the rational numbers.

Coming...

Matching in Evolving Graphs
Aditi Dudeja (Salzburg)
November 28, 2023