



Seminar lecture at the Institute for Theoretical Computer Science

9th August 2023 at 16:00 p.m. in the room ITCS2021, house 64, 2nd floor.

Title: Some Exciting New Directions in Parameterized Complexity and Algorithms

Speaker: Prof. Mike Fellows, University of Bergen (Em.), Michael.fellows@uib.no joined work with:
Prof. Frances Rosamond, University of Bergen (Em.), Frances.rosamond@uib.no

Both also: Adjunct Professors, Western Sydney University Australia. Joined work also with various coauthors.

Abstract

The talk will try to be: five five-minute talks on exciting new directions in parameterized algorithms and complexity, with some pointers to the relevant recent literature.

The talk will start from a very basic review of the central idea of fixed-parameter tractability and its roots in the algorithmics of well-quasiordering.

The new directions highlighted are:

- (1) The solution diversity paradigm for problem parameterization.
- (2) The dynamic computation paradigm for problem parameterization.
- (3) Towards a general theory of kernelization & parameterized transfer learning.
- (4) Truly linear FPT.
- (5) The Functor Project.