

SEMINAR OF APPLIED MATHEMATICS

Wednesday 11 March 2015 at 09h00, lecture room [BS 280](#)

*Prof. **Rico ZENKLUSEN** (ETH Zürich) will present a seminar entitled:*

"New Advances through Algorithmic Matroid Theory"

Abstract:

Matroid theory, initially mostly seen as a clean mathematical generalization of linear independence, became a powerful algorithmic toolbox during the last decades. In particular, numerous classic combinatorial optimization problems are known to admit very efficient algorithms based on matroid optimization.

However, applications beyond these classic settings have been much more limited. In this talk, I will show new ways to leverage matroids to tackle computational problems in more recent application areas. Using a combination of new results on matroids and a variety of further techniques, I will present efficient procedures for well-known optimization problems in the fields of multiobjective optimization and wireless network information flows.

Lausanne, March 6, 2015 / mg