Mathematisches Institut, Sidlerstrasse 5, CH-3012 Bern

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UNIVERSITÄT BERN

Philosophischnaturwissenschaftliche Fakultät Departement Mathematik und Statistik Mathematisches Institut

## **Mathematical Colloquia**

Monday, 09 March 2020 17:15 h, Lecture Room 119

## Dr. Emanuele Ventura, University of Bern

## **Ranks of tensors**

Abstract:

Tensors can be thought of as multidimensional matrices and nowadays appear in several areas of pure and applied mathematics such as algebraic geometry, additive combinatorics, complexity theory, and information theory. As for matrices, there is a natural notion of tensor rank. However, the latter behaves rather differently than usual matrix rank and it is generally difficult to compute. The aim of this talk is to give an introduction to tensors and their ranks.