

24/05/2024

InterCity - seminar

Neuchâtel - Bern - Konstanz - Lugano

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Time	Speaker	Talk
11:00-12:00	Mateusz Michalek (Universität Konstanz)	Gröbner bases for statistical models and resultants Quite a few open problems in mathematics rely on a description of ideals that are only given implicitly. In such cases, one often can guess many elements of the ideal and the challenge is to prove that these generate the whole ideal. We will focus on two such cases: one coming from statistics and one from the theory of resultants, more precisely we will try to find conditions when polynomials have common roots. We will describe an easy technique, based on Groebner basis and combinatorics that allowed to prove two conjectures, from distinct fields, but similar in flavour. The talk is based on joint works with: Austin Conner, Kangjin Han, Michael Schindler and Balazs Szendroi.
12:00-13:15	<i>break and informal discussion</i>	
13:15-14:30	Andreas Blatter (Universität Bern)	Ph.D. defence: Images of Tensor Product Polynomials To determine whether an n -by- n matrix has rank at most r it suffices to check that the $(r+1)$ -by- $(r+1)$ minors have rank at most r . In other words, to describe the set of n -by- n matrices with the property of having rank at most r , we only need the description of the corresponding subset of $(r+1)$ -by- $(r+1)$ matrices. We will generalize this observation to a large class of subsets of tensor spaces. A description of certain subsets of a high-dimensional tensor space can always be pulled back from a description of the corresponding subset in a fixed lower-dimensional tensor space.
14:30-open	<i>APER0</i>	

For further informations please refer to the seminar's webpage

<https://mathsites.unibe.ch/intercity-seminar/>

or contact the organisers:

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