

Summer School at the Max Planck Institute

Numerical Computing in Algebraic Geometry

August 13 – 17, 2018

LECTURERS

Jonathan Hauenstein UNIVERSITY OF NOTRE DAME, INDIANA

Pablo A. Parillo MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Nick Vannieuwenhoven KU LEUVEN, BELGIUM

SCIENTIFIC ORGANIZERS

Paul Breiding MAX PLANCK INSTITUTE FOR MATHEMATICS IN THE SCIENCES

Mario Kummer TECHNISCHE UNIVERSITÄT BERLIN

Yue Ren

ABSTRACT

The aim of this summer school is to provide insight into numerical methods in algebraic geometry, their theory and their applications. There will be three lecture series on:

- Polynomial system solving
- Sums of squares optimization
- Tensor decomposition

Additionally, we will focus on an example-driven, handson training with the following programs:

- Bertini
- SOSTOOLS
- Tensorlab

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No prior experience with numerical algebraic geometry or with these software is expected.

ADMINISTRATIVE CONTACT

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The summer school will take place at the

Max Planck Institute for Mathematics in the Sciences Inselstraße 22 04103 Leipzig Leibniz Hall (1st floor)



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