POEMA

Meeting Type	***POEMA 2nd Workshop***
Date	***26 November 2020***
Time	***09:00 – 16:45 CEST***
Speakers	***Etienne de Klerk (Tilburg University)*** ***Marie-Françoise Roy (Rennes University)*** ***Daniel Plaumann (Technical University of Dortmund)*** ***Salma Kuhlmann (University of Konstanz)*** ***Maria Infusino (University of Cagliari)*** ***Rainer Sinn (University of Berlin)***
No of attendants	***62***

Talk: Jordan symmetry reduction for conic optimization over the doubly nonnegative cone: theory and software by Etienne de Klerk (Tilburg University)	• Ngoc Hoang Anh MAI: Is the cost matrix in the objective function of the doubly nonnegative cone to apply the dimension reduction is dense or sparse in your experiments? • Daniel Brosch: We also applied in on the cases of QAPLib • Daniel Brosch: Also the 100x100 grid actually corresponds to an SDP of size 100^4, we reduced that one analytically - https://github.com/DanielBrosch/SDPSymmetryReduction.jl/ • Edwin van Dam: I'm not sure whether I got one of your comments right, but there are Jordan algebras that are not symmetrizations of coherent algebras. Check https://arxiv.org/abs/1912.04551 • Monique Laurent : What was the final reduced size of the SDP in the 100x100 grid case? • Daniel Brosch: It reduced to a second order cone problem in 50^2 socp cones

Talk: Real algebraic geometry and computations, an intricated history by Marie-Françoise Roy (Rennes University)	• Victor Magron: For a nonnegative (or positive) polynomial f over the reals, does there always exist p and q in the interior of the SOS cone such that f = p / q? If no, are there any known conditions on f such that it's the case?
Talk: Moment problem in infinitely many variables by Salma Kuhlmann (University of Konstanz)	• Lorenzo: There is an equivalent characterization for "truncated" linear funtionals L : V ->R , where V is a subspace of A, finitely dimensional or with bounded degree elements? • Maria Infusino: https://arxiv.org/abs/2009.05115