

# The Motzkin polynomial, Putinar's quadratic module representation and Connes' embedding problem

Markus Schweighofer, University of Rennes 1, France

(Joint work with Igor Klep)

What happens if the variables in the Motzkin polynomial commute less than they used to? In giving a partial answer to this question, we will show that representation theorems for positive polynomials in commuting variables can have interesting consequences like trace or operator inequalities. We will also include a link to the talks of Igor Klep and Sabine Burgdorf on Connes' embedding problem and the BMV conjecture.