Session 33. Quantitative Results in Real Algebra and Geometry

Wednesday 18, Room 308

19:00–19:30  Virtual roots, Budan Fourier theorem, Bernstein basis and root isolation
Marie-Francoise Roy

19:30–20:00  Sum of squares decompositions for structured polynomials
Pablo Parrilo

Thursday 19, Room 307

11:30–12:00  On the enumerative geometry of real algebraic curves
Johannes Huisman

12:30–13:00  Ovals of real cyclic p-gonal Riemann surfaces
Milagros Izquierdo Barrios

13:00–13:30  The degree of difficulty in avoiding singularities when writing polynomials as sums of squares of real rational functions
Charles Delzell

15:30–16:00  Positive polynomials on semialgebraic sets
Niels Schwartz

16:00–16:30  Global semianalytic sets
Francesca Acquistapace

16:30–17:00  Bounds on Betti numbers of semialgebraic sets
Nicolai Vorobjov

17:30–18:00  Complexity of representations of positive polynomials with applications to optimization
Markus Schweighofer

18:30–19:00  Computing the Betti numbers of arrangements via spectral sequences
Saugata Basu

19:00–19:30  An algorithm for convexity of semilinear sets over ordered fields
Mª Pilar Vélez Melón

19:30–20:00  Computational aspects of the Pierce-Birkhoff conjecture
Laureano González-Vega

Saturday 21, Room 307

09:30–10:00  Representation of polynomials positive on subsets of the real line, with applications to the multidimensional moment problem
Salma Kuhlmann

10:00–10:30  Convexity properties of the cone of nonnegative polynomials
Grigoriy Blekherman

10:30–11:00  Eight points in the plane
Bruce Reznick