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