MEALS
*Breakfast (Buffet): 7:00 – 9:30 am, Sally Borden Building, Monday – Friday
*Lunch (Buffet): 11:30 am – 1:30 pm, Sally Borden Building, Monday – Friday
*Dinner (Buffet): 5:30 – 7:30 pm, Sally Borden Building, Sunday – Thursday
Coffee Breaks: As per daily schedule, 2nd floor lounge, Corbett Hall
*Please remember to scan your meal card at the host/hostess station in the dining room for each meal.

MEETING ROOMS
All lectures will be held in Max Bell 159 (Max Bell Building accessible by walkway on 2nd floor of Corbett Hall). LCD projector, overhead projectors and blackboards are available for presentations. Note that the meeting space designated for BIRS is the lower level of Max Bell, Rooms 155-159. Please respect that all other space has been contracted to other Banff Centre guests, including any Food and Beverages in those areas.

SCHEDULE

Monday
08:45: Welcome
09:00-10:00: J. Maurice Rojas: Simple Homotopies for Just Real Roots
10:00-10:30: coffee
10:30-11:30: Tien-Yien Li: The mixed volume computation: MixedVol-2.0 vs. DEMiCs
lunch
13:00-14:00: tour
14:00: photo
14:20-15:10: coffee
15:10-16:10: Zhonggang Zeng: Solving Ill-posed Algebraic Problems: A Geometric Perspective
break
16:25-17:25: Pascal Koiran: Shallow circuits with high-powered inputs
dinner

Tuesday
09:00-10:00: Chris Hillar: Do rational certificates always exists for sum of squares problems?
10:00-10:30: coffee
10:30-11:30: Greg Blekherman: Volume of the Cone of Convex Forms and new Faces of the Cone of Sums of Squares
lunch
13:30-14:30: Levant Tuncel: Local Quadratic Convergence of Polynomial-Time Interior-Point Methods for Nonlinear Convex Optimization Problems
14:30-15:00: coffee
15:00-16:00: Mihai Putinar: Discretization of Shapes via Orthogonal Polynomials
break
16:15-16:40: Martin Harrison: Minimal Sums of Squares in a Free-* Algebra
break
16:45-17:10: Susan Margulies: Vizing's Conjecture and Techniques from Computer Algebra
break
17:15-17:40: Brendan Ames: Convex relaxation for the clique, biclique and clustering problems
dinner
19:30-20:20: Leonard Gurvits: TBA

Wednesday
08:30-9:30: Bernard Mourrain: Moment matrices and border basis
9:30-10:00: coffee
10:00-11:00: Laura Matusevich: Monomial ideals and hypergeometric equations
lunch
walk/hike/ski
dinner
19:30-20:30: Jim Renegar: Numerics of algorithms for optimizing over hyperbolicity cones

Thursday
08:30-9:30: Dan Bates: Khovanskii-Rolle continuation for finding real solutions of polynomial systems
09:30-09:45: coffee
09:45-10:45: Andrew Sommese: Recent work in Numerical Algebraic Geometry
break
11:00-12:00: Anton Leykin: Certified numerical homotopy continuation
lunch
13:30-14:30: Software Demos
14:30-15:00: coffee
15:00-16:00: Martin Avendano: Descartes' Rule of Signs is exact!
break
16:15-17:15: Victor Vinnikov: Constructing determinantal representations via noncommutative techniques
17:15-17:45: Korben Rusek: On Certain Structured Fewnoimals
dinner
**Friday**

09:00-11:00: Impromptu talks (board only, no projectors!)

**Checkout by 12 noon.**

** 5-day workshop participants are welcome to use BIRS facilities (2nd Floor Lounge, Max Bell Meeting Rooms, Reading Room) until 3 pm on Friday, although participants are still required to checkout of the guest rooms by 12 noon. **