ICMS 2018 Schedule

			McKenna Hall Auditorium	McKenna Hall 112-114	McKenna Hall 210-214
July 24	08:50-09:00	welcome	Welcome (James Davenport & Dean Mary Galvin)		
	09:00-10:00	invited talk	William Stein		
	10:00-10:20	break			
	10:20-12:00	session	12 - Computational Algebraic Geometry	4 - Polyhedral methods in geometry and optimization	6 - Post Quantum Groups
	12:00-13:30	lunch			
	13:30-15:10	session	12 - Computational Algebraic Geometry	4 - Polyhedral methods in geometry and optimization	6 - Post Quantum Groups
	15:10-15:30	break			
	15:30-17:10	session	12 - Computational Algebraic Geometry	14 - Towards Composable Mathematical Software	1 - General Session
	17:10-19:00	reception	Welcome Reception (McKenna Hall Atrium)		
July 25	09:00-10:00	invited talk	Thomas Hales		
	10:00-10:20	break			
	10:20-12:00	session	12 - Computational Algebraic Geometry	15 - Management of Mathematics	2 - Algorithms and Applications for Curves and Surfaces
	12:00-12:10	photo	Conference Photo		
	12:10-13:30	lunch			
	13:30-15:10	session	11 - Backtrack search techniques in groups and combinatorics	15 - Management of Mathematics 19 - Formal and Informal Corpora	2 - Algorithms and Applications for Curves and Surfaces 3 - Symbolic Summation and Integration
	15:10-15:30	break			
	15:30-17:10	session	11 - Backtrack search techniques in groups and combinatorics	19 - Formal and Informal Corpora	3 - Symbolic Summation and Integration
	17:20-19:00	optional event	Tour of Notre Dame Stadium (free ticket required, meet in McKenna Hall Atrium)		
July 26	09:00-10:00	invited talk	Folkmar Bornemann		
	10:00-10:20	break			
	10:20-12:00	session	8 - Machine Learning for Mathematical Software	10 - Mathematical Interfaces	7 - Groebner bases
	12:00-13:30	lunch			
	13:30-15:10	session	8 - Machine Learning for Mathematical Software	10 - Mathematical Interfaces	7 - Groebner bases 20 - Software for Mathematical Reasoning
	15:10-15:30	break			
	15:30-17:10	session	9 - SCSC	10 - Mathematical Interfaces	20 - Software for Mathematical Reasoning
	17:30-21:30	banquet	Studebaker Museum (bus from McKenna Hall)		
July 27	09:00-10:00	meeting	Business Meeting		
	10:00-10:20	break			
	10:20-12:00	session	9 - SCSC/18 - Quantifier Reasoning	16 - Software for exact and certified numeric computations	13 - Symbolic Combinatorics
	12:00-13:30	lunch			
	13:30-15:10	session	18 - Quantifier Reasoning	16 - Software for exact and certified numeric computations 1 - General session	
	15:10-15:30	break			
	15:30-15:45	closing	Concluding Remarks		

Tuesday, July 24

		McKenna Hall Auditorium	McKenna Hall 112-114	McKenna Hall 210-214
08:50-09:00	welcome	Welcome (James Davenport & Dean Mary Galvin)		
09:00-10:00	invited talk	William Stein		
10:00-10:20	break			
10:20-12:00	session	12 - Computational Algebraic Geometry	4 - Polyhedral methods in geometry and optimization	6 - Post Quantum Groups
talks	10:20 - 10:40	Investigating multistationarity in structured reaction networks Alicia Dickenstein, Mercedes Perez Millan, Anne Shiu, and Xiaoxian Tang	First steps in the formalization of convex polyhedra in Coq Xavier Allamigeon	Recents Developments in Cayley Hash Functions Bianca Sosnovski
	10:45 - 11:05	Neural Ideals in SageMath Ethan Petersen, Nora Youngs, Ryan Kruse, Dane Miyata, Rebecca Garcia, Luis Garcia Puente	Counting lattice points in lattice polytopes Ben Braun	The Hidden Subgroup Problem and Post-quantum Group-based Cryptography Kelsey Horan
	11:10 - 11:30	Universal Groebner Basis for Parametric Polynomial Ideals Hashemi et al.	Investigating Chvatal's conjecture using exact SCIP and VIPR Leon Eiffler	Private-Key Fully Homomorphic Encryption for Private Classification Alexander Wood
	11:35 - 11:55	Global Identifiability of Differential Models Hong et al.	Enumerating triangulations of cyclic polytopes Michael Joswig	Cryptanalysis of Group-Theoretic Cryptosystems via Machine Learning Jonathan Gryak
12:00-13:30	lunch			
13:30-15:10	session	12 - Computational Algebraic Geometry	4 - Polyhedral methods in geometry and optimization	6 - Post Quantum Groups
talks	13:30 - 13:50	The capacity for Hopf bifurcations in the fully distributive dual-site phosphorylation network Nida Obatake	Numerical Software for Computing Newton Polytopes Taylor Brysiewicz	A framework for unconditionally secure public-key encryption (with possible decryption errors) Mariya Bessonov
	13:55 - 14:15	Certifying reality of projections Jonathan Hauenstein, Avinash Kulkarni, Emre C. Sertöz, and Samantha Sherman	Computing tropical prevarieties Jeff Sommars	Quadratic time algorithm for inversion of binary permutation polynomials Zoran Sunic
	14:20 - 14:40	Image Analysis: Identification of Objects via Polynomial Systems Robert H. Lewis	Tropical Principal Component Analysis and its Applications to Phylogenetics Ruriko Yoshida	Efficient and Secure Delegation to a Single Malicious Server: Exponentiation over Non-Abelian Groups Matluba Khodjaeva
	14:45 - 15:05	Paramotopy: Parameter homotopies in parallel Dan Bates, Danielle Brake, Matt Niemerg	Tropicalized quartic curves of genus 3 Yue Ren	
15:10-15:30	break			
15:30-17:10	session	12 - Computational Algebraic Geometry	14 - Towards Composable Mathematical Software	1 - General Session
talks	15:30 - 15:50	Software for Certifying Homotopy Continuation Paths: Univariate Case Michael Burr, Juan Xu, and Chee Yap	Composing Mathematical Software Systems via the Math-in-the-Middle Paradigm Michael Kohlhase	Sparse multivariate polynomial factorization: a high-performance design and implementation. Michael Monagan and Baris Tuncer
	15:55 - 16:15	polyTop: Software for computing topology of smooth real surfaces Margaret Regan, Jonathan Hauenstein, Danielle Brake	SageMath: an approach to unifying open source mathematical software William Stein	SPARSIMATICS: a mathematics toolbox for sparse problems Annie Cuyt, Engelbert Tijskens, Matteo Briani, Ferre Knaepkens and Wen-Shin Lee
	16:20 - 16:40	Libtropicon: a highly scalable library for computing intersections of tropical hyper-surfaces Tianran Chen	Integrating GAP and Julia - JuliaInterface and Gap.jl Sebastian Gutsche	Efficient computation of squarefree separator polynomials Michela Ceria, Teo Mora and Andrea Visconti
	16:45 - 17:05	Classifying Cubic Surfaces over Small Finite Fields Anton Betten	Proving Axiom Sane Tim Daly	Computability of general integrals and integral transforms Oleg Marichev

Wednesday, July 25

		McKenna Hall Auditorium	McKenna Hall 112-114	McKenna Hall 210-214
09:00-10:00	invited talk	Thomas Hales		
10:00-10:20	break			
10:20-12:00	session	12 - Computational Algebraic Geometry	15 - Management of Mathematics	2 - Algorithms and Applications for Curves and Surfaces
talks	10:20 - 10:40	Eisenstein criterion and some classes of bivariate polynomials Jaime Gutierrez, Jorge Jimenez Urroz	Software Citation in Theory and Practice Daniel S. Katz and Neil Chue Hong	Axl, a geometric modeler for semi-algebraic shapes Mourrain
	10:45 - 11:05	HomotopyContinuation.jl: A package for homotopy continuation in Julia Sascha Timme	Software products, software versions, archiving of software, and swMATH Hagen Chrapary and Wolfgang Dalitz	On the interference problem for ellipsoids: new closed form solutions and applications Caravantes, Gonzalez-Vega
	11:10 - 11:30	Homotopy continuation in Macaulay2 Anton Leykin	Math Object Identifiers – Towards Research Data in Mathematics Michael Kohlhase	Resultants, Implicit Parameterizations, and Intersections of Surfaces Lewis
	11:35 - 11:55	Implementations of symbolic-numeric algorithms computing Euler obstruction functions using maximum likelihood degrees Jose Rodriguez	Mathematical research data, software and the publication-based approach Wolfram Sperber	Practical Considerations for Subdivision-based Algorithms for Curves and Surfaces Burr
12:00-12:10	photo	Conference Photo		
12:10-13:30	lunch			
13:30-15:10	session	11 - Backtrack search techniques in groups and combinatorics	15 - Management of Mathematics 19 - Formal and Informal Corpora	2 - Algorithms and Applications for Curves and Surfaces 3 - Symbolic Summation and Integration
talks	13:30 - 13:50	The Theory and Practice of Refiners in Partition Backtracking Chris Jefferson	Towards a fingerprint database of discrete objects Katja Berčič and Janoš Vidali	de Boor-suitable (DS) T-splines Pataranutaporn
	13:55 - 14:15	Questions on orbital graphs Paula Hahndel, Rebecca Waldecker	First Experiments with Neural Translation of Informal Mathematics to Formal Urban	A New epsilon-Isotopic Curve Tracing via Subdivision Yap
	14:20 - 14:40	Towards practical subgroup conjugacy Robin Candy	NLP and Large-scale Information Retrieval on Mathematical Texts Dong	Plotting real planar implicit curves and its applications Cheng
	14:45 - 15:05	Using Strong Paths to Solve Isomorphism Problems Mattias Koch	A New Style of Mathematical Proof Farmer	Proving and Conjecturing Bounds for some Floor Function Sums Wong
15:10-15:30	break			
15:30-17:10	session	11 - Backtrack search techniques in groups and combinatorics	19 - Formal and Informal Corpora	3 - Symbolic Summation and Integration
talks	15:30 - 15:50	How fast can we compute orbits of groups? Anton Betten	The Lean 3 Mathematical Library Carneiro	Additive Decompositions in Primitive Extensions Chen
	15:55 - 16:15	A Rainbow Clique Search Algorithm for BLT-Sets Betten et al	A Bi-directional Extensible Ad Hoc Interface between Lean and Mathematica Lewis	Bernoulli Symbol and Sum of Powers Jiu
	16:20 - 16:40	Backtrack Search in the Free Group Markus Pfeiffer	Is Univalence Inevitable? Kapulkin	Asymptotic Expansions Kapadia
	16:45 - 17:05	Normalisers in permutation groups as automorphisms of linear codes Mun See Chang	Set-Theoretic Type Theory McAllester	Computability of general integrals and integral transforms Marichev
17:20-19:00	optional event	Tour of Notre Dame Stadium (free ticket required, meet in McKenna Hall Atrium)		

Thursday, July 26

		McKenna Hall Auditorium	McKenna Hall 112-114	McKenna Hall 210-214
09:00-10:00	invited talk	Folkmar Bornemann		
10:00-10:20	break			
10:20-12:00	session	8 - Machine Learning for Mathematical Software	10 - Mathematical Interfaces	7 - Groebner bases
talks	10:20 - 10:40	ML for MS England	Mathematics Classroom Collaborator Kang et al	
	10:45 - 11:05	Ordering of subformulas Kobayashi et al	Identification of Errors Kim et al	
	11:10 - 11:30	Reduce Switch Points Sturm	CindyJS Noda et al	Solving Polynomial Systems using Numeric Groebner Bases Lichtblau
	11:35 - 11:55	Deep Learning in Maple Forrest	Analyses of pen-based input Nakamura et al	Checking Circuits for Integer Multiplication using Groebner bases Kauers
12:00-13:30	lunch			
13:30-15:10	session	8 - Machine Learning for Mathematical Software	10 - Mathematical Interfaces	7 - Groebner bases 20 - Software for Mathematical Reasoning
talks	13:30 - 13:50	ML for AR Urban	Generation of abundant questions Yoshitomi	Application of Groebner bases to Geometrically Nonlinear Analysis of Circular Plates on Pasternak Foundation Liu
	13:55 - 14:15	Mathematical Subject Classification Dong	Intelligent editor Shirai et al	Fitting a Sphere to Point Cloud Data via Computer Algebra Palancz et al.
	14:20 - 14:40	Solving Algorithmic Problems via ML Gryak et al.	Intuitive interface for solving eauations Zeng	Towards a Unified Ordering for Superposition Calculus Automated Theorem Proving Jakubov, Kaliszyk
	14:45 - 15:05	Heuristics in SMT Abraham	Sparse matrix class in C++ Sanderson et al	Inferring Safe Maude Programs with ATAME Alpuente et al.
15:10-15:30	break			
15:30-17:10	session	9 - SCSC	10 - Mathematical Interfaces	20 - Software for Mathematical Reasoning
talks	15:30 - 15:50	Incremental CAD Abraham and Kremer	Francy Martins et al	Finding a Middle Ground for Computer-Aided Cryptography Williams et al.
	15:55 - 16:15	UNSAT cores in TARSKI Vale-Enriquez and Brown	GAP should move beyond the terminal Woodroofe	Automated reasoning in (semi-) groups with power-maps Padmanabhan, Zhang
	16:20 - 16:40	3BA Horacek and Kreuzer	DiscreteZoo Bercic et al	A Topos Model for Syntax Schoenbaum
	16:45 - 17:05	MathCheck Bright et al	NetPad Rao et al	
17:30-21:30	banquet	Studebaker Museum (bus from McKenna Hall)		

Friday, July 27

		McKenna Hall Auditorium	McKenna Hall 112-114	McKenna Hall 210-214
09:00-10:00	meeting	Business Meeting		
10:00-10:20	break			
10:20-12:00	session	9 - SCSC 18 - Quantifier Reasoning	16 - Software for exact and certified numeric computations	13 - Symbolic Combinatorics
talks	10:20 - 10:40	Andrew Curtis Conjecture Lisitsa	Numerical integration in arbitrary-precision ball arithmetic Johansson	guessfunc Pantone
	10:45 - 11:05	Economics Mulligan et al	Tropical basis verification and its applications Ren	IntegerSequences Rowland
	11:10 - 11:30	dReal Gao	D-finite certification Leykin	multivariate asymptotics Wilson
	11:35 - 11:55	Symmetries for QBF Kauers	Implementation of a Near-Optimal Complex Root Clustering Algorithm Imbach et al	PI4 program Melczer
12:00-13:30	lunch			
13:30-15:10	session	18 - Quantifier Reasoning	16 - Software for exact and certified numeric computations 1 - General session	
talks	13:30 - 13:50	Instantiations Urban	On Parametric GCD Mou	
	13:55 - 14:15	QBF proofs systems Chew	On \mu-Symmetric Polynomials and D-plus Jing Yang and Chee K. Yap	
	14:20 - 14:40	unification in HOSMT Barbosa	On the global renormalization and regularization of several complex variables zeta functions by computer Vincel Hoang Ngoc Minh	
	14:45 - 15:05	ML for QBF Janota	Sparse Techniques To Speed Up Multivariate Polynomial Factorization Monagan & Tuncer	
15:10-15:30	break			
15:30-15:45	closing	Concluding Remarks		