CASC 2020 Schedule Overview

UTC+2h	Monday	Tuesday	Wednesday	Thursday	Friday
13:45–14:00	opening remarks				
14:00–14:15	Brown, McCallum	Abelard	Koutschan, Wong	Kaufmann, Biere	Abramov, Khmelnov, Ryabenko
14:15–14:30	Garloff, Titi	Nabeshima	Nabeshima, Tajima	Chi, Terui	Hashemi, Heintz, Pardo, Solerno
14:30–14:45	Tajima, Shibuta, Nabeshima	Liu, Lyakhov, Michels	Kauers, Moosbauer	Deveikis, Gusev, Gerdt, Vinitsky, Gozdz, Pedrak, Burdik, Pogosyan	Schreiber, Kerber
14:45–15:00	England, Florescu	Zheng	Divakov, Tiutiunnik, Sevastianov	Gutnik, Sarychev	Rahkooy, Sturm
15:00–15:15	parallel discussions	parallel discussions	parallel discussions	parallel discussions	parallel discussions
15:15–15:30	break	break	break	break	break
15:30–15:45	Malykh, Ayryan, Sevastianov, Ying	invited talk Werner Seiler	sponsor talk Maple presentation	invited talk Ovidiu Radulescu	Jolly
15:45–16:00	Roanes-Lozano				Zanoni, Bodrato
16:00–16:15	Kaltofen, Pernet, Yang				Kovács
16:15–16:30	Rahkooy, Radulescu, Sturm		break		Bertone, Cioffi
16:30–16:45	parallel discussions	break	Jing, Moreno Maza, Talaashrafi	break	parallel discussions
16:45–17:00	break	Bréhard	Telen, Van Barel, Verschelde	Kruff, Lüders, Radulescu, Sturm, Walcher	break
17:00–17:15	Pan	Brandt, Kazemi, Moreno Maza	Irtegov, Titorenko	Lindner, Imbert, Jacobson	Kalinina, Smol'Kin, Uteshev
17:15–17:30	Corless, Giesbrecht, Rafiee Sevyeri, Saunders	Hashemi, Orth, Seiler	Zhapa Camacho, Ramos, Antón Castro	Pan, Luan	Prokopenya, Minglibayev, Baisbayeva
17:30–17:45	Vorozhtsov, Kiselev	Pan	parallel discussions	Chen, Monagan	Malaschonok
17:45–18:00	Hashemi, Izgin, Robertz, Seiler	parallel discussions		parallel discussions	Krasikov
18:00–18:15	parallel discussions		virtual tour Ars Electronica Linz	break	closing remarks
18:15–18:30				business meeting	parallel discussions
18:30–18:45					

Monday, 14 September 2020

UTC+2h	
13:50–14:00	opening remarks
	Session chair: Jan Verschelde
14:00–14:15	**Christopher Brown and Scott McCallum** Enhancements to Lazard's method for CAD construction
14:15–14:30	**Jürgen Garloff and Jihad Titi** Symbolic-Numeric Computation of the Bernstein Coefficients of a Polynomial From Those of One of Its Partial Derivatives and of the Product of Two Polynomials
14:30–14:45	**Shinichi Tajima, Takafumi Shibuta, and Katsusuke Nabeshima** Computing Logarithmic Vector Fields along an ICIS Germ via Matlis Duality
14:45–15:00	**Matthew England and Dorian Florescu** Machine learning classification for variable ordering choice in a computer algebra system
15:00–15:10	parallel discussions of the previous 4 talks
15:10–15:30	break
	Session chair: Alexander Prokopenya
15:30–15:45	**Mikhail Malykh, Edic Ayryan, Leonid Sevastianov, and Yu Ying** On periodic approximate solutions of the three-body problem found by conservative difference schemes
15:45–16:00	**Eugenio Roanes-Lozano** Looking for compatible routes in the railway interlocking system of an overtaking station using a computer algebra system
16:00–16:15	**Erich Kaltofen, Clément Pernet, and Zhi-Hong Yang** Hermite Rational Function Interpolation with Error Correction
16:15–16:30	**Hamid Rahkooy, Ovidiu Radulescu, and Thomas Sturm** A Linear Algebra Approach for Detecting Binomiality of Steady State Ideals of Reversible Chemical Reaction Networks
16:30–16:40	parallel discussions of the previous 4 talks
16:40–17:00	break
	Session chair: Vladimir Gerdt
17:00–17:15	**Victor Y. Pan** Acceleration of Subdivision Root-finding for Sparse Polynomials
17:15–17:30	**Robert M. Corless, Mark Giesbrecht, Leili Rafiee Sevyeri, and B. David Saunders** On Parametric Linear System Solving
17:30–17:45	**Evgenii Vorozhtsov and Sergey Kiselev** Comparative Study of the Accuracy of Higher-order Difference Schemes for Molecular Dynamics Problems Using the Computer Algebra Means
17:45–18:00	**Amir Hashemi, Thomas Izgin, Daniel Robertz, and Werner M. Seiler** An Involutive GVW Algorithm and the Computation of Pommaret Bases
18:00–18:10	parallel discussions of the previous 4 talks

Tuesday, 15 September 2020

UTC+2h	
	Session chair: Chenqi Mou
14:00–14:15	**Simon Abelard** On the complexity of computing integral bases of function fields
14:15–14:30	**Katsusuke Nabeshima** Computing Parametric Standard bases for Semi-weighted Homogeneous Isolated Hypersurface Singularities
14:30–14:45	**Yang Liu, Dmitry Lyakhov, and Dominik Michels** Contact Linearizability of Scalar Ordinary Differential Equations of Arbitrary Order
14:45–15:00	**Tao Zheng** Characterizing Triviality of the Exponent Lattice of A Polynomial through Galois and Galois-Like Groups
15:00–15:10	parallel discussions of the previous 4 talks
15:10–15:30	break
	Session chair: Timur Sadykov
15:30–16:25	**Werner Seiler** Singularities of Algebraic Differential Equations
16:25–16:45	break
	Session chair: Sergey Gutnik
16:45–17:00	**Florent Bréhard** A Symbolic-Numeric Validation Algorithm for Linear ODEs with Newton-Picard Method
17:00–17:15	**Alexander Brandt, Mahsa Kazemi, and Marc Moreno Maza** Power Series Arithmetic in the BPAS Library
17:15–17:30	**Amir Hashemi, Matthias Orth, and Werner M. Seiler** Relative Groebner and Involutive Bases For Ideals In Quotient Rings
17:30–17:45	**Victor Y. Pan** Acceleration of Subdivision Root-finding and MPSolve
17:45–17:55	parallel discussions of the previous 4 talks

Wednesday, 16 September 2020

UTC+2h	
	Session chair: Changbo Chen
14:00–14:15	**Christoph Koutschan and Elaine Wong** Creative Telescoping on Multiple Sums
14:15–14:30	**Katsusuke Nabeshima and Shinichi Tajima** Computation of κ-invariants associated to deformations of isolated hypersurface singularities
14:30–14:45	**Manuel Kauers and Jakob Moosbauer** Good pivots for small sparse matrices
14:45–15:00	**Dmitriy Divakov, Anastasiia Tiutiunnik, and Anton Sevastianov** Symbolic-numerical research of the geometric properties of adiabatic waveguide modes
15:00–15:10	parallel discussions of the previous 4 talks
15:10–15:30	break
	Session chair: François Boulier
15:30–16:10	**Jürgen Gerhard** Maple presentation
16:10–16:30	break
	Session chair: Hui Huang
16:30–16:45	**Rui-Juan Jing, Marc Moreno Maza, and Delaram Talaashrafi** Complexity Estimates for Fourier-Motzkin Elimination
16:45–17:00	**Simon Telen, Marc Van Barel, and Jan Verschelde** Robust Numerical Tracking of One Path of a Polynomial Homotopy on Parallel Shared Memory Computers
17:00–17:15	**Valentin Irtegov and Tatiana Titorenko** On the Study of the Motion of a System of Two Connected Rigid Bodies by Computer Algebra Methods
17:15–17:30	**Fernando Zhapa Camacho, Anthony Ramos, and Francesc Antón Castro** Purely functional implementation of a tropical geometry system in Haskell
17:30–17:40	parallel discussions of the previous 4 talks

18:00–18:45	**virtual tour:** **Christoph Kremer** Ars Electronica Linz Best of Deep Space 8K

Thursday, 17 September 2020

UTC+2h	
	Session chair: Gleb Pogudin
14:00–14:15	**Daniela Kaufmann and Armin Biere** Nullstellensatz-Proofs for Multiplier Verification
14:15–14:30	**Boming Chi and Akira Terui** The GPGCD Algorithm with the Bezout Matrix
14:30–14:45	**Algirdas Deveikis, Alexander Gusev, Vladimir Gerdt, Sergue Vinitsky, Andrzej Gozdz, Aleksandra Pedrak, Cestmir Burdik, and George Pogosyan** Symbolic-Numerical Algorithm for Computing Orthonormal Basis of O(5)xSU(1,1) Group
14:45–15:00	**Sergey Gutnik and Vasily Sarychev** Symbolic Computations of the Equilibrium Orientations of a System of Two Connected Bodies Moving on a Circular Orbit around the Earth
15:00–15:10	parallel discussions of the previous 4 talks
15:10–15:30	break
	Session chair: Matthew England
15:30–16:25	**Ovidiu Radulescu** Tropical geometry of biological systems
16:25–16:45	break
	Session chair: Marc Moreno Maza
16:45–17:00	**Niclas Kruff, Christoph Lüders, Ovidiu Radulescu, Thomas Sturm, and Sebastian Walcher** Singular Perturbation Reduction of Reaction Networks with Multiple Time Scales
17:00–17:15	**Sebastian Lindner, Laurent Imbert, and Michael Jacobson** Balanced NUCOMP
17:15–17:30	**Victor Y. Pan and Qi Luan** Faster Real and Complex Polynomial Root-Finding by Means of Subdivision Iterations
17:30–17:45	**Tian Chen and Michael Monagan** The Complexity and Parallel Implementation of two Sparse Multivariate Hensel Lifting Algorithms for Polynomial Factorization
17:45–17:55	parallel discussions of the previous 4 talks
17:55–18:00	break
18:00–18:30	business meeting

Friday, 18 September 2020

UTC+2h	
	Session chair: Akira Terui
14:00–14:15	**Sergei Abramov, Denis Khmelnov, and Anna Ryabenko** Truncated and infinite power series in the role of coefficients of linear ordinary differential equations
14:15–14:30	**Amir Hashemi, Joos Heintz, Luis M. Pardo, and Pablo Solerno** Intrinsic complexity for constructing zero-dimensional Gröbner bases
14:30–14:45	**Hannah Schreiber and Michael Kerber** On the expected complexity of matrix reduction for random complexes
14:45–15:00	**Hamid Rahkooy and Thomas Sturm** First-Order Tests for Toricity
15:00–15:10	parallel discussions of the previous 4 talks
15:10–15:30	break
	Session chair: Victor Edneral
15:30–15:45	**Raphael Jolly** Progress report on the Scala Algebra System
15:45–16:00	**Alberto Zanoni and Marco Bodrato** Univariate polynomials with long unbalanced coefficients as bivariate balanced ones: a Toom-Cook multiplication approach
16:00–16:15	**Zoltán Kovács** “Mathemachines” via LEGO, GeoGebra and CindyJS
16:15–16:30	**Cristina Bertone and Francesca Cioffi** The intrinsic connection between border and Pommaret marked bases
16:30–16:40	parallel discussions of the previous 4 talks
16:40–17:00	break
	Session chair: Eugenio Roanes Lozano
17:00–17:15	**Elizabeth Kalinina, Yuri Smol'Kin, and Alexei Uteshev** Routh-Hurwitz stability of a polynomial matrix family. Real perturbations
17:15–17:30	**Alexander Prokopenya, Mukhtar Minglibayev, and Oralkhan Baisbayeva** Analytical Computations in Studying Translational-Rotational Motion of a Non-Stationary Triaxial Body in the Central Gravitational Field
17:30–17:45	**Gennadi Malaschonok** LDU factorization
17:45–18:00	**Vitaly Krasikov** Analytic Complexity of Solutions to Hypergeometric Systems Defined by Zonotopes
18:00–18:05	closing remarks
18:05–18:15	parallel discussions of the previous 4 talks