

MACIS 2015 Program Outline

	11 Wed		12 Thu			13 Fri	
Room:	Zib1	Zib2	Zib1	Zib2	Fub	Zib1	Zib2
08:00:00 AM	Registration		Coffee			Coffee	
08:30:00 AM	Welcome		T3: Stefan Ratschan			T5: Gunter Rote	
09:00:00 AM	T1: C.-P. Jeannerod						
09:30:00 AM							
10:00:00 AM							
10:30:00 AM							
11:00:00 AM	SS1(1:30)	SS3(1:30)	SS4 (2:30)	SS7 (2:30)	SS2 (1:50)	SS8 (1:40)	SS12 (1:40)
11:30:00 AM			SS0 (0:30)			Maple Session	
12:00:00 PM	LUNCH		LUNCH			LUNCH	
12:30:00 PM	LUNCH		LUNCH			LUNCH	
01:00:00 PM	LUNCH		LUNCH			LUNCH	
01:30:00 PM	T2: Hongbo Li		T4: Stefan Dziembowski			T6: J.C. Faugere	
02:00:00 PM			Excursion				
02:30:00 PM			Excursion				
03:00:00 PM			Excursion				
03:30:00 PM			Excursion				
04:00:00 PM			Excursion				
04:30:00 PM			Excursion				
05:00:00 PM	SS9 (2:50)	SS11(2:40)				SS6 (1:50)	SS10 (1:50)
05:30:00 PM	Reception		Social Dinner			T7: Wolfram Dekker	
06:00:00 PM	Business Meeting		Social Dinner			End	
06:30:00 PM	Business Meeting		Social Dinner			End	
	Sessions:					Rooms:	
	SS0		General				
	SS1		Curves and Surfaces				Zib1 = ZIB'S Lecture Hall
	SS2		Applied Algebraic Geometry				
	SS3		Cryptography				Zib1 = ZIB'S Seminar Room
	SS4		Verified Numerical Computation				
	SS6		Polynomial System Solving				Fub = Freie Univ Classroom
	SS7		Massive Data				
	SS8		Computational Differential Equations				
	SS9		Data and Knowledge Exploration				Asterisk (*) = SHORT talk
	SS10		Algorithm Engineering				
	SS11		Real Complexity				
	SS12		Global Optimization				

Time	MACIS 2015: Day 1, November 11	
	ZIB1	ZIB2
8:00-9:00	Registration	
9:00-9:15	Welcome (Prof. Borndorfer, ZIB)	
9:15-9:30	Break	
9:30-10:20	C.-P. Jeannerod [S.Rump] Exploiting structure in floating-point arithmetic	
10:30-12:00	SS1: Curves & Surfaces [S.Schirra]	SS3: Cryptography [J.Blömer]
10:30	A. Beyer, Y. Liu, H. Mara and S. Krömker. Mesh Reduction to Exterior Surface Parts via Random Convex-Edge Affine Features	A. Kiss, A. Stüber and J. Krämer. On the Optimality of Differential Fault Analyses on CLEFIA
11:00	R. Imbach, G. Moroz and M. Pouget. Numeric and Certified Isolation of the Singu- larities of the Projection of a Smooth Space Curve	P. Günther and V. Krummel. Implementing Cryptographic Pairings on Accu- mulator based Smart Card Architectures
11:30	S. Sidorov. Linear k-Monotonicity Preserving Algorithms and Their Approximation Properties	J. Juhnke, J. Blömer and N. Löken. Short Group Signatures with Distributed Trace- ability
12:00-1:30	LUNCH BREAK	
1:30-2:20	Hongbo Li [M.Giesbrecht] Symbolic Geometric Reasoning with Advanced Invariant Algebras	
2:30-5:20	SS9: Data and Knowledge Exploration [J.Luo]	SS11: Real Complexity [A.Kamura]
2:30	R. Walter, T. Kübart and W. Kuechlin. Optimal Coverage in Automotive Configura- tion	M. Schroeder, F. Steinberg and M. Ziegler. Average-Case Bit-Complexity Theory of Real Functions
3:00	W. Bouaguel. *A New Approach for Wrapper Feature Selec- tion using Genetic Algorithm for Big Data	O. Bournez, D. Graça and A. Pouly. *Rigorous numerical computation of polynomial differential equations over unbounded domains
3:20	R. Hambasan and M. Kohlhase. Faceted Search for Mathematics	F. Brauße, M. Korovina and N. Th.Müller. Using Taylor Models in Exact Real Arithmetic
3:50	Break	
4:00	S. Shirai and T. Fukui. * Evaluation of a Predictive Algorithm for Converting Linear Strings to Mathematical Formulae for an Input Method	P. Batra. * On the quality of some root-bounds
4:20	W. An, X. Chen and D. Wang. Searching for Geometric Theorems Using Fea- tures Retrieved from Diagrams	J. van der Hoeven. Certifying trajectories of dynamical systems
4:50	W. Bouaguel and E. Mouelhi. *New Method for Instance Feature Selection Using Redundant Features for Biological Data	Hugo Férée and Martin Ziegler. On the Computational Complexity of Positive Lin- ear Functionals on $C[0,1]$
5:30-6:00	RECEPTION	
6:00-7:00	BUSINESS MEETING	

Time	MACIS 2015: Day 2, November 12		
	ZIB1	ZIB2	FUB
8:00–8:30	Coffee		
8:30–9:20	Stefan Ratschan [M.Ziegler] Decidability from a Numerical Point of View		
9:30–12:00	SS4: Verified Numerics [T.Ogita]	SS7: Massive Data [M.Crochemore]	SS2: Algebraic Geometry [J.Hauenstein]
9:30	T. Okayama. Explicit error bound for modified numerical iterated integration by means of Sinc methods	T. Kociumaka, J. Radoszewski and B. Winiewski. Subquadratic-Time Algorithms for Abelian Stringology Problems	D. Brake, D. Bates, V. Putkaradze and A. Maciejewski. Workspace Multiplicity and Fault Tolerance of Cooperating Robots
10:00	N. Yamamoto, K. Matsue and T. Hiwaki. * Construction of Lyapunov functions by validated computation	S. De Agostino. * Compressing Massive Data on a Distributed System	BREAK (Room Change within FUB)
10:20	K. Kobayashi. * A Recursive Formula for the Circumradius of the n-Simplex	V. Stoykova. * Using Statistical Search to Discover Semantic Relations of Political Lexica Evidences from Bulgarian-Slovak EUROPARL 7 Corpu	D. Brake, J. Hauenstein and A. Sommese. * Numerical local irreducible decomposition
10:40	K. Ozaki and T. Ogita. * Error-Free Transformation of Matrix Multiplication by A Posteriori Verification	A. Langiu, F. Marzi, F. Mignosi and G. Nazzicone. * Compressing Big Data: When the Rate of Convergence to the Entropy Matters	P. Kutas. * Complexity questions concerning the explicit isomorphism problem over number fields
11:00	T. Kinoshita, Y. Watanabe and M. Nakao. * H3 and H4 regularities of the Poisson equation on polygonal domains	J. Giesen, S. Laue and J. K.Mueller. Reconstructing a Sparse Solution from a Compressed Support Vector Machine	P. Bürgisser, K. Kohn, P. Lairesz and B. Sturmfels. * Computing the Chow Variety of Quadratic Space Curves
11:20/30	A. Takayasu, M. Mizuguchi, T. Kubo and S. Oishi. * Verified computations for solutions to semilinear parabolic equations using the evolution operator	J. Daykin, M. Miller and J. Ryan. Temporal Reasoning: Constraints and Graphs	J.-G. Dumas, B. Ekici, D. Pous, J.-C. Reynaud and D. Duval. Relative Hilbert-Post completeness for exceptions
11:40	N. Yamanaka, T. Okayama and S. Oishi. * Verified Error Bounds for the Real Gamma Function using Double Exponential Formula over Semi-infinite Interval		N. Daleo and J. Hauenstein. * Numerically Testing Generically Reduced Projective Schemes for the Arithmetic Gorenstein Property
12:00–1:30	LUNCH BREAK		
1:30–2:20	Stefan Dziembowski [J.Blömer] Modelling Side-Channel Leakage		
2:30–5:30	Excursion		
5:30–7:00	Social Dinner		

Time	MACIS 2015: Day 3, November 13	
	ZIB1	ZIB2
8:00–8:30	Coffee	
8:30–9:20	Günter Rote Congruence testing of point sets in three and four dimensions [M.Joswig]	
9:30–11:20	SS8: Computational Differential Equations [V.Levandovskyy]	SS12: Global Optimization [J.Ninin]
9:30	A. Levin. Dimension Polynomials of Intermediate Fields of Inversive Difference Field Extensions	M. Lange. A new matrix splitting based relaxation for the quadratic assignment problem
10:00	G. Pogudin. * A “polynomial shifting” trick in differential algebra	J. Ninin. * Global Optimization based on Contractor Programming: an Overview of the IBEX library
10:20	Break	
10:30	J. Freitag and W. Li. Simple differential field extensions and effective bounds	B. Patil. The Bernstein branch-and-prune algorithm for constrained global optimization of multivariate polynomial MINLPs
11:00	R. Gustavson and O. L. Sanchez. * A new bound for the existence of differential field extensions	D. Monnet, J. Ninin and B. Clement. * Global Optimization of H_∞ problem: Application to robust control synthesis under structural constraint
11:30-12:00	Maple Session	
12:00-1:30	LUNCH BREAK	
1:30–2:20	Jean-Charles Faugère Solving Structured Polynomial Systems with Gröbner Bases [É.Schost]	
2:30–4:30	SS6: Polynomial System Solving [C.Mou]	SS10: Algorithm Engineering in Geometry [R.Fleischer]
2:30	K. Nabeshima and S. Tajima. Solving extended ideal membership problems in rings of convergent power series via Groebner bases	M. Joswig, G. Loho, B. Lorenz and B. Schrtter. Parametric linear programs and convex hulls
3:00	R. Fukasaku, H. Iwane and Y. Sato. * Improving a CGS-QE algorithm	M. Mörig. * Another Classroom Example of Robustness Problems in Planar Convex Hull Computation
3:20	Break	
3:30	F. Quedenfeld and C. Wolf. Advanced Algebraic Attack on Trivium	C. Amendola, M. Drton and B. Sturmfels. Maximum Likelihood Estimates for Gaussian Mixtures Are Transcendental
4:00	M. Kobayashi, H. Iwane, T. Matsuzaki and H. Anai. Efficient subformula orders for real quantifier elimination of non-prenex formulas	M. Mörig and S. Schirra. Precision-Driven Computation in the Evaluation of Expression-Dags with Common Subexpressions: Problems and Solutions
4:45-5:35	Wolfram Decker Current Trends in Developing Open Source Computer Algebra Software [C.Yap]	
6:00	END OF CONFERENCE	