

Monday September, 22

08:00 **Registration**

09:00 **Opening**

09:30 **Moore Prize Talk: Kenta Kobayashi, Chair: V. Kreinovich**
Computer-Assisted Uniqueness Proof for Stokes' Wave of Extreme Form

10:30 **Coffee Break**

11:00 **Plenary Session: John Pryce, Chair: B. Kearfott**
The architecture of the IEEE P1788 draft standard for interval arithmetic

12:00 **Lunch**

13:20 **Plenary Session: Ekaterina Auer, Chair: W. Luther**
Result Verification and Uncertainty Management in Engineering Applications

<i>Turing Hörsaal</i>	<i>Zuse Hörsaal</i>	<i>Moore Hörsaal (ÜR2)</i>
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Chair: J.Garloff	Chair: C.P. Jeannerod	Chair: A. Rauh
14:20 A1(1) S. Miyajima <i>Saddle point lin. Systems</i>	A2(1) A. Elskhawy <i>Modal Interval FPU</i>	A3(1) T. Hiwaki <i>Basin of a limit cycle</i>
14:45 A1(2) T. Ogita <i>Symmetric Eigenvalue</i>	A2(2) N. Revol <i>Affine arithmetic</i>	A3(2) C. Spandl <i>True orbit simulation</i>
15:10 A1(3) S. Shary <i>Maximum Consistency</i>	A2(3) P. Theveny <i>Metrics</i>	A3(3) M. Konecny <i>Interval Picard Operator</i>
15:35 A1(4) G. Mayer <i>Symmetric solution set</i>	A2(4) O. Kupriianova <i>Replacing branches...</i>	A3(4) L. Jaulin <i>Computing capture tubes</i>

18.00 **Guided walk to town hall**

19.00 **Reception by the City of Würzburg**

Tuesday September, 23

09:00 **Plenary Session: Jack Dongarra, Chair: G. Alefeld**
Algorithmic and Software Challenges at Extreme Scales

10:00 **Coffee Break**

Turing Hörsaal	Zuse Hörsaal	Moore Hörsaal (ÜR2)
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Chair: G. Mayer	Chair: L. Jaulin	Chair: W. Tucker
10:30 B1(1) E. Popova <i>Parametric Solution Sets</i>	B2(1) S. Miyajima <i>Inverse square root</i>	B3(1) B. Bánhelyi <i>On a conjecture of Wright</i>

10:55 B1(2) S. Shary <i>AE-solutions</i>	B2(2) S. Graillat <i>l2 norm</i>	B3(2) S. I. Kumkov <i>Estimation of data</i>
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11:20 B1(3) K. Ozaki <i>Linear Systems</i>	B2(3) L Balzer <i>SONIC - a nonlinear solver</i>	B3(3) T. Tsuchiya <i>Triangular Elements</i>
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11:45 **Lunch**

13:00 **Plenary Session: Andrej Bauer, Chair: S. Shary**
Programming techniques for exact real arithmetic

Chair: M. Nakao	Chair C. Spandl	Chair: M. Konecny
14:00 C1(1) T. Uda <i>Elliptic BVP</i>	C2(1) S. Markov <i>Batch fermentation</i>	C3(1) C. Vanaret <i>Evolutionary Algorithms</i>

14:25 C1(2) H. Behnke <i>Curve Veering</i>	C2(2) A. Rauh <i>IVP with Multiple EV</i>	C3(3) B. Kearfott <i>Exclusion Regions</i>
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14:50 C1(3) T. Kinoshita <i>Inverse elliptic operators</i>	C2(3) L. Senkel <i>Confidence Regions</i>	
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15:15 **Coffee Break**

Chair: J.Horacek	Chair: N. Yamamoto	Chair: E. Popova
15:45 D1(1) M. Markót <i>Finding positively invariant sets</i>	D2(2) A. Takayasu <i>Parabolic equations</i>	D3(1) P. Eberhart <i>HP Stochastic Arithmetic</i>

16:10 D1(2) J. Garloff <i>Sign Regular Matrices</i>	D2(1) M. Mizuguchi <i>Nonlinear heat equations</i>	D3(2) W. Luther <i>Uncertain GPS-localization</i>
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16:45		Meeting Scientific Committee Editorial Board
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19:30 **Conference Dinner**

Wednesday September, 24

09:00 **Plenary Session: John Gustafson, Chair: U. Kulisch**
An Energy-Efficient and Massively Parallel Approach to Valid Numerics

10:00 **Coffee Break**

<i>Turing Hörsaal</i>	<i>Zuse Hörsaal</i>	<i>Moore Hörsaal (ÜR2)</i>
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	Chair: G. Bohlender	Chair: K. Ozaki	Chair: N. Louvet
10:30	E1(1) R. Iakymchuk <i>Matrix Multiplication</i>	E2(1) M. Hladik <i>Optimal preconditioning</i>	E3(1) I. Sokolov <i>Fuzzy arithmetic</i>

10:55	E1(2) C. Chohra <i>RTN-BLAS</i>	E2(2) A. Minamihata <i>Modified Verification for LS</i>	E3(2) V. Kreinovich <i>Decision making</i>
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11:20	E1(3) H. Jiang <i>Quad-Precision GEMM</i>	E2(3) A. Rauh <i>Parameter Identification</i>	E3(3) B. Dobronets <i>Probabilistic approach</i>
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11:45 **Lunch**

13:00 **Excursion to Bamberg**

Thursday September, 25

09:00 **Plenary Session: Sylvie Boldo, Chair: N. Revol**
Formal verification of tricky numerical computations

10:00 **Coffee Break**

Turing Hörsaal	Zuse Hörsaal	Moore Hörsaal (ÜR2)
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Chair: B. Bánhelyi	Chair: P. Langlois	Chair: T. Ogita
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10:30 F1(1) S. Markov <i>H- and D-continuous</i>	F2(1) H. D. Nguyen <i>Hardware support</i>	F3(1) J. Horacek <i>On Unsolvability</i>
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10:55 F1(2) L. Senkel <i>Sliding Mode Approaches</i>	F2(2) C. Jeannerod <i>On relative errors</i>	F3(2) V. Kreinovich <i>Objective uncertainty</i>
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11:20 F1(3) A. Maher <i>Range arithmetic</i>	F2(3) S. Siegel <i>Complete Arithmetic</i>	F3(3) M. Hladik <i>Radius of nonsingularity</i>
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11:45 **Lunch**

13:00 **Plenary Session: Bartłomiej Jacek Kubica, Chair: T. Csendes**
Interval methods for solving various kinds of quantified nonlinear problems

Chair: H. Behnke	Chair: M. Hladik	Chair: F. Jezequel
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14:00 G1(1) B. Bánhelyi <i>Localization of trajectories</i>	G2(1) J. Garloff <i>Rational Bernstein Form</i>	G3(1) R. v. Nooijen <i>Interval in hydrology</i>
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14:25 G1(2) X. Liu <i>Lower eigenvalue bounds</i>	G2(1) N. Paluri <i>Bernstein B&B algorithm</i>	G3(2) T. Montanher <i>Hidden Markov model</i>
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14:50 G1(3) K. Tanaka <i>Allen-Cahn equation</i>		G3(3) V. Golodov <i>Spectroscopic analysis</i>
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15:20 **Closing**

15:40 **Coffee Break**

19:00 **Wine tasting party**