



Programme

Monday 17 September 2012

9:00	Günter Hotz lecture theatre	Opening ceremony (in German)
11:00	Foyer, building E2 2	Coffee
11:30	Günter Hotz lecture theatre	Plenary talk: Endre Süli (Oxford) <i>Navier-Stokes-Fokker-Planck systems: analysis, approximation, computation</i>
12:30	Mensa	Lunch for all delegates
13:30	Buildings E1 3, E2 4 and E2 5	Minisymposia and Sections
15:30	Foyers of buildings E1 3 and E2 5	Coffee
16:00	Buildings E1 3, E2 4 and E2 5	Minisymposia and Sections
18:30	Günter Hotz lecture theatre	Public lecture (in German): Günter M. Ziegler (FU Berlin) <i>Das ist doch keine Kunst!</i> <i>Zehn Bilder aus der Mathematik</i>

Tuesday 18 September 2012

9:00	Buildings E1 3, E2 4 and E2 5	Minisymposia and Sections
11:00	Foyer, building E2 2	Coffee
11:30	Günter Hotz lecture theatre	Plenary talk: Mila Nikolova (Paris) <i>Mathematics in image processing</i>
12:30	Mensa	Lunch for all delegates
14:00	Depart University bus	Excursion to the Cloef and
-14:15	terminal	Emmy Noether lecture
15:30	Cloef-Atrium	Emmy Noether lecture: Anna Wienhard (Princeton) <i>Geometric structures</i> - <i>past, present and future</i>
16:30	Cloef-Atrium	Springer Happy Hour and walk to the scenic viewpoint
17:15	Cloef-Atrium	DMV-Mitgliederversammlung (in German)
9:00- 17:00	Buildings E2 4 and E2 5	Lehrertag (in German)

Wednesday 19 September 2012

9:00	Günter Hotz lecture theatre	Plenary talk: Iliia Itenberg (Paris) <i>Geometry in the tropical limit</i>
10:00	Günter Hotz lecture theatre	Plenary talk: Nina Uraltseva (St: Petersburg) <i>Recent developments in the theory of free boundary problems</i>
11:00	Foyer, building E2 2	Coffee
11:30	Günter Hotz lecture theatre	Plenary talk: Jean-Pierre Wintenberger (Strasbourg) <i>Galois representations and modularity</i>
12:30	Mensa	Lunch for all delegates
13:30	Buildings E1 3, E2 4 and E2 5	Minisymposia and Sections
13.30	Günter Hotz lecture theatre	Unternehmenstag (in German) Additive GmbH, CosmosDirekt
15:30	Foyers of buildings E1 3, E2 2 and E2 5	Coffee
16:00	Buildings E1 3, E2 4 and E2 5	Minisymposia and Sections
16.00	Günter Hotz lecture theatre	Unternehmenstag (in German) d-fine GmbH, Fraunhofer ITWM
18:00	Hörsaal II, building E2 5	Treffen der Abiturpreisträger und Teilnehmer der Studierendenkonferenz (in German)
18:15 -18:45	Depart University bus terminal	Excursion to Völklingen and conference dinner in the Völklingen Ironworks

Thursday 20 September 2012

9:00	Günter Hotz lecture theatre	Plenary talk: Dimitri Shlyakhtenko (UCLA) <i>Free probability and random matrices</i>
10:00	Günter Hotz lecture theatre	Plenary talk: Martin Schweizer (ETH Zürich) <i>Arbitrage</i>
11:00	Foyers of buildings E1 3 and E2 5	Coffee
11:30	Günter Hotz lecture theatre	Plenary talk: Wolfram Decker (TU Kaiserslautern) <i>Current trends in the design of open source computer algebra software</i>
12:30	Mensa	Lunch for all delegates
13:30	Buildings E1 3, E2 4 and E2 5	Minisymposia, Sections and Studierendenkonferenz (in German)
15:30	Foyers of buildings E1 3 and E2 5	Coffee
16:00	Buildings E1 3, E2 4 and E2 5	Minisymposia, Sections and Studierendenkonferenz (in German)

Eröffnungszereemonie, Montag 17. September 2012

Begrüßung

Prof. Dr. Mark Groves (Vorsitzender des lokalen Organisationskomitees und
Dekan der Fakultät für Mathematik und Informatik)

Prof. Dr. Christian Bär (Präsident der DMV)

Grußworte

Prof. Dr. Volker Linneweber (Universitätspräsident)

Dr. Susanne Reichrath (Staatssekretärin)

Musik

Cantor-Medallie-Preisverleihung

Prof. Dr. Christian Bär

Preisträger: Prof. Dr. Michael Struwe (ETH Zürich)

von Kaven-Preisverleihung

Dr. Frank Kiefer (Deutsche Forschungsgemeinschaft)

Preisträgerin: Prof. Dr. Eva Viehmann (TU München)

Laudatio: Prof. Dr. Stefan Müller-Stach

Musik

Erinnerung an Friedrich Hirzebruch

Prof. Dr. Don Zagier

Musik

Minisymposia and Sections (Monday 17 September 2012, 13:30-15:30)

Session 1 (Hörsaal I, E25) Applied mathematical finance	Session 2 (Hörsaal II, E25) Approximation of optimal control problems with PDE constraints	Session 3 (Zeichensaal, E25) Complex fluids	Session 4 (Seminarraum 3, E25) Free probability theory and random matrices	Session 5 (Seminarraum 4, E25) Inverse problems
<p>13:30 Recent developments in applied credit portfolio modelling Ludger Overbeck</p> <p>14:00 The cost-of-capital valuation principle applied to contingent convertibles and wind farms Sascha Meyer-Dautrich</p> <p>14:30 Capital requirement for insurance companies under Solvency II Simone Sonntag, Markus Zacharski</p> <p>15:00 Modeling recalibration Christian Bender</p>	<p>13:30 Analysis of adaptive finite elements for optional control problems Kunibert Siebert</p> <p>14:30 Adaptive finite element methodes, boundary approximation and control-constrained optimal control Fernando Gaspoz</p> <p>15:00 Sufficient optimality conditions for an abstract nonlinear optimization problem Martin Naß</p>	<p>13:30 Implicitly constituted material models Vit Prusa</p> <p>14:30 On strong solutions for viscoelastic fluid models Matthias Geissert</p> <p>15:00 L_p-theory for a certain class of viscoelastic fluid models Manuel Nesensohn</p>	<p>13:30 Free probability theory and spiked models Mireille Capitaine</p> <p>14:30 Moderate deviation principles for Wigner matrices Hanna Döring</p> <p>15:00 Free multiplicative convolution of k-symmetric measures Octavio Arizmendi</p>	<p>14:00 Numerical solution of an inverse problem in particle break-up dynamics Andreas Groh</p> <p>14:30 Identifiability of the elasticity tensor in an elastodynamic problem Arne Wöstehoff</p> <p>15:00 Convergence rates in expectation for Tikhonov-type regularization of inverse problems with Poisson data Frank Werner</p>

Session 6 (Hörsaal III, E25) Representation theory for finite groups	Session 7 (Hörsaal IV, E24) Tropical geometry	Session 8 (Seminarraum 5, E24) Algebraic geometry and complex analysis	Session 9 (Seminarraum 6, E24) Didactics and history of mathematics	Session 10 (Hörsaal 001, E13) Discrete mathematics
<p>13:30 Restriction unipotent Specht modules of $GL_n(q)$ to the unitriangular group and supercharacters Richard Dipper</p> <p>14:30 Ordering Lusztig's families in type B_n Laci Iancu</p> <p>15:00 Restricted rational Cherednik algebras Ulrich Thiel</p>	<p>13:30 Tropical geometry and amoebas – some computational developments Thorsten Theobald</p> <p>14:30 The Relative tropical inverse problem for curves in a tropical plane Kirsten Schmitz</p> <p>15:00 Tropical oriented matroids Silke Horn</p>	<p>13:30 Rational volume of varieties over local fields and Galois extensions Annabelle Hartmann</p> <p>14:00 Thom-Porteous formulas in algebraic cobordism Thomas Hudson</p> <p>14:30 Regular singular stratified bundles and tame ramification Lars Kindler</p> <p>15:00 Generalized Picard schemes Fabian Reede</p>	<p>13:30 100 Jahre Analysisunterricht am Gymnasium – ein Rückblick auf die Meraner Reform Kajja Krüger</p> <p>14:30 Diesterweg als Geometrie-Didaktiker Antonia Zeimet</p> <p>15:00 Gnedenko und Gumbel – zwei Stochastiker im Nachkriegsdeutschland Hans-Joachim Girtlich</p>	<p>13:30 Energy-efficient algorithms Susanne Albers</p> <p>14:30 Noncommutativity makes determinants hard Markus Bläser</p> <p>15:00 Instance-dependent robustness guarantees for dual-value sequencing Nicole Megow</p>
Session 11 (Hörsaal 002, E13) Functional analysis	Session 12 (Hörsaal 003, E13) Geometry and topology	Session 13 (Seminarraum 14, E13) Numerics and scientific computing	Session 14 (Seminarraum 15, E13) Stochastics	
<p>13:30 Operator theory and geometric quantization on symmetric spaces Harald Upmeyer</p> <p>14:30 The C^*-algebra of a nilpoint Lie group Jean Ludwig</p> <p>15:00 C^*-algebras generated by isometries with twisted commutation relations Moritz Weber</p>	<p>13:30 Curvature operator and collapsing of Riemannian manifolds Wilderich Tuschmann</p> <p>14:30 Isometries of Lie groups equipped with intrinsic distances Enrico Le Donne</p>	<p>13:30 Stable coupling of finite and boundary element methods Olaf Steinbach</p> <p>14:30 An adaptive fundamental solution method Marvin Fleck</p> <p>15:00 Reduced-order modelling for coupled nonlinear PDE systems using POD Oliver Lass</p>	<p>13:30 Scaling limits of random maps: the Brownian and staple maps Grégory Miermont</p> <p>14:30 Spanning trees on ladder-like graphs Achim Klenke</p> <p>15:00 Coalescent trees and their lengths Götz Kersting</p>	

Minisymposia and Sections (Monday 17 September 2012, 16:00-18:00)

Session 1 (Hörsaal I, E25)	Session 2 (Hörsaal II, E25)	Session 3 (Zeichensaal, E25)	Session 4 (Seminarraum 3, E25)	Session 5 (Seminarraum 4, E25)
<p>Applied mathematical finance</p> <p>16:00 <i>Libor model with expiry-wise stochastic volatility and displacement</i> John Schoenmakers</p> <p>16:30 <i>Practical challenges in interest rate derivatives modeling</i> Artur Steiner</p> <p>17:00 <i>Diskussionsrunde</i></p>	<p>Approximation of optimal control problems with PDE constraints</p> <p>16:00 <i>Error estimates for the finite element approximation for nonconvex semi-infinite optimal control problems</i> Ira Neitzel</p> <p>16:30 <i>Optimal control of particle accelerators</i> Oliver Thoma</p> <p>17:00 <i>Discretization of Neumann boundary control problems on polyhedral domains</i> Max Winkler</p> <p>17:30 <i>A priori and a posteriori error estimates for elliptic optimization problems with Moreau-Yosida regularized state constraints</i> Winnifried Wollner</p>	<p>Complex fluids</p> <p>16:00 <i>Chemically reacting viscoelastic fluids</i> Tomas Barta</p> <p>16:30 <i>Weil-posedness of mixed order systems</i> Jürgen Saal</p> <p>17:00 <i>Spin coating of an evaporating liquid</i> Lorenz von Below</p> <p>17:30 <i>L_p-theory for free boundary problems for generalized Newtonian fluids</i> Dario Götz</p>	<p>Free probability theory and random matrices</p> <p>16:00 <i>Liberation of projections</i> Benoit Collins</p> <p>17:00 <i>The distribution of heavy Wigner and deterministic large matrices, a traffic-based approach</i> Camille Male</p> <p>17:30 <i>Partial freeness of random matrices</i> Jiahao Chen</p>	<p>Inverse problems</p> <p>16:00 <i>Computation of dispersion curves and external forces for anisotropic plates</i> Thomas Schuster</p> <p>16:30 <i>Sparsity-promoting reconstruction schemes for inverse scattering problems</i> Armin Lechleiter</p> <p>17:00 <i>Reconstruction in dynamic computerized tomography</i> Bernadette Hahn</p> <p>17:30 <i>Uncertainty principles and optimal function systems for inverse problems with sparsity constraints</i> Peter Maas</p>

<p>Session 6 (Hörsaal III, E25) Representation theory for finite groups</p> <p>16:00 Derived equivalences for finite groups David Craven</p> <p>17:00 Brauers trees of unipotent blocks of finite reductive groups Oliver Dudas</p> <p>17:30 Mackey functors for fusion systems Sejong Park</p>	<p>Session 7 (Hörsaal IV, E24) Tropical geometry</p> <p>16:00 Enumeration of tropical curves Ilia Itenberg</p> <p>17:00 Tropical Geometry and commutative algebra Tim Römer</p>	<p>Session 8 (Seminarraum 5, E24) Algebraic geometry and complex analysis</p> <p>16:00 Berezin-Toeplitz quantization of compact Kähler manifolds and its application Martin Schlichenmaler</p> <p>17:00 Brill-Noether loci in moduli spaces of stable curves Nicola Tarasca</p> <p>17:30 On the homotopy sequence Nori's fundamental group Lei Zhang</p>	<p>Session 9 (Seminarraum 6, E24) Didactics and history of mathematics</p> <p>16:00 Die Rolle der Entropie in der Choreographie von Pina Bausch Barbara Rüdiger</p> <p>16:30 Variablen aus fachlicher und didaktischer Perspektive Reinhard Oldenburg</p> <p>17:00 Ungleichungen in der Schulmathematik? Heinz Schumann</p> <p>17:30 $(a + b)^2 = a^2 + b^2$? – Ein Schauder-Fehler als Ausgangspunkt für strukturelle mathematische Entdeckungen Johanna Heitzer</p>	<p>Session 10 (Hörsaal 001, E13) Discrete mathematics</p> <p>16:00 How to play Mastermind with many colors Carola Winzen</p> <p>16:30 An $O(\log k)$-competitive algorithm for generalized caching Harald Räcke</p> <p>17:00 A polyhedral approach to the quadratic matching problem Frauke Liers</p> <p>17:30 Kombinatorische Eigenschaften affiner Räume Walter Wenzel</p>
<p>Session 11 (Hörsaal 002, E13) Functional analysis</p> <p>16:00 Commutative Toeplitz algebras over the unit ball in \mathbb{C}^n Wolfram Bauer</p> <p>16:30 Zur Spektraltheorie von Toeplitzoperatoren auf dem Hardyraum Zineb Akkar</p> <p>17:00 The essential commutant of analytic Toeplitz operators Kevin Everard</p> <p>17:30 Approximate projections and non-strongly converging approximation methods Markus Seidel</p>	<p>Session 12 (Hörsaal 003, E13) Geometry and topology</p> <p>16:00 Uniqueness of the approximating contact structure Thomas Vogel</p> <p>17:00 On the classification of embeddings of 4-manifolds in 7-space Diarmuid Crowley</p>	<p>Session 13 (Seminarraum 14, E13) Numerics and scientific computing</p> <p>16:00 Big trouble with small particle numbers: methods and models for simulating gene regulatory networks Tobias Jahinke</p> <p>17:00 An adaptive polynomial algorithm to model complex high-dimensional empirical data Marc Winter</p> <p>17:30 Double greedy algorithms for reduced basis methods Gerrit Welper</p>	<p>Session 14 (Seminarraum 15, E13) Stochastics</p> <p>16:00 Shifting Brownian motion and related problems Peter Mörters</p> <p>17:00 The resolvent and expected local times for Markov-modulated Brownian motion with phase dependent termination rates Lothar Breuer</p> <p>17:30 Limit theorems for random characteristics associated with fragmentation processes Robert Knobloch</p>	<p>Session 15 (Seminarraum 16, E13) Waves and patterns</p> <p>16:00 Justification of the Ginzburg-Landau approximation for an instability as it appears for Marangoni convection Guido Schneider</p> <p>16:30 The Camassa-Holm equation – past, present, and future Helge Holden</p> <p>17:00 An explicit butterfly catastrophe in front dynamics of certain reaction diffusion systems Jens Rademacher</p> <p>17:30 A new construction of modified equations for variational integrators Marcel Oliver</p>

Minisymposia and Sections (Tuesday 18 September 2012, 9:00-11:00)

Session 2 (Hörsaal II, E25) Complex fluids	Session 3 (Zeichensaal, E25) Free probability theory and random matrices	Session 4 (Seminarraum 3, E25) Machine learning	Session 5 (Seminarraum 4, E25) Representation theory for finite groups
<p>9:00 Power law fluids Lars Diening</p> <p>10:00 On incompressible Newtonian flows in domains with artificial boundaries Matthias Köhne</p> <p>10:30 Continuity of drag and domain stability in the low Mach number limits Elfriede Friedmann</p>	<p>9:00 Universal microscopic correlation functions for products of n independent Ginibre matrices Gernot Akemann</p> <p>10:00 Random subspaces of a tensor product and the additivity problem Ion Nechita</p> <p>10:30 Free Probability and planar algebras Stephen Curran</p>	<p>9:00 Limit properties of distance functions on random geometric graphs Ulrike von Luxburg</p> <p>9:30 Graph-based spectral approaches to manifold learning – A unifying theoretical analysis based on distance matrices and graph approximations to the geodesic metric Jochen Garcke</p> <p>10:00 Nonlinear eigenproblems for data analysis Matthias Hein</p> <p>10:30 Machine learning for dynamic games Thomas Gärtner</p>	<p>9:00 On Brauer's height zero conjecture Britta Späth</p> <p>10:00 Okuyama retractions and generalized Steinberg representations Marc Cabanes</p> <p>10:30 Further evidence for conjectures in block theory Benjamin Sambale</p>

<p>Session 6 (Hörsaal III, E25) Tropical geometry</p> <p>9:00 Wonderful compactifications from a tropical point of view Eva-Maria Feichtner</p> <p>10:00 Tropical approaches to amoebas supported on a circuit Timo de Wolff</p> <p>10:30 Tropical Schubert varieties Mathias Häbich</p>	<p>Session 7 (Hörsaal IV, E24) Waves and patterns</p> <p>9:00 Nonnegative global weak solutions for the thin-film approximation of the capillary driven Muskat problem Bodgan Vasile Matioc</p> <p>9:30 Approximation theorems for the water wave problem in the arc length formulation Wolf-Patrick Düll</p> <p>10:00 Steady internal water waves with a critical layer bounded by the wave surface Anca-Voichita Matioc</p> <p>10:30 Singularities of axisymmetric flows with gravity Georg Weiss</p>	<p>Session 8 (Seminarraum 5, E24) Algebra</p> <p>9:00 On the unit group of integral group rings Wolfgang Kimmerle</p> <p>10:00 Branching laws for tensor modules over $sl(\infty)$ Elitza Hristova</p> <p>10:30 Darstellungstheorie Drinfeld'scher Modulformen Enrico Varela</p>	<p>Session 9 (Seminarraum 6, E24) Discrete mathematics</p> <p>9:00 Mixed integer convex minimization Robert Weismantel</p> <p>10:00 A new approach to online scheduling: approximating the optimal competitive ratio Andreas Wiese</p> <p>10:30 14:30 The phase transition in random graph processes seen through the lens of PDE and singularity analysis Mihyun Kang</p>	<p>Session 10 (Hörsaal 001, E13) Functional analysis</p> <p>9:00 Division of distributions and Oka's principle for analytic Fredholm functions Bernhard Gramsch</p> <p>10:00 Applications of LF-space theory to partial differential operators Jochen Wengenroth</p> <p>10:30 Restriction spaces of A_∞ Dietmar Vogt</p>
<p>Session 11 (Hörsaal 002, E13) Geometry and topology</p> <p>9:00 Concordance and isotopy of metrics with positive scalar curvature Boris Botvinnik</p> <p>10:00 A smooth variation of Baas-Sullivan theory and positive scalar curvature Sven Fühning</p> <p>10:30 The equivariant Yamabe problem Farid Madani</p>	<p>Session 12 (Hörsaal 003, E13) Number theory</p> <p>9:00 On Abhyankar's generalized iteration conjecture Florian Breuer</p> <p>9:30 Number fields sharing a common discriminant Daniel Mayer</p> <p>10:00 Asymptotik von Galoisgruppen und Klassengruppen Gunter Malle</p>	<p>Session 13 (Seminarraum 14, E13) Partial differential equations</p> <p>9:00 Self-similarity in Smoluchowski's coagulation equation Barbara Niethammer</p> <p>10:00 Parabolic equations with diffusive hysteresis thresholds Pavel Gurevich</p> <p>10:30 Variational problems with linear growth conditions Michael Bildhauer</p>	<p>Session 14 (Seminarraum 15, E13) Stochastics</p> <p>9:00 Dependent processes in probability theory, statistics and analysis Herold Dehling</p> <p>10:00 Discrete multivariate survival functions and higher order monotonic (multi-) sequences Paul Ressel</p> <p>10:30 On the notion(s) of duality for Markov processes Sabine Jansen</p>	<p>Session 15 (Seminarraum 16, E13) Applied mathematical finance</p> <p>9:00 Reduced order models in financial applications Ekkehard Sachs</p> <p>9:30 Calibration of SDE-based financial market models Bastian Gross</p> <p>10:00 A primal-dual algorithm for Bermudan options with mixed buyer and seller exercise Jan Maruhn</p> <p>10:30 Efficient Monte Carlo computation of Greeks of Bermudan swaptions in the LIBOR model Ralf Korn</p>

Minisymposia and Sections (Wednesday 19 September 2012, 13:30-15:30)

Session 1 (Hörsaal I, E25) Dynamical systems	Session 2 (Hörsaal II, E25) Free probability theory and random matrices	Session 3 (Zeichensaal, E25) Nonparametric statistics	Session 4 (Seminarraum 3, E25) Representation theory for finite groups	Session 5 (Seminarraum 4, E25) Tropical geometry
<p>13:30 <i>On consistent couplings of quantum mechanical and dissipative systems</i> Alexander Mielke</p> <p>14:30 <i>Continuation and collapse of homoclinic tangles</i> Wolf-Jürgen Beyn</p>	<p>13:30 <i>Distribution of random matrices and free probability</i> Friedrich Götze</p> <p>14:30 <i>Gaussian fluctuations for random matrices with correlated entries</i> Hermann Schulz-Baldes</p> <p>15:00 <i>On sample covariance matrices with dependent entries</i> Michael Stolz</p>	<p>13:30 <i>On estimating higher order properties of locally stationary long-memory processes</i> Jan Beran</p> <p>14:00 <i>Modeling and estimating heavy tails and long memory in nonlinear time series models</i> Philippe Soulier</p> <p>14:30 <i>Density estimators for linear processes</i> Wolfgang Wefelmeyer</p> <p>15:00 <i>Testing and monitoring changes in correlation and variances using an extended functional delta method</i> Dominik Wied</p>	<p>13:30 <i>Modular Koszul duality</i> Geordie Williamson</p> <p>14:30 <i>The stable moment graph of an affine Kac-Moody algebra</i> Martina Lanini</p>	<p>13:30 <i>Symplectic sum formulas in real enumerative geometry</i> Erwan Brugallé</p> <p>14:30 <i>Towards a tropical mirror correspondence</i> Janko Böhm</p>

Session 6 (Hörsaal III, E25) Waves and patterns	14:00 <i>Traveling profile solutions to a model for the growth of fungal hyphae</i> Georg Prokert 14:30 <i>Snaking between stripes and spots</i> Daniel Wetzel 15:00 <i>Exponential stability in electrokinetics</i> Jürgen Saal	Session 7 (Hörsaal IV, E24) Algebra	13:30 <i>D-modules-driven stratification of an affine space</i> Viktor Levandovskyy 14:00 <i>Invariants of modular group algebras</i> Tiemachos Vassias 14:30 <i>Jordan-Hölder theorems for derived categories</i> Steffen König	Session 8 (Seminarraum 5, E24) Partial differential equations	13:30 <i>Branch points in a two-phase Bernoulli type free boundary problem</i> Georg Weiss 14:30 <i>BMO-estimates for the p-Laplacian and p-fluids</i> Lars Diening 15:00 <i>Reaction-diffusion equations with spatially distributed hysteresis</i> Sergey Tikhomirov	Session 9 (Seminarraum 6, E24) Functional analysis	13:30 <i>The operator sum method for evolution equations</i> Lutz Weis 14:30 <i>Spectral multipliers for groups and regularized groups of operators</i> Christoph Kriegler 15:00 <i>Convergence theorems in mean ergodic theorems</i> Markus Haase	Session 10 (Hörsaal 001, E13) Geometry and topology	13:30 <i>Combinatorics of configuration spaces</i> Günter M. Ziegler 14:30 <i>Dirac-harmonic maps, regularization and evolution equations</i> Volker Branding 15:00 <i>Special holonomy, rational formality and fibrations</i> Manuel Amann
Session 11 (Hörsaal 002, E13) Number theory	13:30 <i>On automorphisms of extremal lattices</i> Gabriele Nebe 14:30 <i>Eine Maßformel für das Geschlecht ganzzahliger, orthogonaler Darstellungen der zyklischen Gruppe von Primzahlordnung</i> Björn Hoffmann 15:00 <i>Ebene wohligerundete Gitter</i> Stefan Kühnlein	Session 12 (Hörsaal 003, E13) Numerics and scientific computing	13:30 <i>Numerical upscaling and preconditioning of highly heterogeneous second order elliptic problems</i> Raytcho Lazarov 14:30 <i>Adaptive wavelet domain decomposition methods for nonlinear elliptic PDEs</i> Dominik Lellik 15:00 <i>Riccati-based boundary feedback stabilization of flow problems</i> Heiko Weichelt	Session 13 (Seminarraum 14, E13) Discrete mathematics	13:30 <i>From graph homology to matroids: a surprising connection</i> Reinhard Diestel 14:30 <i>The price of connectivity for vertex cover</i> Oliver Schaudt 15:00 <i>Phase transitions and computational complexity</i> Amin Coja-Oghlan	Session 14 (Seminarraum 15, E13) Stochastics	13:30 <i>On the connection between discrete and continuous Wick calculus</i> Peter Parczewski 14:00 <i>A white noise approach for the Feynman integrand for electrons in random media</i> Herry Suryawan		

Minisymposia and Sections (Wednesday 19 September 2012, 16:00-18:00)

Session 1 (Hörsaal I, E25)	Session 2 (Hörsaal II, E25)	Session 3 (Zeichensaal, E25)	Session 4 (Seminarraum 3, E25)	Session 5 (Seminarraum 4, E25)
Dynamical systems 16:00 Exponential estimates for slow manifolds Claudia Wulff 16:30 The tumbling universe: cosmological models in the big-bang limit Stefan Liebscher 17:00 Periodic orbits in differential equations with state-dependent delays Jan Sieber 17:30 Cnoidal waves on FPU lattices Alice Mikikits-Leither	Free probability theory and random matrices 16:00 Chaos and the fourth moment Ivan Nourdin 17:00 Faber polynomials in free probability theory Tobias Mai 17:30 Limits for spacings Kristina Schubert	Nonparametric statistics 16:00 Asymptotics for degenerate U - and v -statistics of dependent random variables Anna Leucht 16:30 Bootstrap for degenerate U - and v -statistics of dependent random variables Michael Neumann 17:00 Bootstrap for U -statistics and U -quantiles under dependence Martin Wendler 17:30 Semi-nonparametric indirect inference Francisco Blasques	Information and communication in mathematics 16:00 EuDML – the prototype Romeo Angelache 16:30 Automatisches Klassifizieren und die Mathematical Subject Classification (MSC) Wolfram Sperber 17:00 Erschließung mathematischer Publikationen mittels linguistischer Verfahren Ulf Schöneberg 17:30 Formulae search: the MathSearch project Cevahir Demirkiran	Insurance mathematics 16:00 A risk-based premium: what does it mean for DB plan sponsors? An Chen 16:30 Worst-case-optimal dynamic reinsurance for large claims Olaf Menkens 17:00 Pricing and hedging of interest rate derivatives in a Lévy driven term structure model Kathrin Glau 17:30 Value of additional-payment-options in life annuity contracts Tobias Schacht

<p>Session 6 (Hörsaal III, E25) Waves and patterns</p> <p>16:00 <i>Instability of travelling waves in a singular chemotaxis model</i> Martin Meyries</p> <p>16:30 <i>On the existence and stability of solitary-wave solutions to a class of evolution equations of Whitham type</i> Mark Groves</p> <p>17:00 <i>A dimension-breaking phenomenon for steady water waves with weak surface tension</i> Erik Wahlén</p> <p>17:30 <i>Multimodal steady water waves</i> Mats Ehrnström</p>	<p>Session 7 (Hörsaal IV, E24) Algebra/Algebraic geometry and complex analysis</p> <p>16:00 <i>Structure constants and applications</i> Gunter Malle</p> <p>17:00 <i>Holomorphe symplektische Geometrie</i> Manfred Lehn</p>	<p>Session 8 (Seminarraum 5, E24) Partial differential equations</p> <p>16:00 <i>L^∞-estimates for derivatives of solutions to some parabolic free boundary problem</i> Darya Apushkinskaya</p> <p>16:30 <i>Global existence in electrokinetic flows</i> André Fischer</p> <p>17:00 <i>Evolving hypersurfaces in spacetime initial data sets</i> Kristen Moore</p> <p>17:30 <i>Homogenization of a system of multispecies diffusion-reaction equations</i> Hart Mahato</p>	<p>Session 9 (Seminarraum 6, E24) Functional analysis</p> <p>16:00 <i>Stochastic partial differential equations via non-time-homogeneous evolution systems</i> Martin Grothaus</p> <p>16:30 <i>The ADI splitting for Maxwell's equations</i> Roland Schnaubelt</p> <p>17:00 <i>Construction of a finite volume dynamical wetting model with δ-pinning in $(d+1)$-dimension via Dirichlet forms</i> Torben Fattler</p> <p>17:30 <i>Ergodicity of a spherical velocity Langevin type process and relations to a class of new geometric Langevin equations on manifolds</i> Patrik Stilgenbauer</p>	<p>Session 10 (Hörsaal 001, E13) Geometry and topology</p> <p>16:00 <i>Morse theory for families and torsion forms</i> Sebastian Goette</p> <p>17:00 <i>The Witten deformation for singular spaces</i> Ursula Ludwig</p> <p>17:30 <i>Properties of the Dirac-spectrum on three-dimensional lens spaces</i> Sebastian Boldt</p>
<p>Session 11 (Hörsaal 002, E13) Number theory</p> <p>16:00 <i>On a hidden property of Borcherds products</i> Bernhard Heim</p> <p>16:30 <i>Elliptic Eisenstein series</i> Anna von Pippich</p> <p>17:00 <i>Modulformen und das inverse Galois-Problem</i> Gabor Wiese</p>	<p>Session 12 (Hörsaal 003, E13) Numerics and scientific computing</p> <p>16:00 <i>Frequency-independent approximation of integral formulations of Helmholtz boundary value problems</i> Mario Bebendorf</p> <p>17:00 <i>On numerical methods for the simulation of two phase flows with population balance systems</i> Ellen Schmeyer</p> <p>17:30 <i>A numerical method for the simulation of uni- and bivariate population balance systems</i> Carina Suciu</p>	<p>Session 13 (Seminarraum 14, E13) Discrete mathematics</p> <p>16:00 <i>On the tree-packing conjecture of Gyarfás and Lehel</i> Anusch Taraz</p> <p>16:30 <i>A super-polynomial lower bound for Cunningham's rule for solving linear programs</i> Oliver Friedmann</p> <p>17:00 <i>Combinatorial abstractions for the polynomial Hirsch conjecture</i> Nicolai Hähnle</p> <p>17:30 <i>Multilevel algorithms</i> Peter Sanders</p>	<p>Session 14 (Hörsaal 004, E13) Discrete mathematics</p> <p>16:00 <i>On the tree-packing conjecture of Gyarfás and Lehel</i> Anusch Taraz</p> <p>16:30 <i>A super-polynomial lower bound for Cunningham's rule for solving linear programs</i> Oliver Friedmann</p> <p>17:00 <i>Combinatorial abstractions for the polynomial Hirsch conjecture</i> Nicolai Hähnle</p> <p>17:30 <i>Multilevel algorithms</i> Peter Sanders</p>	

Minisymposia, Sections and Studierendekonferenz (Thursday 20 September 2012, 13:30-15:30)

Session 1 (Hörsaal I, E25)	Session 2 (Hörsaal II, E25)	Session 3 (Zeichensaal, E25)	Session 4 (Seminarraum 3, E25)	Session 5 (Seminarraum 4, E25)
<p>Dynamical systems</p> <p>13:30 <i>The Turing instability in irregular network systems</i> Matthias Wolfrum</p> <p>14:00 <i>Reduction of interaction delays in networks</i> Leonhard Lücken</p> <p>14:30 <i>Perturbations of homoclinic snaking scenarios</i> Jürgen Knobloch</p> <p>15:00 <i>Invariant sets forced by symmetry</i> Sebastian Walcher</p>	<p>Free probability theory and random matrices</p> <p>13:30 <i>Review of some recent results on the Anderson model</i> Wolfgang Spitzer</p> <p>14:30 <i>Around functional inequalities for free entropy relative to a convex polynomial potential</i> Yoann Dabrowski</p> <p>15:00 <i>Products of free random variables and k-divisible partitions</i> Carlos Vargas</p>	<p>Information and communication in mathematics</p> <p>13:30 <i>Mathematik zwischen Open Access, Peer Reviewed Journals und Internetsuchdiensten</i> Judith Plümer</p> <p>14:00 <i>Open Access publishing in mathematics</i> Michael Jost</p> <p>14:30 <i>Autoren-Identifikation in Zentralblatt MATH - Verbesserung, Vernetzung, Kooperationen</i> Lucia Santamaria</p> <p>15:00 <i>SMATH – Informationsdienst für mathematische Software</i> Sebastian Bönsch</p>	<p>Insurance mathematics</p> <p>13:30 <i>Unisex tariffs in insurance markets</i> Jörn Sass</p> <p>14:00 <i>Risk analysis of annuity conversion options in a stochastic mortality environment</i> Katja Schilling</p> <p>14:30 <i>Risk-minimization for mortality derivatives</i> Irene Schreiber</p> <p>15:00 <i>Pricing of unemployment insurance products with doubly stochastic Markov chains</i> Jan Widenmann</p>	<p>Machine learning</p> <p>13:30 <i>Approximation properties of reproducing kernel Hilbert spaces</i> Ingo Steinwart</p> <p>14:00 <i>An application of generic chaining in high-dimensional statistics</i> Sara van de Geer</p> <p>14:30 <i>Transfer learning using kernel marginal predictors</i> Gilles Blanchard</p> <p>15:00 <i>On the bootstrap approach for some regularized kernel methods</i> Andreas Christmann</p>

<p>Session 6 (Hörsaal III, E25) Number theory</p> <p>13:30 Analytic methods for diophantine equations, and random Diophantine equations Rainer Dietmann</p>	<p>Session 7 (Hörsaal IV, E24) Geometry and topology</p> <p>13:30 Harmonic morphisms from twists Paul-Andi Nagy</p> <p>14:30 Exceptional geometries and minimal submanifolds Frederik Witt</p> <p>15:00 A flow approach to special holonomy Hartmut Weiß</p>	<p>Session 8 (Seminarraum 5, E24) Studierendenkonferenz</p> <p>13:30 A turbulence model based on invariants of the strain rate tensor Helene Dallmann</p> <p>14:00 Modelling and simulation of direct stream generation in solar thermal power plants Pascal Richter</p> <p>14:30 Konvexität und gleichmäßige Abschätzungen bei der Kapillaritätsgleichung Stephan Lenor</p> <p>15:00 Die linearisierte Elastizität als Grenzwert finiter Elastizität Pascal Gussmann</p>	<p>Session 9 (Seminarraum 6, E24) Functional analysis</p> <p>13:30 Über die positive Invertierbarkeit von Operatoren und Operatorintervallen in geordneten Banachräumen Martin Weber</p> <p>14:00 Locally definite normal operators in Krein spaces Friedrich Philipp</p> <p>14:30 Über das antisymmetrische Tensorprodukt David Wenzel</p> <p>15:00 Riccatigleichungen und Hamiltonsche Matrizen Christian Wyss</p> <p>15:30 Intersections of balls and sets of finite dimension Christian Richter</p>	<p>Session 10 (Hörsaal 001, E13) Partial differential equations</p> <p>13:30 Regularität für elliptische partielle Differentialgleichungen und stochastische Differentialbeispiele Jens Frehse</p> <p>14:30 Energy and energy dissipation in two mode equations Maria Westdickenberg</p> <p>15:00 Flowing maps to minimal surfaces Melanie Rupfin</p> <p>15:30 Ein singuläres, gemischtes Randwertproblem für minimale Graphen auf einer Riemannschen Fläche und das Plateausche Problem für Wendekurven Friedrich Sauvigny</p>
<p>Session 11 (Hörsaal 002, E13) Stochastics</p> <p>13:30 Nonparametric inference for multivariate data Arne Bathke</p> <p>14:00 How to motivate the use of the variance as a measure of statistical dispersion? Norbert Poschadel</p> <p>14:30 Statistical inference in general nonparametric regression and classification problems with regularized kernel methods Robert Häble</p> <p>15:00 Continuous mapping approach to the asymptotics of U- and V-statistics Eric Beutner</p>	<p>Session 12 (Hörsaal 003, E13) Studierendenkonferenz</p> <p>13:30 Wave equations on Robertson-Walker spacetimes and cosmological redshift Ariane Beier</p> <p>14:00 Geometrie höherdimensionaler schwarzer Löcher Bernadette Lessel</p> <p>14:30 Eigenschaften des Dirac-Spektrums auf Linsenräumen Sebastian Boldt</p> <p>15:00 Isospectral Alexandrov spaces Alexander Engel</p>	<p>Session 13 (Seminarraum 14, E13) Studierendenkonferenz</p> <p>13:30 Das Barvinok-Novik-Orbitop Kai Kellner</p> <p>14:00 Ein Schülerseminar zur tropischen Mathematik – Fördert forschendes Lernen Tim Haga</p> <p>14:30 Lifting tropical curves in a plane Anna Lena Winstel</p> <p>15:00 Berechnung von Ordnungen in Einheitsgruppen von endlichen Faktoringen Daniel Kortzak</p>	<p>Session 15 (Seminarraum 16, E13) Studierendenkonferenz</p> <p>13:30 Path-following methods for a class of gradient constrained minimization problems in function space Jennifer Rasch</p> <p>14:00 Exponentielle symplektische Integrioren für Hamiltonsche Systeme Sina Meister</p> <p>14:30 Numerische Berechnung genetischer Rekombinations-Wahrscheinlichkeiten Sebastian Probst</p> <p>15:00 Bregman iteration for optical flow Laurent Hoellgen</p>	

Minisymposia, Sections and Studierendenkonferenz (Thursday 20 September 2012, 16:00-18:00)

Session 1 (Hörsaal I, E25) Dynamical systems	Session 2 (Hörsaal II, E25) Industrial applications with stochastic models	Session 3 (Zeichensaal, E25) Nonparametric statistics	Session 4 (Seminarraum 3, E25) Studierendenkonferenz	Session 5 (Seminarraum 4, E25) Machine learning
<p>16:00 KdV and NLS dynamics in dispersive wave systems - an overview and latest developments - Guido Schneider</p> <p>17:00 pde2PATH – a Matlab package for continuation and bifurcation in 2D elliptic systems Hannes Uecker</p> <p>17:30 Dynamics near heteroclinic networks with periodic orbits by Lyapunov-Schmidt reduction Jens Rademacher</p>	<p>16:00 Analysis and modeling of microstructures based on 3D image data Claudia Redenbach</p> <p>16:30 Modeling of nonwoven structures generated by fiber laydown as 3d stochastic processes Johannes Maringer</p> <p>17:00 Generation of homogeneous mass distributions using Abel's inversion Dimitri Nowak</p> <p>17:30 Multilevel Monte Carlo method for CDF estimation with application for AFFF processes Tigran Nagapetyan</p>	<p>16:00 Survival copula: dependence modelling and statistical independence tests Arnold Janssen</p> <p>16:30 Sequential empirical copula processes under serial dependence Axel Bücher</p> <p>17:00 Comparative and qualitative robustness for law-invariant risk measures Volker Krätschmer</p> <p>17:30 Nonparametric estimation of some finite mixture models Laurent Bordes</p>	<p>16:00 Diophantine equations, heights and the Manin conjecture Felix Janda</p> <p>16:30 Hyperelliptic resultant formulas Martin Schmidt</p> <p>17:00 Rationale Punkte auf einer singulären del Pezzo Fläche Susanne Moll</p> <p>17:30 Dualization invariance and a new complex elliptic genus Stefan Schreieder</p>	<p>16:00 Quantifying uncertainty in complex simulation models: ensemble copula coupling and the future of weather forecasting Tilmann Gneiting</p> <p>16:30 Variational approximations of Bayesian inference for large scale automated decision making Matthias Seeger</p> <p>17:00 Context sensitive information: which bits matter in data? Joachim Buhmann</p> <p>17:30 Variational shape priors and learning Christoph Schnörr</p>

<p>Session 6 (Hörsaal III, E25) Studierendenkonferenz</p> <p>16:00 Generalized Bloch theory for quasicrystals Siegfried Beckus</p> <p>16:30 Direkte Methoden der Variationsrechnung nach Alfred Haar Tristan Jenschke</p> <p>17:00 Gabor frames of totally positive functions of finite type Tobias Kloos</p> <p>17:30 Global properties of Dirichlet forms on discrete spaces Marcel Schmidt</p>	<p>Session 7 (Hörsaal IV, E24) Geometry and topology</p> <p>16:00 Lorentzian manifolds with special holonomy Helga Baum</p> <p>17:00 Holonomy reductions in parabolic geometry Felipe Leitner</p>	<p>Session 8 (Seminarraum 5, E24) Studierendenkonferenz</p> <p>16:00 Semigroups for linear systems Miriam Bombieri</p> <p>16:30 Zweidimensionale Flächen mit beliebiger Kodimension: Existenz des Tangentialraumes in Verzweigungspunkten und ein Barriereprinzip für starke Sublösungen Patrick Henkmeyer</p> <p>17:00 Über Theoreme von Bernsteinschen Typ Peter Lewintan</p> <p>17:30 Slices through fractals Rüdiger Zeller</p>	<p>Session 9 (Seminarraum 6, E24) Studierendenkonferenz</p> <p>16:00 On roots of generalized Eisenstein series Karl Bringmann</p> <p>16:30 Maximale Gitter und ihre Theta-Reihen Ivica Turkalj</p> <p>17:00 Stickelberger's discriminant theorem over arbitrary bases Daniel Harrer</p> <p>17:30 A counterexample to Gouvêa's dimension conjecture Johannes Sprang</p>
<p>Session 14 (Seminarraum 15, E13) Studierendenkonferenz</p> <p>16:00 Ein Transfer-Paradoxon bei besteuerten Matrixspielen Marlis Bärthel</p> <p>16:30 Untersuchung von Self-Play-Experimenten für die Monte-Carlo-Spielbaumsuche Matthias Beckmann</p> <p>17:00 Calibration of self-decomposable Lévy models Mathias Trabs</p> <p>17:30 Pricing and hedging of VSTOXX futures and options Elisabeth Zschorlich</p>	<p>Session 15 (Seminarraum 16, E13) Studierendenkonferenz</p> <p>16:00 Kuhn's finiteness conjecture for cohomology Fabian Hebestreit</p> <p>16:30 Cocycles for characteristic classes in smooth Deligne cohomology Natalie Peternell</p> <p>17:00 Systolische Geometrie projektiver Räume und verallgemeinerte Wirtinger-Ungleichungen Fabian Telschow</p> <p>17:30 Matsumoto's theorem on K-theory and A^1-homotopy theory of reductive groups Konrad Völkel</p>		