

Programme for Monday, September 25, 2017

Morning Session			<i>Room: Bürglsaal</i>
<i>Chair: Ulrich Langer</i>			
9:30	Opening		
9:40	Gabriel Wittum Extreme Scale Solvers for Coupled Systems.		
10:30	Tea and Coffee Break		– 10:50
	Session 65 <i>Chair: Thomas Apel</i> <i>Room: Bürglsaal</i>	Adaptive FEM I <i>Chair: Jens Markus Melenk</i> <i>Room: SR 1</i>	Advanced FEM <i>Chair: Svetozar Margenov</i> <i>Room: SR 2</i>
10:50	Gundolf Haase FEM Completely Implemented for GPUs by Available Algorithm Libraries.	Andreas Schröder A Posteriori Error Estimates for h - and hp -Adaptive Mixed Finite Elements.	Francisco-Javier Sayas Some new HDG Projections and their Use for Streamlined Analysis of HDG Methods.
11:15	Joachim Schöberl The Hellan-Herrmann-Johnson (HHJ) Method and the Tangential-Displacement Normal-Normal-Stress Continuous (TDNNS) Method.	Lothar Banz Higher Order FEM for the Obstacle Problem of the p -Laplacian.	Ariel Lombardi A Mixed Discretization of Elliptic Problems on Anisotropic Hybrid Meshes.
11:40	Sven Beuchler SPC-PM3AdH Finite Element Computations on Locally Refined Hexahedral Meshes with Hanging Nodes.	Alex Bespalov Adaptive Stochastic Galerkin Methods for Parametric PDEs with Spatial Singularities.	Zoa de Wijn Mixed Finite Volume Element Methods for Three-field Formulations in Elasticity and Poroelasticity.
12:05	Michael Weise A new Efficient Locking-free Mindlin–Reissner Plate Element.	Herbert Egger A Mixed Finite Element Approximation for the Compressible Euler Equations.	Oliver Rheinbach Domain Decomposition for Exascale Computing.
12:30	Lunch		Haupthaus
Afternoon Session			<i>Room: Bürglsaal</i>
<i>Chair: Arnd Meyer</i>			
14:00	Ricardo Nochetto Numerical Methods for Fractional Diffusion.		
14:50	Fast Forward Postersession <i>Chair: Stefan Takacs</i>		<i>Room: Bürglsaal</i>
	Bernhard Endtmayer Adaptive Mesh Refinement for Multiple Goal Functionals.		
	Christoph Erath Adaptive Coupling of Finite Volume and Boundary Element Methods: Non-symmetric and Three-field FVM-BEM.		
	Christoph Hofer Fast Multipatch Isogeometric Analysis Solvers.		
	Daniel Jodlbauer Parallel Block-Preconditioners for Fluid-Structure-Interaction Problems.		
	Eglantina Kalluci The Parallel Implementation of the Hyperbolic Equation.		
	followed by Tea and Coffee Break		– 15:30

Programme for Monday, September 25, 2017 (continued)

	Fractional PDEs I <i>Chair:</i> Ricardo Nochetto <i>Room:</i> Bürglsaal	Adaptive FEM II <i>Chair:</i> Sergej Rjasanow <i>Room:</i> SR 1	Isogeometrical Analysis I <i>Chair:</i> Walter Zulehner <i>Room:</i> SR 2
15:30	Svetozar Margenov Solution Methods for Fractional Diffusion Problems and Related Rational Approximations.	Vadim Korneev On the Accuracy and Robustness of A Posteriori Error Majorants for Approximate Solutions of Reaction-Diffusion Equations.	Mario Kapl C^2 -smooth Isogeometric Functions on Planar Multi-Patch Geometries.
15:55	Johannes Pfefferer hp-Finite Elements for Fractional Diffusion.	Maksim Frolov Reliability and Efficiency of Functional-type A Posteriori Error Estimates for Solid Mechanics in 2D: a Comparison of Standard and Mixed Finite Elements.	Svetlana Matculevich Adaptive IgA Based on the Functional-type Error Control.
16:20	Jens Markus Melenk Local FEMs for the Fractional Laplacian.	Simon Becher On Layer-adapted Meshes for General Linear Turning Point Problems.	Ioannis Touloupoulos Time Discontinuous Galerkin Multipatch Isogeometric Analysis of Parabolic Problems.
16:45	Postersession / Tea and Coffee Break		– 17:15
	Fractional PDEs II <i>Chair:</i> Andreas Schröder <i>Room:</i> Bürglsaal	Adaptive FEM III <i>Chair:</i> Joachim Schöberl <i>Room:</i> SR 1	Solvers <i>Chair:</i> Michael Jung <i>Room:</i> SR 2
17:15	Nicole Cusimano Numerical Approximations of a Family of Nonlocal Operators on Bounded Domains.	Marius Paul Bruchhäuser Goal-oriented Error Control for Stabilized Finite Element Methods.	Roland Herzog Another GMRES please!?
17:40	Paolo Gatto Approximation of the Fractional Laplacian via hp-Finite Elements.	Andreas Brenner Fully Discrete A Posteriori Estimates for the Two-step Backward Differentiation Formula (BDF2) for the Time Dependent Stokes Equations.	Christoph Hofer Efficient Solvers for Discontinuous Galerkin Space Time Isogeometric Analysis Discretizations of Parabolic Problems.
18:05	Gabriel Acosta FEM for Fractional Evolution Problems.	Christoph Erath Adaptive Vertex-centered Finite Volume Methods (Petrov-Galerkin) with Convergence Rates for General Second-Order Linear Elliptic PDE.	Stefan Takacs Robust Multigrid Methods for Isogeometric Discretizations of Multipatch Domains.
18:30	Dinner / Get-together		Haupthaus
20:00	Meeting of the Scientific Committee		SR 1

Programme for Tuesday, September 26, 2017

Morning Session			<i>Room: Bürglsaal</i>
<i>Chair: Roland Herzog</i>			
9:00	Mark Ainsworth Fractional Cahn-Hilliard Equation(s): Analysis, Properties and Approximation.		
9:50	5 min break – switch to parallel session		
	Fractional PDEs III <i>Chair: Mark Ainsworth</i> <i>Room: Bürglsaal</i>	Space Time I <i>Chair: Helmut Harbrecht</i> <i>Room: SR 1</i>	Isogeometrical Analysis II <i>Chair: Bert Jüttler</i> <i>Room: SR 2</i>
9:55	Martin Stynes A New Analysis of a Numerical Method for the Time-fractional Fokker-Planck Equation with General Forcing.	Olaf Steinbach Coercive Space-time Finite Element Methods for Time-dependent Problems.	Felix Scholz Partial Tensor Decomposition for Decoupling Isogeometric Discretisations.
10:20	Chaobao Huang Optimal Error Analysis of a Direct Discontinuous Galerkin Method for Time-fractional Reaction-Diffusion Equation.	Marco Zank Space-Time Methods for the Wave Equation.	Clemens Hofreither A Black-Box Algorithm for Fast Matrix Assembly in Isogeometric Analysis.
10:45	Tea and Coffee Break		– 11:05
	BEM <i>Chair: Olaf Steinbach</i> <i>Room: Bürglsaal</i>	Space Time II <i>Chair: Jens Lang</i> <i>Room: SR 1</i>	FEM on Surfaces <i>Chair: Martin Stynes</i> <i>Room: SR 2</i>
11:05	Sergej Rjasanow Numerical Solution of the General Diffusion Equation Based on the Boundary Element Methods and Chebyshev Approximation.	Martin Neumüller A Time-parallel Algorithm for Parabolic Evolution Equations.	Lutz Tobiska Local Projection Stabilization for a Convection-Diffusion Equation on a Surface.
11:30	Helmut Harbrecht Adaptive Wavelet Boundary Element Methods.	Huidong Yang Monolithic Algebraic Multigrid Methods for a Space-time Finite Element Discretization of Parabolic Optimal Control Problems.	Axel Voigt A FEM Approach for a Surface Navier-Stokes Equation on Manifolds with Arbitrary Genus.
11:55	Günther Of On the Non-symmetric FEM BEM Coupling for the Stokes Problem.	Stefan Dohr Space-time Boundary Element Spaces and Operator Preconditioning for the Two-dimensional Heat Equation.	Peter Gangl A Local Mesh Modification Strategy for Interface Problems with Application to Shape and Topology Optimization.
12:20	Lunch		Haupthaus
13:05	Departure for Excursion (extra 45 Euro to pay cash on Monday) 13:20 – Boat from Strobl to St. Wolfgang 14:50 – Schafbergbahn from St. Wolfgang uphill to last stop Schafbergspitze		Return options: (1) 16:25 railway / 17:05 boat / 17:40 Strobl (2) 17:05 railway / 17:40-19:00 walk to Strobl
19:30	Conference Dinner		Haupthaus

Programme for Wednesday, September 27, 2017

Morning Session			
<i>Chair:</i> Lutz Tobiska			<i>Room:</i> Bürglsaal
9:00	Volker John Finite Elements for Scalar Convection-Dominated Equations and Incompressible Flow Problems – a Never Ending Story.		
9:50	5 min break – switch to parallel session		
	CFD I <i>Chair:</i> Volker John <i>Room:</i> Bürglsaal	Adaptive FEM IV <i>Chair:</i> Vadim Korneev <i>Room:</i> SR 1	Time Discretization <i>Chair:</i> Axel Voigt <i>Room:</i> SR 2
9:55	Alexander Linke Towards Pressure-robust Mixed Methods for the Incompressible Navier-Stokes Equations.	Thomas Apel Superconvergent Graded Meshes.	Jens Lang On the Stability and Conditioning of Anisotropic Finite-Element-Runge-Kutta Methods.
10:20	Philip Lukas Lederer Pressure Robust Discretizations for Incompressible Flows.	Svetoslav Nakov Functional A Posteriori Error Estimates for the Nonlinear Poisson-Boltzmann Equation.	Igor Voulis An Optimal Order DG Time Discretization Scheme for Parabolic Problems with Non-homogeneous Constraints.
10:45	Tea and Coffee Break		– 11:10
	CFD II <i>Chair:</i> Gabriel Wittum <i>Room:</i> Bürglsaal	Solid Mechanics <i>Chair:</i> Sven Beuchler <i>Room:</i> SR 1	Efficient Implementation <i>Chair:</i> Gundolf Haase <i>Room:</i> SR 2
11:10	Susanne Höllbacher Relating FEM to FVM for Interface Problems in CFD.	Walter Zulehner A new Approach for Kirchhoff-Love Plates and Shells.	Matthias Hochsteger Automated Finite Element Assembling.
11:35	Jürgen Fuhrmann A Coupled FEM-FVM Method for Electroosmotic Flow.	Jan Petsche hp-FEM for a Stabilized Three-field Formulation of the Biharmonic Problem.	Nicolas Neuss How to Make a Common Lisp Finite Element Library High-performing?.
12:00	Michael Neunteufel Fluid-Structure Interaction with H(div)-Conforming HDG and a new H(curl)-Conforming Method for Non-Linear Elasticity.	Rolf Springer Efficient Simulation of Short Fibre Reinforced Composites.	Daniel Ganellari Domain Decomposition and Memory Footprint Reduction of an Eikonal Solver.
12:25	Closing		<i>Room:</i> Bürglsaal
12:30	Lunch		Haupthaus
13:30	Departure		