

Monday, 21 July

Time	Lecture room			
08:00 – 08:45	Registration (Room 051)			
08:45 – 09:00	Opening			
	Plenary talks (Chair: Deuffhard)			
09:00 – 09:45	Brezzi: Nonmatching Grids and Lagrange Multipliers [p. 17]			
09:45 – 10:30	Fischer: Hybrid Schwarz-Multigrid Methods for the Spectral Element Method [p. 18]			
10:30 – 11:00	Coffee break			
	Contributed talks			
	Lecture room	Room 005	Room 049	Room 055
11:00 – 11:20	Pavarino: A Parallel Solver for Reaction-Diffusion Systems in Computational Electrocardiology [p. 61]	Khoromskij: Direct Schur Complement Method by Hierarchical Matrix Techniques [p. 57]	Garbey: Multilevel Solutions, Least Square Extrapolation and a Posteriori Error Estimate [p. 55]	Stefanica: Lower Bounds for Overlapping and Nonoverlapping Domain Decomposition Preconditioners for Mortar Element Methods [p. 63]
11:20 – 11:40	Pacull: — cancelled —	Le Borne: Hierarchical Matrices for Convection-Dominated Problems [p. 58]	Marcinkowski: Parallel Performance of a Two-Level ASPIN Algorithm [p. 59]	Sheen: P_1 Nonconforming Finite Element Method on Quadrilaterals and its Domain Decomposition Procedure [p. 63]
11:40 – 12:00	Pennacchio: The Mortar Finite Element Method in Computational Electrocardiology [p. 61]	Nabben: A Comparison of Deflation and Coarse Grid Correction Applied to Porous Media Flow [p. 60]	Chen: An Accelerated Block-Parallel Newton Method via Overlapped Partitioning [p. 53]	Cros: Rigid Body Modes within the Framework of Domain Decomposition Methods [p. 54]
12:00 – 12:20	Weber Dos Santos: Preconditioning Techniques for the Bidomain Equations [p. 64]	Szyld: Algebraic Analysis of Schwarz Methods for Singular Systems [p. 63]	Kulkarni: Domain Decomposition Based Two-Level Newton Scheme for non-Linear Problems [p. 58]	Rahman: An Additive Schwarz Method for the Morley Element Approximation of a Non-Linear Biharmonic Equation [p. 62]
12:20 – 12:40	Tagami: Numerical Computations of 3-D Eddy Current Problems by Iterative Domain Decomposition Method [p. 64]	Oudin: Acceleration of the Schwarz Method for Elliptic Problems [p. 60]	Azimi: Geometrical Discretization of the Computational Domain for Computations of Axisymmetric Supersonic Flows [p. 51]	
12:40 – 14:00	Lunch break			

Monday, 21 July

Time	Lecture room			
	Plenary talks (Chair: Widlund)			
14:00 – 14:45	Farhat: Time-Decomposed Parallel Time-Integrators: Theory and Feasibility Studies for Accelerating the Massively Parallel Solution of Fluid, Structure, and Fluid-Structure Problems [p. 17]			
14:45 – 15:30	Klawonn: Dual-Primal FETI Methods for Elasticity [p. 21]			
15:30 – 16:00	Coffee break			
	Minisymposia			
	MS08 Domain Decomposition on Nonmatching Grids (Hoppe, Wohlmuth, Kuznetsov) [p. 38]	MS02 Discretization Techniques and Algorithms for Multibody Contact Problems (Wohlmuth, Sassi) [p. 26]	MS06 Robust Decomposition Methods for Parameter Dependent Problems (Langer, Nepomnyaschikh) [p. 35]	
	Lecture room	Room 005	Room 049	Room 055
16:00 – 16:25	Braess: A Cascadic Multigrid Algorithm for Mortar Elements [p. 38]	Dostal: Optimal Penalty and Scalable FETI Based Algorithms for Numerical Solution of Variational Inequalities [p. 26]	Nepomnyaschikh: Preconditioning for Heterogeneous Problems [p. 35]	
16:25 – 16:50	Maday: Coupling Scalar and Vector Potentials on Nonmatching Grids for Eddy Currents in Moving Conductor [p. 38]	Sassi: A Mixed Finite Element Approximation of 3D Contact Problems with Given Friction: Approximation and the Numerical Realization [p. 26]	Scherer: Weighted Norm-Equivalences for Preconditioning [p. 36]	
16:50 – 17:15	Wieners: Multigrid Analysis for Saddle Point Problems Arising from Mortar Discretizations [p. 38]	Krause: Fast Solving of Contact Problems on Complicated Geometries [p. 27]	Beuchler: A Dirichlet-Dirichlet DD -preconditioner for p -fem [p. 36]	
17:15 – 17:40	Lamichhane: Second Order Lagrange Multiplier Spaces for Mortar Finite Element Discretizations [p. 39]	Sassi: Domain Decomposition Algorithms for Contact Problems [p. 27]	Becirovic: Optimal Extension Operators for High Order Tetrahedral Elements [p. 36]	
17:40 – 18:05	Xu: A Mortar Element Method for a Plate Bending Problem [p. 39]	Vassilevski: Monotone Element Agglomeration AMG _e for Contact Problems [p. 27]	Deng: Folding Process of Thin-Walled Prismatic Columns by Origami Modeling [p. 36]	

Tuesday, 22 July

Time	Lecture room			
	Plenary talks (Chair: Sprekels)			
09:00 – 09:45	Gilg: Industrial Mechatronics - Some Problems from a Mathematical Viewpoint [p. 19]			
09:45 – 10:30	Girault: Combining Domain Decomposition with Other Techniques: Fictitious Domain, Discontinuous Galerkin,... [p. 19]			
10:30 – 11:00	Coffee break			
	Minisymposia			
	MS09 FETI and Neumann-Neumann Domain Decomposition Methods (Klawonn, Pierson, Widlund) [p. 41]	MS10 Recent Advances for the Parareal in Time Algorithm (Maday) [p. 45]	MS12 Trefftz-Methods (Herrera, Yates) [p. 48]	
	Lecture room	Room 005	Room 049	Room 055
11:00 – 11:25	Farhat: An Iterative Domain Decomposition Method for the Solution of a Class of Indefinite Problems in Computational Structural Dynamics [p. 41]	Maday: The Parareal Algorithm: Basics and Combination with Domain Decomposition Iterations [p. 45]	Herrera: A New and More General Version of the Hybrid-Trefftz Finite Element Model, Derived by Application of th-Domain Decomposition [p. 49]	
11:25 – 11:50	Widlund: Selecting Primal Constraints for FETI-DP Algorithms for Linear Elasticity [p. 41]	Bal: On the Analysis and Implementation of the Parareal Algorithm [p. 45]	Yates: Trefftz-Herrera Method: Highly Accurate Numerical Algorithms for Parabolic Equations [p. 49]	
11:50 – 12:15	Kucera: The FETI Based Domain Decomposition Method for Solving 3D-Multibody Contact Problems with Coulomb Friction [p. 41]	Staff: Stability and Convergence of the Parareal Algorithm [p. 45]	Rubio-Acosta: Parallel Implementation of Indirect Collocation Methods [p. 49]	
12:15 – 12:40	Kim: A FETI-DP Method for the Stokes Problems on Nonmatching Grids [p. 42]	Fischer: Investigation of the Parareal Algorithm for Semi-Implicit Incompressible Navier-Stokes Simulations [p. 46]	Diaz-Viera: Trefftz-Herrera Domain Decomposition Method for Biharmonic Equation [p. 50]	
12:40 – 14:00	Lunch break			

Tuesday, 22 July

Time	Lecture room			
	Plenary talks (Chair: Kwarada)			
14:00 – 14:45	Kako: Numerical Approximation of Dirichlet-to-Neumann Mapping and its Application to Voice Generation Problem [p. 21]			
14:45 – 15:30	Hiptmair: Domain Decomposition Preconditioners for Edge Elements: A Survey [p. 19]			
15:30 – 16:00	Coffee break			
	Minisymposia			
	MS04 Domain Decomposition Methods for Wave Propagation in Unbounded Media (Antoine, Schmidt) [p. 32]	MS05 Heterogeneous Domain Decomposition with Applications in Multiphysics (Kornhuber, Quarteroni) [p. 33]	MS03 Recent Developments for Schwarz Methods (Gander) [p. 27]	
	Lecture room	Room 005	Room 049	Room 055
16:00 – 16:25	Hohage: New Transparent Boundary Conditions for Coupled Interior/Exterior Wave Propagation Problems [p. 32]	Hoppe: Domain Decomposition Methods in Electrothermomechanical Coupling Problems [p. 34]	Gander: RAS: Understanding Restricted Additive Schwarz [p. 28]	
16:25 – 16:50	Balin: Domain Decomposition and Additive Schwarz Techniques in the Solution of a TE Model of the Scattering by an Electrically Deep Cavity [p. 32]	Nefedov: Subgridding in Finite-Difference Time-Domain Method [p. 34]	Lube: Acceleration of an Iterative Substructuring Method for Singularly Perturbed Elliptic Problems [p. 28]	
16:50 – 17:15	Antoine: On the Construction of Approximate Boundary Conditions for Solving the Interior Problem of the Acoustic Scattering Transmission Problem [p. 33]	Saleri: A Multiphysics Strategy for Free Surface Flows [p. 34]	Gerardo-Giorda: Modified Schwarz Algorithms without Overlap for the Harmonic Maxwell's System [p. 28]	
17:15 – 17:40	Schmidt: Numerical Methods to Realize the Pole Condition Concept [p. 33]	Schieweck: Coupling Fluid Flow with Porous Media Flow [p. 35]	Nataf: Finite Volume Methods on Non-Matching Grids with Arbitrary Interface Conditions [p. 28]	
17:40 – 18:05	Ehrhardt: Approximation, Stability and Fast Calculation of non-Local Boundary Conditions for the Schrödinger Equation [p. 33]	Zunino: Iterative Substructuring Methods for Advection-Diffusion Problems in Heterogeneous Media [p. 35]		

Wednesday, 23 July

Time	Lecture room			
	Plenary talks (Chair: Quarteroni)			
09:00 – 09:45	Valli: The Swiss Carpet Preconditioner: A Simple Parallel Preconditioner of Dirichlet-Neumann Type [p. 22]			
09:45 – 10:30	Langer: Boundary and Finite Element Tearing and Interconnecting Methods. [p. 21]			
10:30 – 11:00	Coffee break			
	Minisymposia			
	MS09 FETI and Neumann-Neumann Domain Decomposition Methods (Klawonn, Pierson, Widlund) [p. 41]	MS07 Parallel Finite Element Software (Bastian, Wieners) [p. 37]	MS03 Recent Developments for Schwarz Methods (Gander) [p. 27]	
	Lecture room	Room 005	Room 049	Room 055
11:00 – 11:25	Stefanica: Parallel FETI Algorithms for Mortars [p. 42]	Banaś: A Model for Parallel Adaptive Finite Element Software [p. 37]	Dolean: A Non-Overlapping Schwarz Type Algorithm for the Resolution of the Euler Equations [p. 29]	
11:25 – 11:50	Rheinbach: Some Computational Results for Dual-Primal FETI Methods for Three Dimensional Elliptic Problems [p. 42]	Pflaum: Parallelization Concepts of the Library EXPDE [p. 37]	Rohde: Overlapping Schwarz Waveform Relaxation for Convection Dominated Nonlinear Conservation Laws [p. 30]	
11:50 – 12:15	Rey: An Hybrid Domain Decomposition Method [p. 43]	Wieners: Distributed Point Objects: A New Concept for Parallel Finite Elements [p. 37]	Martin: Domain Decomposition Methods for Unsteady Convection Diffusion Equation [p. 30]	
12:15 – 12:40	Fragakis: A Family of FETI-Derived Preconditioners for the Primal Substructuring Method: Application to Multiple Right-Hand Side Problems and Implicit Dynamic Analysis [p. 43]	Bastian: Towards a Unified Framework for Finite Element Computations [p. 37]	Rapin: A Stabilized Three Field Domain Decomposition Formulation for Advection-Diffusion Problems and its Iterative Decoupling [p. 30]	
12:40 – 14:00	Lunch break			

Wednesday, 23 July

Time	Social event
14:00 – 19:00	Trip to Potsdam (meeting in front of the computer science building 10 minutes in advance)

Thursday, 24 July

Time	Lecture room			
	Plenary talks (Chair: Periaux)			
09:00 – 09:45	Ghattas: Multiscale Methods for Inverse Wave Propagation [p. 18]			
09:45 – 10:30	Joly: Domain Decomposition Approaches to Space-Time Mesh Refinement in Linear Wave Propagation [p. 20]			
10:30 – 11:00	Coffee break			
	Contributed talks			
	Lecture room	Room 005	Room 049	Room 055
11:00 – 11:20	Turek: Adaptivity Concepts and Load Balancing Strategies for a Generalized Parallel Multigrid/Domain Decomposition Solver [p. 64]	Heinkenschloss: Domain Decomposition Preconditioners for the Optimization of Distributed Parameter Systems [p. 56]	Ismail: The Fat Boundary Method: Convergence and Error Analysis [p. 57]	Boursier: Modelling of an Underground Waste Disposal Site by Upscaling and Simulation with Domain Decomposition Method [p. 52]
11:20 – 11:40	Charmpis: Generation of Subdomains and Subdomain Clusters for Domain Decomposition Methods [p. 53]	Periaux: Domain Embedding/Controllability Methods for the Conjugate Gradient Solution of Wave Propagation Problems: Application to Shape Optimization [p. 61]	Daoud: Explicit Implicit Non Overlapping Domain Decomposition Method with Splitting up method for Multi Dimensional Parabolic Problem [p. 54]	Calugaru: A non-Overlapping Domain Decomposition Method to Solve Flow in Discontinuous Porous Media [p. 52]
11:40 – 12:00	Compton: Domain Decomposition and Load Balancing in the AMTRAN Neutron Transport Code [p. 54]	Pieska: Predictor-Corrector Methods for Solving Continuous Casting Problem [p. 62]	Filatov: — cancelled —	Discacciati: Domain Decomposition Methods for Coupling Stokes and Darcy Equations [p. 55]
12:00 – 12:20	Huelsemann: Optimised Data Structures for Efficient Large Scale Parallel Computations [p. 57]	Hientzsch: Domain Decomposition Preconditioners for Spectral Nedelec Elements in Two and Three Dimensions [p. 56]	Li: Robin Transmission Conditions for Overlapping Additive Schwarz Method Applied to Elliptic Problems [p. 59]	Martin: Domain Decomposition Methods for Viscous Shallow Water Equation [p. 59]
12:20 – 12:40	Rychkov: Parallel Distributed Object-Oriented Model of Domain Decomposition [p. 62]	Urazbaeva: System of Queuing Research with the Decomposition Technique and its Application to the Analysis of the Fiber Optic Transmission Network with the DQDB Protocol [p. 64]	Mihai: A Two-Grid Alternate Strip-Based Domain Decomposition Strategy in Two-Dimensions [p. 59]	Krzyzanowski: Domain Decomposition for Discontinuous Galerkin Method with Application to Stokes Flow [p. 58]
12:40 – 14:00	Lunch break			

Thursday, 24 July

Time	Lecture room			
	Plenary talks (Chair: Xu)			
14:00 – 14:45	Espedal: Parallel Simulation of Multiphase/Multicomponent Flow Models [p. 17]			
14:45 – 15:30	Bänsch: Finite Element Methods for Curvature Driven Problems [p. 17]			
15:30 – 16:00	Coffee break			
	Minisymposia			
	MS08 Domain Decomposition on Nonmatching Grids (Hoppe, Wohlmuth, Kuznetsov) [p. 38]	MS01 Collaborating Subdomains for Multi-Scale Multi-Physics Modelling (Chow, Lai) [p. 23]	MS11 Space Decomposition and Subspace Correction Methods for Linear and Nonlinear Problems (Tai, Xu) [p. 46]	
	Lecture room	Room 005	Room 049	Room 055
16:00 – 16:25	Heinrich: Nitsche-Type Mortaring for Elliptic Problems with Singularities and Boundary Layers [p. 39]	Cai: ASPIN for Incompressible Navier-Stokes Equations [p. 23]	Badea: On a Multilevel Schwarz Method for the Constraint Minimization of non-Quadratic Functionals [p. 46]	
16:25 – 16:50	Kuznetsov: Mixed Finite Element Methods for Diffusion Equations on Nonmatching Grids [p. 39]	Knopp: Iterative Substructuring Methods for Indoor Air Flow Simulation [p. 23]	Kornhuber: Hierarchical Decomposition of Domains with Fractures [p. 47]	
16:50 – 17:15	Rahman: Additive Schwarz Method for the Mortar Crouzeix-Raviart Element [p. 40]	Swim: Fluid-Structure Interaction with Nonconforming Finite Elements [p. 24]	Tai: Nonlinear Positive Intepolation Operators for Analysis with Multilevel Grids [p. 47]	
17:15 – 17:40	Gantner: Multilevel Additive Schwarz Preconditioner for Nonconforming Mortar Finite Element Methods [p. 40]	Lai: Some Effective Techniques of Nonlinear Solvers for Black-Oil Modelling [p. 24]	Xu: Anisotropic grid adaptation and multigrid methods [p. 47]	
17:40 – 18:05	Seshaiyer: Non-Conforming Finite Element Methods for Nonmatching Grids Tuned to Parallel Implementation [p. 40]		Garrido: A Convergent Algorithm for Time Parallelization Applied to Reservoir Simulation [p. 47]	
17:40 – 19:00	Poster session (Room 046, see next page)			
18:30 – 22:00	Conference dinner (Pavilion)			

Poster session, Thursday, 17:40 – 19:00, Room 046

- **Cai:** A Restricted Additive Schwarz Method for the Bidomain Model of Cardiac Excitation [p. 67]
- **Cai:** Domain Decomposition Methods for A PDE Constrained Optimization Problem [p. 67]
- **Cai:** Simulations of Branching Blood fluids on Parallel Computers [p. 67]
- **Cho:** Domain Decomposition Preconditioning for Elliptic Problems with Jumps in the Coefficients [p. 67]
- **Deng:** Perturbation Analysis and its Approximation by FEM for Coupled Systems Between Structure and Acoustic Field [p. 68]
- **Fahimuddin:** PLATON - An Environment for Coupling Optimisation and Simulation Codes [p. 68]
- **Horak:** Scalability of FETI Based Algorithms for Variational Inequalities [p. 68]
- **Keyes:** Optimization of PDE-constrained Systems in the Terascale Optimal PDE Simulations Project [p. 68]
- **Keyes:** Scalable Solvers in the Terascale Optimal PDE Simulations Project [p. 68]
- **Keyes:** Terascale Optimal PDE Solvers: Project Overview [p. 69]
- **Stary:** Parallel Iterative Solvers in Geomechanics [p. 69]
- **Steckel:** MpCCI: A Tool for the Simulation of Coupled Problems, eg. Using Domain Decomposition [p. 69]
- **Vlach:** Signorini Problem with a Solution Dependent Coefficient of Friction (Model with Given Friction): Approximation and the Numerical Realization [p. 69]

The posters are on display in Room 046 throughout the whole conference.

Friday, 25 July

Time	Minisymposia			
	MS09 FETI and Neumann-Neumann Domain Decomposition Methods (Klawonn, Pierson, Widlund) [p. 41]	MS01 Collaborating Subdomains for Multi-Scale Multi-Physics Modelling (Chow, Lai) [p. 23]	MS03 Recent Developments for Schwarz Methods (Gander) [p. 27]	
	Lecture room	Room 005	Room 049	Room 055
09:00 – 09:25	Dryja: A Dual-Primal FETI Method with Face Constraints for Mortar Discretization of Elliptic Problems [p. 44]	Anthonissen: Local Defect Correction Techniques Applied to a Combustion Problem [p. 24]	Roux: Approximation of Optimal Interface Boundary Conditions for Two-Lagrange Multiplier FETI Method [p. 30]	
09:25 – 09:50	Proskurowski: A FETI-DP Method for the Mortar Discretization of Elliptic Problems with Discontinuous Coefficients [p. 44]	Garbey: Heterogeneous Domain Decomposition for Boundary Layer Problems [p. 25]	Vandewalle: Optimized Overlapping Schwarz Methods for Parabolic PDEs with Time-Delay. [p. 31]	
09:50 – 10:15	Toselli: FETI and Neumann-Neumann Preconditioners for hp Finite Element Approximations on Anisotropic Meshes: Algorithms and Theory [p. 44]	Veldman: Interaction Laws in Viscous-Inviscid Coupling [p. 25]	Laayouni: Non-Overlapping Optimized Domain Decomposition Methods in Spherical Coordinates [p. 31]	
10:15 – 10:40	Vasseur: FETI and Neumann-Neumann Preconditioners for hp Finite Element Approximations on Anisotropic Meshes: Numerical Validation [p. 44]	Chow: Electronic Packaging and Reduction in Modelling Time Using Domain Decomposition [p. 25]	Japhet: A New Cement to Glue Non-conforming Grids with Robin Interface Conditions: The Finite Element Case [p. 31]	
10:40 – 11:15	Coffee break			
	Lecture room			
	Plenary talk (Chair: Hoppe)			
11:15 – 12:00	Schütte: Domain Decomposition for Metastable Dynamical Systems [p. 22]			
12:00 – 12:20	Closing Ceremony			
12:20 – 14:00	Lunch			