

Thursday, June 28, 2012 – AM

Plenary Lectures P11

Location: Amphi

Chairman: Olof Widlund

8:30-9:15 : Blanca Ayuso de Dios
Solvers for Discontinuous Galerkin Methods

Plenary Lectures P12

Location: Amphi

Chairman: Olof Widlund

9:15-10:00 : Chen-Song Zhang
Fast Auxiliary Space Preconditioning: Implementation and Applications in Complex Flows

Mini Symposium M17P1: Domain Decomposition Methods based on Robin Conditions for Large and / or Nonlinear Problems

Location: Amphi

Chairman: Heiko Berninger, Sébastien Loisel, Oliver Sander

10:35-11:00 : Sébastien Loisel
Large-Scale Implementation of Optimized Decomposition Methods

11:00-11:25 : Florence Hubert
Optimized Schwarz Algorithms for Anisotropic Elliptic Operators in the Framework of DDFV Schemes

11:25-11:50 : Oliver Sander
The 2-Lagrange-Multiplier Method for the Richards Equation

11:50-12:15 : Minh Binh Tran
Optimized Schwarz Methods for the Primitive Equations

Mini Symposium M18P2: Solvers for Discontinuous Galerkin Methods

Location: Markov

Chairman: Blanca Ayuso de Dios, Susanne C. Brenner

10:35-11:00 : Paola F. Antonietti
Schwarz Methods for a Preconditioned WOPSIP Discretization of Elliptic Problems

11:00-11:25 : Andrew Barker
Additive Schwarz Preconditioners for the Discontinuous Petrov-Galerkin Method

11:25-11:50 : Guido Kanschat
Multigrid Methods for a Divergence-Conforming DG Discretization of Incompressible Flow

11:50-12:15 : Ludmil T. Zikatanov
A Preconditioner for $H(\text{div})$ -Conforming DG Discretizations of Stokes Equation

Mini Symposium M19P1: Domain Decomposition in Computational Cardiology

Location: Petri

Chairman: Rolf Krause and Luca Pavarino

10:35-11:00 : Luca Gerardo-Giorda
Optimized Schwarz Coupling and Model Adaptivity for Numerical Electrocardiology

11:00-11:25 : Dorian Krause
Scalable Solvers for Electrocardiology on Massively Parallel Architectures

11:25-11:50 : Stefano Zampini
Exact and Inexact BDDC Methods for the Cardiac Bidomain Model

11:50-12:15 : Charles Pierre
A Preconditioner with Almost Linear Complexity for the Bidomain Model

Mini Symposium M3 : Finite Elements for First-Order System Formulations of Interface Problems

Location: Turing

Chairman: Pavel Bochev and Gerhard Starke

10:35-11:00 : James Adler
Constrained First-Order System Least Squares for Improved Mass Conservation

11:00-11:25 : Steffen MüNZenmaier
Least Squares Finite Element Methods for Coupled Generalized Newtonian Stokes-Darcy Flow

11:25-11:50 : Fleurianne Bertrand
Least Squares Methods with Interface Approximation for Two Phase Stokes Flow

11:50-12:15 : Pavel Bochev
Least-Squares Methods for Mesh-Tying

Contributed Talks C11: Time Parallel - Parareal Methods

Location: I50

Chairman: Michael Minion

- 10:35-11:00 : Noha Makhoul-Karam
Ratio-Based Parallel Time Integration
- 11:00-11:25 : Daniel Ruprecht
Hybrid Space-Time Parallel Solution of Burger's Equation
- 11:25-11:50 : Rolf Krause
A Massively Space-Time Parallel N-Body Solver

Contributed Talks 18: FETI Methods

Location: I50

Chairman: Michael Minion

- 11:50-12:15 : Ulrich Langer
FETI-Solvers for Non-standard Finite Element Equations based on Boundary Integral Operators

Contributed Talks C14: Time Dependent PDEs and Applications

Location: I51

Chairman: Daniel Loghin

- 10:35-11:00 : Petros Aristidou
A Schur Complement Method for DAE Systems in Power System Simulation
- 11:00-11:25 : Rodrigue Kammogne
Domain Decomposition Methods for Reaction-Diffusion Systems
- 11:25-11:50 : Frederic Plumier
Combining Full Transients and Phasor Approximation Models in Power System Time Simulation
- 11:50-12:15 : David Cherel
Domain Decomposition For Stokes Equations Using Waveform Relaxation Method