



DD 20 Schedule

Version Date: February 9, 2011

Monday, February 7, 2011				
7:45-8:00	Opening Remarks: Chancellor Marye Anne Fox, Dean Mark Thiemens			
	Plenary P1 (Chair: Ralf Kornhuber)			
8:00-8:45	Harry Yserentant			
8:45-9:30	Thomas Hou			
9:30-10:00	Coffee Break			
10:00-12:00	Mini M8 B211-B212	Mini M15 B210	Mini M7 B143-B144	
	P. F. Antonietti B. Ayuso de Dios A. Barker E.-H. Park	M. Gander A. Sandu J. Diaz R. Haynes	E. P. Stephan R. Hiptmair G. Of M. Windisch	
12:00-1:30	Lunch			
	Plenary P2 (Chair: David Keyes)			
1:30-2:15	Charbel Farhat			
2:15-2:45	Coffee Break			
2:45-4:45	Mini M3 B211-B212	Mini M15 B210	Mini M6 B143-B144	Contributed C1 B145
	J. Xu J. Kraus J. Adler Y. Zhu	J. Rodríguez V. Lisitsa F. Haeberlein L. Halpern	H. Zhang R. Tezaur M. Guddati D. Neklyudov	D. Keyes P. Gosselet D. N. Wakam T. Dufaud M. B. Tran P. Krzyzanowski
5:15-6:30	Reception and			

Tuesday, February 8, 2011

Plenary P3 (Chair: Rob Falgout)				
8:00-8:45	Yvon Maday			
8:45-9:30	John Bell			
9:30-10:00	Coffee Break			
10:00-12:00	Mini M3 B211-B212	Mini M17 B210	Mini M10 B143-B144	Contributed C2 B145
	R. Hiptmair T. Kolev L. Grasedyck S. Zhang	D. Samaddar J. Salomon M. Gander B. Ong	Y. Courvoisier J.-F. Lee V. Dolean M. Huber	S. Zampini O. Steinbach C. Japhet Y. Wu M. Garbey M. Garbey
12:00-1:30	Lunch			
Plenary P4 (Chair: Jeff Rimmel)				
1:30-2:00	Michael Norman			
2:00-2:30	Richard C. J. Somerville			
2:30-3:00	J. Andrew McCammon			
3:00-3:30	Coffee Break			
3:30-5:30	Mini M3 B211-B212	Mini M17 B210	Mini M9 B143-B144	Contributed C3 B145
	J. Chen J. W. L. Wan G. Xue X. Hu	Y. Maday M. L. Minion S. Guettel X. Dai	A. St-Cyr S. Loisel F.-X. Roux X. Tu	S. Thirunavukkarasu C. Rey S. Beuchler A. Patel T. Dickopf Y. Boubendir

Wednesday, February 9, 2011

Plenary P5 (Chair: Jinchao Xu)				
8:00-8:45	Robert Scheichl			
8:45-9:30	Long Chen			
9:30-10:00	Coffee Break			
10:00-12:00	Mini M3 B211-B212	Mini M12 B210	Mini M11 B143-B144	Contributed C4 B145
	G. Wittum Y. Chen R. Szymowski J.-H. Kimn	R. Krause T. Kouzbek J. Kruijs J. Lee	Y. Vassilevski J. Willems A. Matsokin J. Galvis	I. Prokopyshyn S. Quraishi L. Marcinkowski F.-N. Hwang L. Laayouni L. F. Pavarino
12:00-1:30	Lunch			
Plenary P6 (Chair: Ulrich Langer)				
1:30-2:15	Clark Dohrmann			
2:15-2:45	Coffee Break			
2:45-4:45	Mini M3 B211-B212	Mini M12 B210	Mini M11 B143-B144	Contributed C5 B145
	R. Falgout U. Yang Y. Chen J. Gaidamour	D. Lukáš A. Markopoulos A. Popp V. Vondrák	U. Langer L. Zikatanov C. Pechstein S. Nepomyaschikh	T. Huyen Dao M. Belonosov X.-C. Cai F. Lemarie M. Neumüller H. Berninger

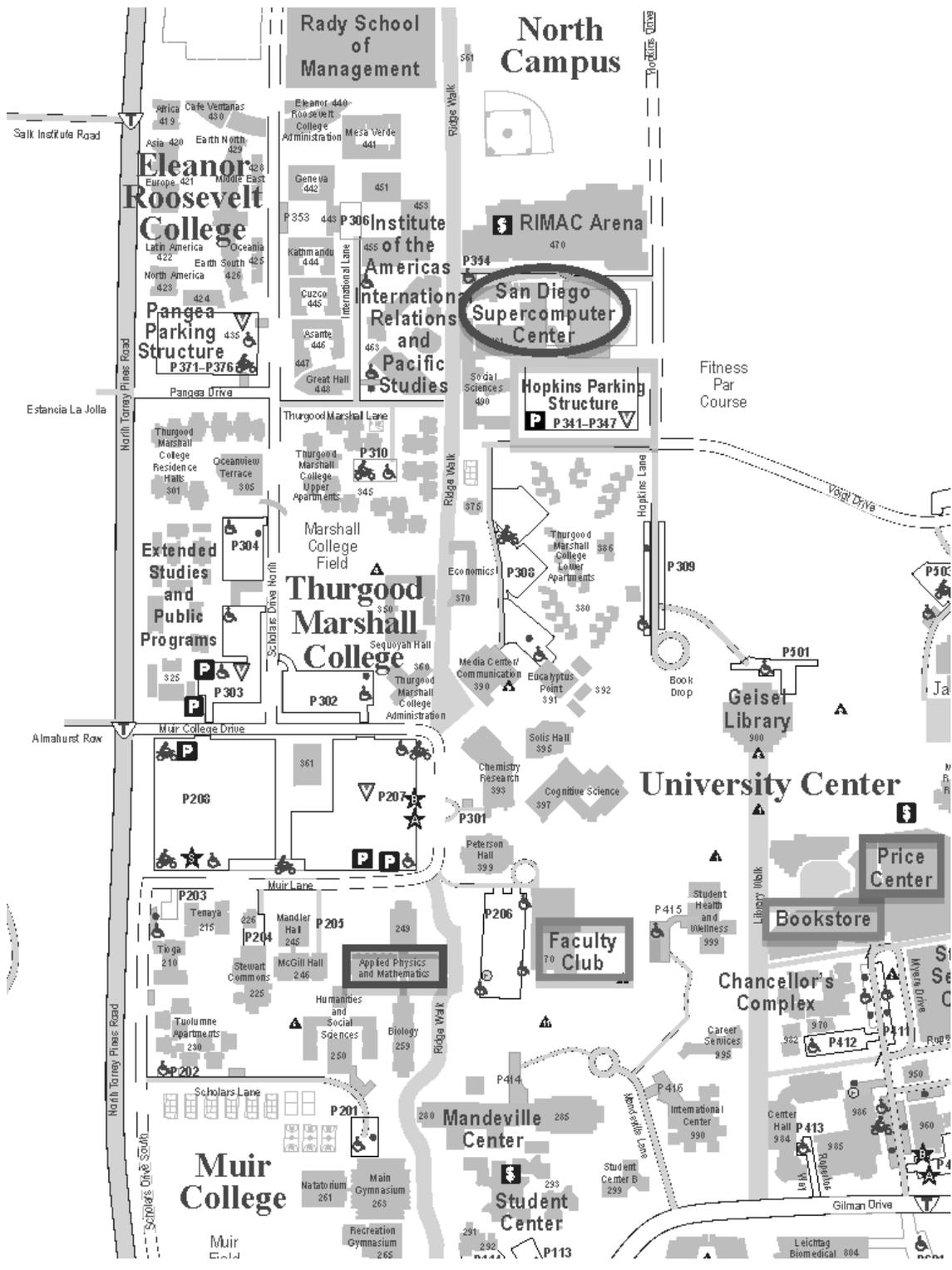
Thursday, February 10, 2011				
	Plenary P7 (Chair: Olof Widlund)			
8:00-8:45	Zdeněk Dostál			
8:45-9:30	Jun Zou			
9:30-10:00	Coffee Break			
10:00-12:00	Mini M2 B211-B212	Mini M14 B210	Mini M16 B143-B144	Mini M13 B145
	A. Alonso Rodriguez H. Li J. Gopalakrishnan R. Hoppe	A. Klawonn D.-S. Oh O. Rheinbach O. Widlund	V. Martin J. Ryan T. Arbogast O. Sander	R. Brower K. Kahl J. Cohen K. Kahl
12:00-1:30	Lunch			
	Plenary P8 (Chair: Harry Yserentant)			
1:30-2:15	Wolfgang Dahmen			
2:15-2:45	Coffee Break			
2:45-5:05	Mini M2 B211-B212	Mini M1 B210	Mini M16 B143-B144	Contributed C6 B145
	M. Sarkis Y. Huang L. Chen H. Nguyen	F. Nataf R. Tuminaro I. Yamazaki E. Agullo	R. Kornhuber L. Gastaldi P. Gervasio M. Discacciati	J. Leskinen V. Martin R. Chen E. Chacon Vera T. Sassi H. H. Kim B. Eguzkitza
7:00-10:00	Banquet			

Friday, February 11, 2011				
	Plenary P9 (Chair: Petter Bjørstad)			
8:00-8:45	Victorita Dolean			
8:45-9:30	Xuejun Xu			
9:30-10:00	Coffee Break			
10:00-12:00	Mini M2 B211-B212	Mini M5 B210	Mini M18 B143-B144	Mini M19 B145
	K. Wang L.-Y. Sung P. Sun Y. Zhu	D. Barajas E. Rosseel W. Subber E. Ullmann	X.-C. Cai A. Nägel C. Groß B. Gmeiner	F. Kwok M.-B. Tran O. Sander K. Santgini
12:00	Close of Conference			

Bus Schedule

Depart – Arrive	Event	Depart – Arrive	Event
Sunday, February 6			
08:30a – 08:45a	Both Hotels to AP&M (run 1)	09:15a – 09:30a	Both Hotels to AP&M (run 2)
05:00p – 05:30p	AP&M to Both Hotels (run 1)	05:45p – 06:00p	AP&M to Both Hotels (run 2)
Monday, February 7			
07:15a – 07:30a	DM-Inn to SDSC (run 1)	07:45a – 08:00a	DM-Inn to SDSC (run 2)
07:15a – 07:30a	Strat-Inn to SDSC (run 1)	07:45a – 08:00a	Strat-Inn to SDSC (run 2)
06:45p – 07:00p	SDSC to DM-Inn (run 1)	07:15p – 07:30p	SDSC to DM-Inn (run 2)
06:45p – 07:00p	SDSC to Strat-Inn (run 1)	07:15p – 07:30p	SDSC to Strat-Inn (run 2)
Tuesday, February 8			
07:30a – 07:45a	DM-Inn to SDSC (run 1)	08:00a – 08:15a	DM-Inn to SDSC (run 2)
07:30a – 07:45a	Strat-Inn to SDSC (run 1)	08:00a – 08:15a	Strat-Inn to SDSC (run 2)
05:45p – 06:00p	SDSC to DM-Inn (run 1)	06:15p – 06:30p	SDSC to DM-Inn (run 2)
05:45p – 06:00p	SDSC to Strat-Inn (single run)		
06:20p – 06:30p	Strat-to-DM-to-Poseidon (single run)		
09:45p – 10:00p	Poseidon to Hotels (single run)		
Wednesday, February 9			
07:30a – 07:45a	DM-Inn to SDSC (run 1)	08:00a – 08:15a	DM-Inn to SDSC (run 2)
07:30a – 07:45a	Strat-Inn to SDSC (run 1)	08:00a – 08:15a	Strat-Inn to SDSC (run 2)
05:45p – 06:00p	SDSC to DM-Inn (run 1)	06:15p – 06:30p	SDSC to DM-Inn (run 2)
05:45p – 06:00p	SDSC to Strat-Inn (run 1)	06:15p – 06:30p	SDSC to Strat-Inn (run 2)
Thursday, February 10			
07:30a – 07:45a	DM-Inn to SDSC (run 1)	08:00a – 08:15a	DM-Inn to SDSC (run 2)
07:30a – 07:45a	Strat-Inn to SDSC (run 1)	08:00a – 08:15a	Strat-Inn to SDSC (run 2)
05:45p – 06:00p	SDSC to DM-Inn (single run)		
05:45p – 06:00p	SDSC to Strat-Inn (single run)		
06:30p – 06:45p	DM-Inn to Faculty Club (single run)		
06:30p – 06:45p	Strat-Inn to Faculty Club (single run)		
09:30p – 09:45p	Faculty Club to DM-Inn (single run)		
09:30p – 09:45p	Faculty Club to Strat-Inn (single run)		
Friday, February 11			
07:30a – 07:45a	DM-Inn to SDSC (run 1)	08:00a – 08:15a	DM-Inn to SDSC (run 2)
07:30a – 07:45a	Strat-Inn to SDSC (run 1)	08:00a – 08:15a	Strat-Inn to SDSC (run 2)
12:15p – 12:30p	SDSC to DM-Inn (run 1)	12:45p – 01:00p	SDSC to DM-Inn (run 2)
12:15p – 12:30p	SDSC to Strat-Inn (run 1)	12:45p – 01:00p	SDSC to Strat-Inn (run 2)

UCSD Map - Zoomed



Monday, February 7, 2011 – AM

Plenary Lectures P1

Location: SDSC Auditorium

Chairman: Ralf Kornhuber

- 8:00-8:45 : Harry Yserentant: Multi-level decompositions of electronic wave functions
- 8:45-9:30 : Thomas Hou: A Data-Driven Stochastic Multiscale Method

Mini Symposium M8: Domain Decomposition for Discontinuous Galerkin Methods

Location: B211-B212

Chairman: Blanca Ayuso de Dios, Susanne C. Brenner

- 10:00-10:30 : Paola F. Antonietti: Schwarz Preconditioners for the hp-Version of the Discontinuous Galerkin Method
- 10:30-11:00 : Blanca Ayuso de Dios: Multilevel Preconditioners for Interior Penalty Discontinuous Galerkin Discretizations of Elliptic Problems with Jump Coefficients
- 11:00-11:30 : Andrew Barker: Additive Schwarz Preconditioners for the Local Discontinuous Galerkin Method Applied to Convection-Diffusion Problems
- 11:30-12:00 : Eun-Hee Park: A Nonoverlapping Domain Decomposition Preconditioner for a Weakly Over-Penalized Symmetric Interior Penalty Method

Mini Symposium M15P1: Space-time Adaptive Methods

Location: B210

Chairman: Martin J. Gander, Laurence Halpern

- 10:00-10:30 : Martin J. Gander: Techniques for Locally Adaptive Timestepping Developed Over the Last Two Decades
- 10:30-11:00 : Adrian Sandu: Recent Developments in Multirate Time Integration
- 11:00-11:30 : Julien Diaz: Explicit hp-Adaptive Time Scheme for the Wave Equation
- 11:30-12:00 : Ron Haynes: Equidistributing Grids via Domain Decomposition

Mini Symposium M7: Domain Decomposition Methods in Computational Electromagnetics

Location: B143-B144

Chairman: Ulrich Langer, Olaf Steinbach

- 10:00-10:30 : E. P. Stephan: Fast Solvers for the hp Version Boundary Element Method and Applications in Electromagnetics
- 10:30-11:00 : R. Hiptmair: Multiple Traces Boundary Integral Formulations for Helmholtz Transmission Problems
- 11:00-11:30 : G. Of: Direct and Indirect Boundary Element Methods for Magnetostatic Field Problems
- 11:30-12:00 : M. Windisch: Robust Boundary Element Domain Decomposition Methods for Electromagnetic Scattering

Monday, February 7, 2011 – PM

Plenary Lectures P2

Location: SDSC Auditorium

Chairman: David Keyes

- 1:30-2:15 : Charbel Farhat: A Domain Decomposition Method with a Proper Orthogonal Decomposition-Based Augmented Conjugate Gradient Algorithm for Nearby Problems

Mini Symposium M3P1: Optimal Solvers from Multi-grid and Two-grid to One-grid and No-grid

Location: B211-B212

Chairman: Randolph E. Bank, Michael Holst, Jinchao Xu, Yunrong Zhu, Ludmil Zikatanov

- 2:45-3:15 : Jinchao Xu: An Overview of Optimal Solvers from Multi-grid and Two-grid to One-grid and No-Grid
- 3:15-3:45 : Johannes Kraus: Auxiliary Space Preconditioner for Finite Element Elasticity Systems Obtained by Reduced Integration
- 3:45-4:15 : James Adler: Multigrid Methods for Complex Fluids
- 4:15-4:45 : Yunrong Zhu: Multilevel Preconditioners for Crouzeix-Raviart Discretization of Second Order Elliptic Equations with Jump Coefficients and Application to Discontinuous Galerkin Discretizations

Mini Symposium M15P2: Space-time Adaptive Methods

Location: B210

Chairman: Martin J. Gander, Laurence Halpern

- 2:45-3:15 : Jerónimo Rodríguez: Coupling Discontinuous Galerkin Methods and Retarded Potentials for Transient Wave Propagation on Unbounded Domains
- 3:15-3:45 : Vadim Lisitsa: Local Low-Reflection Space-Time Mesh Refinement for Finite-Difference Simulation of Seismic Waves
- 3:45-4:15 : Florian Haerberlein: Krylov Subspace Accelerators for Non-Overlapping Schwarz Waveform Relaxation Methods Applied to Coupled Nonlinear Reactive Transport Systems in the Context of CO2 Geological Storage Simulation
- 4:15-4:45 : Laurence Halpern: Space-time Refinement for the 1-D Wave Equation

Mini Symposium M6: Domain Decomposition Methods for Helmholtz Problems

Location: B143-B144

Chairman: Martin J. Gander and Hui Zhang

- 2:45-3:15 : Hui Zhang: Extensive Numerical Tests of Domain Decomposition Methods for the Helmholtz Equation Representing a Geophysical Model
- 3:15-3:45 : Radek Tezaur: The Discontinuous Enrichment Method and its Domain Decomposition Solver for the Helmholtz Equation
- 3:45-4:15 : Murthy Guddati: Improving the Convergence Rate of Optimized Schwarz Methods for Time-Harmonic Wave Propagation Problems
- 4:15-4:45 : Dmitry Neklyudov: An Iterative Method for Elastic Wave Equation in the Frequency Domain with No Use of Finite-Difference Approximations

Contributed Talks C1: DD Based Solvers and Preconditioners

Location: B145

Chairman: Ryan Szypowski

- 2:45-3:05 : David Keyes: Inexact Schwarz-AMG Preconditioners for Crack Problems Modeled by XFEM
- 3:05-3:25 : Pierre Gosselet: An Exact Non-Intrusive Submodeling Technique Based on Domain Decomposition
- 3:25-3:45 : Désiré Nuentza Wakam: Deflated GMRES with Multiplicative Schwarz Preconditioner: A Challenge of Robustness and Parallelism
- 3:45-4:05 : Thomas Dufaud: Aitken Restricted Additive Schwarz 2 Preconditioning Technique Using Coarse Approximations on the Interface
- 4:05-4:25 : Minh Binh Tran: A Domain Decomposition Method for Forward-Backward SDEs
- 4:25-4:45 : Piotr Krzyzanowski: Block Preconditioning for Systems of Equations Originating From PDEs

Poster Session

Location: SDSC Auditorium

Chairman: TBA

- 5:00-6:30 : Josselyn Touzeau: Arlequin Method and Domain Decomposition-Solver Applied to the Simulation of Multiscale Mechanical Problems
- 5:00-6:30 : Tomáš Brzobohatý: MatSol - an Efficient Way to Solve Large Problems of Contact Mechanics
- 5:00-6:30 : Laslo Diosady: A Unified Analysis of Balancing Domain Decomposition by Constraints for Higher-order Discontinuous Galerkin Discretizations
- 5:00-6:30 : Feng-Nan Hwang: Parallel Newton-Krylov-Schwarz Algorithms for the Three-dimensional Poisson-Boltzmann Equation in Numerical Simulation of Colloidal Particle Interactions
- 5:00-6:30 : Christian Waluga: Hybrid Discontinuous Galerkin Methods for Incompressible Flow

Tuesday, February 8, 2011 – AM

Plenary Lectures P3

Location: SDSC Auditorium

Chairman: Rob Falgout

8:00-8:45 : Yvon Maday: Parareal Algorithm, Basics and New Contributions

8:45-9:30 : John Bell: Parallel Algorithms for Multiphysics Adaptive Mesh Refinement

Mini Symposium M3P2: Optimal Solvers from Multi-grid and Two-grid to One-grid and No-grid

Location: B211-B212

Chairman: Randolph E. Bank, Michael Holst, Jinchao Xu, Yunrong Zhu, Ludmil Zikatanov

10:00-10:30 : Ralf Hiptmair: Auxiliary Space Methods for Edge Elements

10:30-11:00 : Tzanio Kolev: Parallel Algebraic Multigrid for Electromagnetic Diffusion

11:00-11:30 : Lars Grasedyck: Algebraic Multigrid Based on Clustering

11:30-12:00 : Shuo Zhang: Poisson-based Optimal Solvers for Biharmonic Problems

Mini Symposium M17P1: Time-Domain Decomposition Methods for the Solution of ODEs and PDEs

Location: B210

Chairman: Martin J. Gander, Stefan Guettel, Yvon Maday

10:00-10:30 : Debasmita Samaddar: A New Approach to Turbulence Simulations: Temporal Parallelization by Application of the "Parareal Algorithm"

10:30-11:00 : Julien Salomon: Time Parallelization for Optimal Control

11:00-11:30 : Martin J. Gander: A Parareal Schwarz Waveform Relaxation Algorithm

11:30-12:00 : Benjamin Ong: Distributed Parallel Time Integrators

Mini Symposium M10: Domain Decomposition Methods for Maxwell Equations

Location: B143-B144

Chairman: Victorita Dolean, Martin J. Gander, Stéphane Lanteri

10:00-10:30 : Y. Courvoisier: Time Domain Maxwell Equations Solved with Schwarz Waveform Relaxation Methods

10:30-11:00 : Z. Peng: Domain Decomposition Method for Combined Field Integral Equations in Computational Electromagnetics

11:00-11:30 : Victorita Dolean: Optimized Schwarz Methods for the Conductive Time-Harmonic Maxwell Equations

11:30-12:00 : Martin Huber: Hybrid Domain Decomposition Solvers for Scalar and Vectorial Wave Equations

Contributed Talks C2: Applications in the Sciences

Location: B145

Chairman: Ari Stern

10:00-10:20 : Stefano Zampini: Exact and Inexact BDDC Methods for Spectral Element Discretizations of Almost Incompressible Elasticity in Three Dimensions

10:20-10:40 : Olaf Steinbach: All Floating Finite Element Tearing and Interconnecting Methods for the Simulation of Biological Tissues

10:40-11:00 : Caroline Japhet: Optimized Schwarz Waveform Relaxation for Porous Media Applications

11:00-11:20 : Yuqi Wu: Scalable Parallel Methods for Modeling Blood Flows in 3D

11:20-11:40 : Marc Garbey: Simulation of Breast Conservative Therapy

11:40-12:00 : Marc Garbey: From Ultrasound Video to Hemodynamic Simulation with Moving Walls

Tuesday, February 8, 2011 – PM

Plenary Lectures P4

Location: SDSC Auditorium

Chairman: Jeff Remmel

- 1:30-2:00 : Michael Norman: Extreme Scale AMR for Hydrodynamic Cosmology
2:00-2:30 : Richard C. J. Somerville: Evaluating a Global Climate Model with Superparameterized Clouds
2:30-3:00 : J. Andrew McCammon: Computer-aided Drug Discovery: From the Molecule to the Cell

Mini Symposium M3P3: Optimal Solvers from Multi-grid and Two-grid to One-grid and No-grid

Location: B211-B212

Chairman: Randolph E. Bank, Michael Holst, Jinchao Xu, Yunrong Zhu, Ludmil Zikatanov

- 3:30-4:00 : Jinru Chen: Mixed and Nonconforming FEMs with Nonmatching Meshes for A Coupled Stokes-Darcy Model
4:00-4:30 : Justin W.L. Wan: Multigrid Time Stepping Method for Systems of Hyperbolic PDEs
4:30-5:00 : Guangri Xue: A Preconditioning Technique for Mixed Finite Element Formulations of Elliptic Problems with Full Tensor Coefficients
5:00-5:30 : Xiaozhe Hu: Fast Solvers for Reservoir Simulation

Mini Symposium M17P2: Time-Domain Decomposition Methods for the Solution of ODEs and PDEs

Location: B210

Chairman: Martin J. Gander, Stefan Guettel, Yvon Maday

- 3:30-4:00 : Yvon Maday: Some Practical and Numerical Aspects of the Parareal in Time Algorithm Related to Exascale Simulations
4:00-4:30 : Michael L. Minion: The Parallel Full Approximation Scheme in Space and Time
4:30-5:00 : Stefan Guettel: A Time-Parallel Rational Krylov Integrator for Linear ODEs
5:00-5:30 : X. Dai: Parareal Algorithm for Convection Type Equation

Mini Symposium M9: Domain Decomposition and Massively Parallel Computation

Location: B143-B144

Chairman: Felix Kwok, Sébastien Loisel

- 3:30-4:00 : Amik St-Cyr: Two-Level Spectral Elements Optimized Schwarz Preconditioning for MHD Simulations
4:00-4:30 : Sébastien Loisel: Optimized Domain Decomposition Methods that Scale Weakly
4:30-5:00 : Francois-Xavier Roux: Strategies for Massively Parallel Implementation of FETI
5:00-5:30 : Xuemin Tu: The Fourth Talk in This Mini Symposium

Contributed Talks C3: Finite Element and DD Theory

Location: B145

Chairman: Melvin Leok

- 3:30-3:50 : Senganal Thirunavukkarasu: Domain Decomposition Method for Concurrent Multiscale Modeling
3:50-4:10 : Christain Rey: A Fully Parallel A Posteriori Error Estimation for Nonoverlapping Domain Decomposition Methods
4:10-4:30 : Sven Beuchler: Quasioptimal Additive Schwarz Based Solvers for hp-FEM Discretizations in 3D
4:30-4:50 : Ajit Patel: Stabilized Nitsche's Mortaring Element Method for Elliptic Interface Problems
4:50-5:10 : Thomas Dickopf: Non-Nested Meshes in Multilevel Methods
5:10-5:30 : Yassine Boubendir: New Non-overlapping Domain Decomposition Algorithm for Helmholtz Equation

Wednesday, February 9, 2011 – AM

Plenary Lectures P5

Location: SDSC Auditorium

Chairman: Jinchao Xu

8:00-8:45 : Robert Scheichl: Weighted Poincare Inequalities and Applications in Multigrid/DD Analysis

8:45-9:30 : Long Chen: Optimal Delaunay Triangulation

Mini Symposium M3P4: Optimal Solvers from Multi-grid and Two-grid to One-grid and No-grid

Location: B211-B212

Chairman: Randolph E. Bank, Michael Holst, Jinchao Xu, Yunrong Zhu, Ludmil Zikatanov

10:00-10:30 : Gabriel Wittum: Multi-grid Methods and Domain Decomposition for Large Scale Simulations

10:30-11:00 : Yanping Chen: Analysis of Two-Grid Methods for Nonlinear Reaction Diffusion Equations by Mixed Finite Element Methods

11:00-11:30 : Ryan Szypowski: Two-Grid Methods for Semilinear Interface Problems

11:30-12:00 : Jung-Han Kimn: Overlapping Balancing Domain Decomposition Methods for the Helmholtz Equation

Mini Symposium M12P1: Optimal Algorithms for Contact Problems

Location: B210

Chairman: Zdeněk Dostál, Rolf Krause

10:00-10:30 : Rolf Krause: Monotone Multigrid Methods Based on Parametric Finite Elements

10:30-11:00 : Tomáš Kozubek: Scalable TFETI Based Algorithm for Transient Contact Problems with Preconditioning by Conjugate Projector

11:00-11:30 : Jaroslav Kruiš: Modelling Imperfect Interfaces in Composite Materials

11:30-12:00 : Jungho Lee: A Comparison of Two Domain Decomposition Methods for a Linearized Contact Problem

Mini Symposium M11P1: Domain Decomposition Methods for Multiscale Heterogeneous Problems

Location: B143-B144

Chairman: Sergey Nepomnyaschikh, Juan Galvis

10:00-10:30 : Yuri Vassilevski: Hybrid DDM for the Diffusion Equation with Heterogeneous Coefficient

10:30-11:00 : Joerg Willems: Robust Additive Schwarz Preconditioners for Abstract Symmetric Positive Definite Operators

11:00-11:30 : A. Matsokin: Domain Decomposition Preconditioning for Well Models for Reservoir Problems

11:30-12:00 : Juan Galvis: Spectrally Constructed Coarse Spaces

Contributed Talks C4: Applications in Engineering

Location: B145

Chairman: Li-Tien Cheng

10:00-10:20 : Ihor I. Prokopyshyn: Robin-Robin Type Domain Decomposition Schemes for Frictionless Multibody Contact Problems

10:20-10:40 : Sarosh Quraishi: Catmull Clark Subdivision Based Iso-geometric Analysis on Meshes with Arbitrary Topology

10:40-11:00 : Leszek Marcinkowski: A Neumann-Dirichlet Preconditioner for FETI-DP Method for Mortar Discretization of a 4th Order Problem

11:00-11:20 : Feng-Nan Hwang: A Parallel Polynomial Jacobi-Davidson Approach for Dissipative Acoustic Eigenvalue Problems

11:20-11:40 : Lahcen Laayouni: Optimized Schwarz Methods for Bi-harmonic Differential Equations in Two-Dimension

11:40-12:00 : Luca Pavarino: Robust BDDC Preconditioners for Reissner-Mindlin Plate Problems and MITC Elements

Wednesday, February 9, 2011 – PM

Plenary Lectures P6

Location: SDSC Auditorium

Chairman: Ulrich Langer

1:30-2:15 : Clark Dohrmann: Two Domain Decomposition Algorithms for Problems in $H(\text{curl})$

Mini Symposium M3P5: Optimal Solvers from Multi-grid and Two-grid to One-grid and No-grid

Location: B211-B212

Chairman: Randolph E. Bank, Michael Holst, Jinchao Xu, Yunrong Zhu, Ludmil Zikatanov

2:45-3:15 : Rob Falgout: Compatible Relaxation Techniques for Parallel Coarsening in Algebraic Multigrid

3:15-3:45 : Ulrike Yang: Recent Developments in the Design of Algebraic Multigrid Methods for Multicore Architectures

3:45-4:15 : Yao Chen: An AMG Algorithm Based on Matching of Graphs

4:15-4:45 : Jeremie Gaidamour: A General AMG Strategy for Addressing the Near Null-space Based on Energy Minimization

Mini Symposium M12P2: Optimal Algorithms for Contact Problems

Location: B210

Chairman: Zdeněk Dostál, Rolf Krause

2:45-3:15 : Dalibor Lukáš: Scalable TBETI Algorithms for Contact Problems of Elasticity

3:15-3:45 : Alexandros Markopoulos: Solution of Complex Engineering Problems by Scalable TFETI/TBETI

3:45-4:15 : Alexander Popp: The Mortar Method with Dual Lagrange Multipliers: Application to 3D Finite Deformation Contact and Quadratic Elements

4:15-4:45 : Vít Vondrák: Contact Shape Optimization with Scalable TFETI Algorithms

Mini Symposium M11P2: Domain Decomposition Methods for Multiscale Heterogeneous Problems

Location: B143-B144

Chairman: Sergey Nepomnyaschikh, Juan Galvis

2:45-3:15 : Ulrich Langer: Parameter-Robust and Almost Optimal Solvers for Eddy Current Problems in the Frequency Domain

3:15-3:45 : Ludmil T. Zikatanov: Energy Minimizing Coarse Spaces with Functional Constraints

3:45-4:15 : Clemens Pechstein: Analysis of FETI and FETI-DP Methods for Highly Varying Coefficients Within Subdomains

4:15-4:45 : Sergey Nepomnyaschikh: Trace Theorems and Domain Decomposition Preconditioners in the Case of Subdomains with Jumps in Coefficients of Elliptic Problems

Contributed Talks C5: Time Dependent Problems

Location: B145

Chairman: Pete Kekenes-Huskey

2:45-3:05 : Thu Huyen Dao: A New Approach of Domain Decomposition Methods for Hyperbolic Problems

3:05-3:25 : Mikhail Belonosov: Simulation of Elastic Waves by Schwartz Alternations After Application of Laguerre Transform in Time

3:25-3:45 : Xiao-Chuan Cai: A Parallel Domain Decomposition Method for Compressible Nonhydrostatic Atmospheric Flows in 2-D

3:45-4:05 : Florian Lemarie: Optimized Schwarz Methods in the Context of Ocean-Atmosphere Coupling

4:05-4:25 : Martin Neumüller: A Space-Time Domain Decomposition Method

4:25-4:45 : Heiko Berninger: Dirichlet-Neumann and Robin Methods for Degenerate Nonlinear Transmission Problems

Thursday, February 10, 2011 – AM

Plenary Lectures P7

Location: SDSC Auditorium

Chairman: Olof Widlund

- 8:00-8:45 : Zdeněk Dostál: Scalable FETI Based Algorithms for Contact Problems: Theory, Implementation, and Numerical Experiments
8:45-9:30 : Jun Zou: Non-overlapping DD Preconditioners for Maxwell and PML Maxwell Systems in Non-homogeneous Media

Mini Symposium M2P1: Theory and Application of Adaptive and Multilevel Methods

Location: B211-B212

Chairman: Blanca Ayuso, Long Chen, Jun Hu, and Ludmil Zikatanov

- 10:00-10:30 : Ana Alonso Rodriguez: Domain Decomposition Methods for Maxwell Equations
10:30-11:00 : Hengguang Li: FEMs and MG Methods for Axisymmetric Problems on Polygonal Domains
11:00-11:30 : Jay Gopalakrishnan: A Convergent Multigrid Algorithm for the HDG Method
11:30-12:00 : Ronald Hoppe: Adaptive Finite Element Methods for Control and State Constrained Elliptic Optimal Control Problems

Mini Symposium M14: Advances in Domain Decomposition Methods for Almost Incompressible Elasticity and Problems Posed in $H(\text{div})$ and $H(\text{curl})$

Location: B210

Chairman: Olof Widlund

- 10:00-10:30 : Axel Klawonn: A Hybrid FETI-DP Method for Almost Incompressible Elasticity
10:30-11:00 : Duk-Soon Oh: An Overlapping Schwarz Algorithm for Raviart–Thomas Vector Fields
11:00-11:30 : Oliver Rheinbach: Newton-Krylov-FETI and the Augmented Lagrange Method in the Simulation of Biological Soft Tissue
11:30-12:00 : Olof Widlund: Advances in Domain Decomposition Algorithms for $H(\text{curl})$ -Problems

Mini Symposium M16P1: Heterogeneous Domain Decomposition

Location: B143-B144

Chairman: Veronique Martin, Ralf Kornhuber, Oliver Sander, Alfio Quarteroni

- 10:00-10:30 : Veronique Martin: Historical Review of Methods for Coupling Different Models
10:30-11:00 : Juliette Ryan: Euler - Navier-Stokes Coupling for Aeroacoustics Based on a Schwarz Waveform Technique
11:00-11:30 : Todd Arbogast: Multiscale Mortar Methods for Flow in Heterogeneous Porous Media
11:30-12:30 : Oliver Sander: Nonlinear Coupling between a Cosserat Rod and an Elastic Continuum

Mini Symposium M13: Domain Decomposition and Multigrid Methods for Lattice QCD

Location: B145

Chairman: James Brannick, Richard Brower

- 10:00-10:30 : Richard Brower: Overview of LQCD
10:30-11:00 : Karsten Kahl: Multigrid Methods for Lattice QCD
11:00-11:30 : Jonathan Cohen: Domain Decomposition on GPUs
11:30-12:00 : Karsten Kahl: Domain Decomposition Methods for LQCD

Thursday, February 10, 2011 – PM

Plenary Lectures P8

Location: SDSC Auditorium

Chairman: Harry Yserentant

1:30-2:15 : Wolfgang Dahmen: Robust Preconditioners for DG-Discretizations with Arbitrary Polynomial Degrees on Locally Refined Meshes

Mini Symposium M2P2: Theory and Application of Adaptive and Multilevel Methods

Location: B211-B212

Chairman: Blanca Ayuso, Long Chen, Jun Hu, and Ludmil Zikatanov

2:45-3:15 : Marcus Sarkis: Robust Parameter-Free Multilevel Preconditioner for Boundary Elliptic Control Problems

3:15-3:45 : Yunqing Huang: The Lower Bounds for Eigenvalues of Elliptic Operators By Nonconforming Finite Element Methods

3:45-4:15 : Long Chen: Adaptive Finite Element Methods for $H(\text{curl})$ and $H(\text{div})$ Problems

4:15-4:45 : Hieu Nguyen: Mesh Regularization in Parallel hp -Adaptive Meshing

Mini Symposium M1: Parallel Preconditioning Techniques Based on Algebraic Domain Decomposition

Location: B210

Chairman: Luc Giraud, Jean Roman, Stéphane Lanteri

2:45-3:15 : Frederic Nataf: A Two Level Domain Decomposition Preconditionner Based on Local Dirichlet to Neumann Maps

3:15-3:45 : Ray Tuminaro: A Quasi-Algebraic Multigrid Approach to Fracture Problems Based on Extended Finite Elements

3:45-4:15 : Ichitaro Yamazaki: A Parallel Schur Complement Based Hybrid Solver for Highly-Indefinite Systems

4:15-4:45 : Emmanuel Agullo: Algebraic Schwarz Preconditioning for the Schur Complement: Application to the Time-Harmonic Maxwell Equations Discretized by a Discontinuous Galerkin Method

Mini Symposium M16P2: Heterogeneous Domain Decomposition

Location: B143-B144

Chairman: Veronique Martin, Ralf Kornhuber, Oliver Sander, Alfio Quarteroni

2:45-3:15 : Ralf Kornhuber: Numerical Simulation of Coupled Surface and Saturated/Unsaturated Ground Water Flow

3:15-3:45 : Lucia Gastaldi: Finite Elements for the Immersed Boundary Method

3:45-4:15 : Paola Gervasio: Virtual Controls and Extended Variational Formulation for Hyperbolic/Elliptic Couplings

4:15-4:45 : Marco Discacciati: A Domain Decomposition Framework for Modeling Dimensionally Heterogeneous Problems

Contributed Talks C6: Applications to Flow Problems

Location: B145

Chairman: Yunrong Zhu

2:45-3:05 : Jyri Leskinen: A New Distributed Optimization Approach for Solving CFD Design Problems Using Nash Games Coalition and Evolutionary Algorithms Implemented on GPUs

3:05-3:25 : Veronique Martin: Revisiting the Open Boundary Problem in Computational Fluid Dynamics

3:25-3:45 : Rongliang Chen: Parallel One-Shot Lagrange-Newton-Krylov-Schwarz Algorithms for Shape Optimization of Steady Incompressible Flows

3:45-4:05 : Eliseo Chacon Vera: A Continuous Approach to FETI-DP Mortar methods: Application to Dirichlet and Stokes Problem

4:05-4:25 : Taoufik Sassi: Domain Decomposition Method for the Stokes Problem with Tresca Friction

4:25-4:45 : Hyea Hyun Kim: Domain Decomposition Algorithms for the Stokes Problem Without Primal Pressure Components

4:45-5:05 : Beatriz Eguzkitza: An Implicit and Parallel Chimera Method

Friday, February 11, 2011 – AM

Plenary Lectures P9

Location: SDSC Auditorium

Chairman: Petter Bjørstad

8:00-8:45 : Victorita Dolean: Preconditioning Methods for PDE Systems Using Algebraic Tools

8:45-9:30 : Xuejun Xu: Local Multilevel Method and Its Applications

Mini Symposium M2P3: Theory and Application of Adaptive and Multilevel Methods

Location: B211-B212

Chairman: Blanca Ayuso, Long Chen, Jun Hu, and Ludmil Zikatanov

10:00-10:30 : Kening Wang: An Iterative Substructuring Algorithm for C^0 Interior Penalty Methods

10:30-11:00 : Li-Yeng Sun: Fast Solvers for the Biharmonic Problem with Boundary Conditions of the Cahn-Hilliard Type

11:00-11:30 : Pengtao Sun: An Overlapping Domain Decomposition Method for a Polymer Exchange Membrane Fuel Cell Model

11:30-12:00 : Yunrong Zhu: Convergence of Adaptive Finite Element for the Poisson-Boltzmann Equation

Mini Symposium M5: Efficient Solvers for Stochastic PDEs

Location: B210

Chairman: Victorita Dolean and Robert Scheichl

10:00-10:30 : David Barajas: Random Data-Driven Domain Decompositions for Stochastic PDEs

10:30-11:00 : Eveline Rosseel: Multigrid Solvers for Stochastic PDEs with Application to Biological Reaction-Diffusion Problems

11:00-11:30 : Waad Subber: Domain Decomposition of Stochastic PDEs

11:30-12:00 : Elisabeth Ullmann: Efficient Iterative Solvers for Stochastic Galerkin Discretizations of the Lognormal Diffusion Problem

Mini Symposium M18: Domain Decomposition Methods for Non-smooth Quadratic and Nonlinear Programming Problems

Location: B143-B144

Chairman: Rolf Krause, Christian Groß

10:00-10:30 : Xiao-Chuan Cai: Newton-Krylov-Schwarz for Some PDE-Constrained Optimization Problems

10:30-11:00 : Arne Nägel: Filtering AMG Solvers for Systems of PDEs

11:00-11:30 : Christian Groß: Parallel Multiscale Optimization Techniques in Nonlinear Mechanics

11:30-12:00 : Björn Gmeiner: Multigrid for Finite Elements on 290,000 Compute Cores: Scalability Experiments

Mini Symposium M19: Schwarz Methods: Analysis and Applications

Location: B145

Chairman: Felix Kwok, Kevin Santugini

10:00-10:30 : Felix Kwok: Optimized Schwarz Method for Problems with Cross Points

10:30-11:00 : Minh Binh Tran: Convergence Proofs of Domain Decomposition Algorithms

11:00-11:30 : Oliver Sander: Domain Decomposition Algorithms for the Heterogeneous Richards Equation

11:30-12:00 : Kevin Santugini: Explicit Constants for the Condition of the Continuous Additive Schwarz Preconditioned Operator with a Coarse Grid

Schedule at a Glance

Time	Event	Location
Sunday, February 6		
9:00-5:00	DD Short Course (Widlund)	AP&M 2402
Monday, February 7		
7:45-8:00	Opening Remarks (Chancellor Fox, Dean Thiemens)	Auditorium
8:00-9:30	Plenary (P1 - Yserentant, Hou)	Auditorium
9:30-10:00	Coffee Break	
10:00-12:00	Parallel Sessions (M8, M15p1, M7)	B211-212, B210, B143-144
12:00-1:30	Lunch	
1:30-2:15	Plenary (P2 - Farhat)	Auditorium
2:15-2:45	Coffee Break	
2:45-4:45	Parallel Sessions (M3p1, M15p2, M6, C1)	B211-212, B210, B143-144, B145
5:15-6:30	Poster Session and Reception	Auditorium
Tuesday, February 8		
8:00-9:30	Plenary (P3 - Maday, Bell)	Auditorium
9:30-10:00	Coffee Break	
10:00-12:00	Parallel Sessions (M3p2, M17p1, M10, C2)	B211-212, B210, B143-144, B145
12:00-1:30	Lunch	
1:30-3:00	Plenary (P4 - UCSD 50th - Associate Dean Rummel, Norman, Somerville, McCammon)	Auditorium
3:00-3:30	Coffee Break	
3:30-5:30	Parallel Sessions (M3p3, M17p2, M9, C3)	B211-212, B210, B143-144, B145
6:30-9:30	Special Dinner for the Plenary Speakers	
Wednesday February 9		
8:00-9:30	Plenary (P5 - Scheichl, Chen)	Auditorium
9:30-10:00	Coffee Break	
10:00-12:00	Parallel Sessions (M3p4, M12p1, M11p1, C4)	B211-212, B210, B143-144, B145
12:00-1:30	Lunch	
1:30-2:15	Plenary (P6 - Dohrmann)	Auditorium
2:15-2:45	Coffee Break	
2:45-4:45	Parallel Sessions (M3p5, M12p2, M11p2, C5)	B211-212, B210, B143-144, B145
5:30-7:30	Meeting of the Scientific Committee	AP&M 2402
Thursday, February 10		
8:00-9:30	Plenary (P7 - Dostal, Zou)	Auditorium
9:30-10:00	Coffee Break	
10:00-12:00	Parallel Sessions (M2p1, M14, M16p1, M13)	B211-212, B210, B143-144, B145
12:00-1:30	Lunch	
1:30-2:15	Plenary (P8 - Dahmen)	Auditorium
2:15-2:45	Coffee Break	
2:45-5:05	Parallel Sessions (M2p2, M1, M16p2, C6)	B211-212, B210, B143-144, B145
6:30-9:30	Banquet (Dinner served at 7:15)	Faculty Club
Friday, February 11		
8:00-9:30	Plenary (P9 - Dolean, Xu)	Auditorium
9:30-10:00	Coffee Break	
10:00-12:00	Parallel Sessions (M2p3, M5, M18, M19)	B211-212, B210, B143-144, B145
12:00	Close of Conference	Auditorium