

5th International Conference on High Performance Scientific Computing
March 5-9, 2012 – Hanoi, Vietnam

SCIENTIFIC PROGRAM

Monday, March 5, 2012					
08:30-09:15	Registration				
09:15-09:40	Opening – Meeting hall in the 10th floor				
	Plenary Session P1 – Meeting hall in the 10th floor Chair: M. Grötschel				
09:45-10:30	I. Daubechies : Sparsity in Data Analysis and Computation				
10:30-10:55	Coffee break (served in the 7 th floor)				
	Session α1 – Room 702 - M12 Chair: F. Tröltzsch	Session β1 – Room C15 - M02 Chair: R. Jeltsch	Session γ1 – Room C02 - M01 Chair: M. C. Steinbach	Session δ1 – Room C04-05 - M15 Chair: S. Körkel	Session ϵ1 – Room C06-07 Chair: S. Siripant
10:55-11:25	J. A. Burns , X. He, W. Hu: Feedback Control of Hybrid PDE Systems with Applications to the Operation of Energy Efficient Buildings	R. J. LeVeque , M. J. Berger, D. L. George, K. T. Mandli: Numerical Modeling of Tsunamis and Storm Surge	T. Januschowski, M. E. Pfetsch : The Maximum k-Colorable Subgraph Problem and Symmetry	T. Carraro : A Primal-dual Active Set Strategy for Optimal Experimental Design in the Framework of PDEs	K.-H. Hoffmann : Modelling of CO₂ Sequestration and Numerical Simulation
11:25-11:55	A. Günnel , R. Herzog: Optimal Control in Elasticity for Large Deformations	A. Adimurthi : Optimal Controllability for Scalar Conservation Laws	B. Hiller , T. Klug, A. Tuchscherer: Advanced Online Algorithms for Real-world Elevator Control	C. K. F. Weiler , A. Badinski: Optimum Experimental Design for Estimating Mobility Parameter in Organic Semiconductors	A. E. Kovtanyuk , N. D. Botkin, K.-H. Hoffmann: Numerical Simulations of a Coupled Conductive-Radiative Heat Transfer Model
11:55-12:25	C. Meyer, S. Schnepf, O. Thoma : Optimal Control of Particle Accelerators	K. Shyue : Interface-sharpening Methods for Compressible Flow Problems	F. M. Hante , S. Sager: On Mixed-Integer Optimal Control of Partial Differential Equations	M. S. Mommer , A. Sommer, J. P. Schlöder, H. G. Bock: A Nonlinear Preconditioner for Experimental Design Problems	D. A. Tuan , B. H. Jeon: Analysis and Computation of Electron Transport Coefficients in Cl₂-He Mixtures Using a Two-term Approximation of the Boltzmann Equation for Energy
12:25-13:25	Lunch (served in the 10 th floor)				

Monday, March 5, 2012

	Session $\alpha 2$ – Room 702 - M12 Chair: J. A. Burns ,	Session $\beta 2$ – Room C15 - M02 Chair: R. J. LeVeque	Session $\gamma 2$ – Room C02 - M01 Chair: M. E. Pfetsch	Session $\delta 2$ – Room C04-05 - M15 Chair: T. Carraro	Session $\epsilon 2$ – Room C06-07 Chair: A. E. Kovtanyuk
14:00-14:30	P. Benner: Numerical Computation of Robust Controllers for Parabolic Systems	T. Tang: A General Moving Mesh Framework for Simulating Multi-Phase Flows	T. J. Gellert, F. G. König, R. H. Möhring: Scheduling Multiple Cranes on a Shared Pathway	S. Körkel: Optimum Experimental Design for Differential Equation Models	H. C. Nguyen, C. H. Pham, V. L. Nguyen: T-matrix Approach to Studying Electronic Properties of Graphene Nanostructures
14:30-15:00	J.-P. Raymond: Coupling Pressure Measurements and Boundary Control for the Stabilization of Fluid Flows	P. G. LeFloch: Asymptotic-preserving Approximations of Nonlinear Hyperbolic Equations	V. P. Nguyen, C. Prins, C. Prodon: Models and Methods for the Problem of Transient <div style="border: 1px solid black; padding: 2px; display: inline-block; color: red; text-align: center;">This talk was neither cancelled nor presented</div>	D. Janka, S. Körkel, S. Sager: Separable Formulations of Optimum Experimental Design Problems	P. Selyshchev: Modeling of Radiation-induced Excitation and Damage of Macromolecules and Clusters
15:00-15:30	S. Ulbrich, J. C. Ziemis: Adaptive Multilevel Optimization with Reduced Order Models for PDE-constrained Problems	H. J. Schroll: High Resolution FV Methods for Hyperbolic Balance Laws with Multiplicative Noise	S. Schmieder, A. Martin: Life Cycle Optimization for Infrastructures	E. Kostina, M. Nattermann: A Higher Order Sensitivity Analysis of Parameter Estimation Problems and its Effect on the Design of Robust Optimal Experiments	D. L. Minh, D. D. L. Minh, A. L. Nguyen: Regenerative Markov Chain Monte Carlo for Any Distribution
15:30-15:50	Coffee break (served in the 7 th floor)				
	Session $\alpha 3$ – Room 702 - M12 Chair: J.-P. Raymond	Session $\beta 3$ – Room C15 - M02 Chair: T. Tang	Session $\gamma 3$ – Room C02 - M05 Chair: D. P. Williamson	Session $\delta 3$ – Room C04-05 - M08 Chair: S. Sager	Session $\epsilon 3$ – Room C06-07 Chair: D. L. Minh
15:50-16:20	S. Bechmann, M. Frey, A. Rund, H. J. Pesch: Bridges from ODE Optimal Control to PDE Optimal Control	D.-K. Mao, M. A. Ullah, W. B. Gao: Conservative Front-Tracking Method for 2D Euler System and Numerical Simulation of Shock-Bubble Interactions	T. Koch: From Simulation to Optimization	F. Rendl, A. Wiegele: Towards Higher Order Semidefinite Relaxations for Cut Problems	G. A. Kurina: Solution of Inverse Problem of the Variational Calculus for Differential Equations of Second Order with Deviating Argument
16:20-16:50	A. Schiela, M. Weiser: An Inexact Composite Step Method in Function Space	P. T. Cuong, J. A. Teixeira de Freitas: Numerical Modelling of the Hydration of Cement in Concrete	A. Fügenschuh, B. Hiller, J. Humpola, T. Koch, T. Lehmann, R. Schwarz, J. Schweiger: Solving Nonconvex MIQCP arising in Gas Network Extension Planning	C. Kirches, S. Leyffer, A. Mahajan: QP Diving	N.-S. Liou, M.-C. Chuang: Developing Linear Viscoelastic Co... with ... Using Inverse Finite Element Analyses <div style="border: 1px solid black; padding: 2px; display: inline-block; color: red; text-align: center;">This talk was neither cancelled nor presented</div>
16:50-17:20	R. Herzog, F. Schmidt: On Worst-Case Robust Optimal Control of PDEs	P. N. Thang: Combination of ... <div style="border: 1px solid black; padding: 2px; display: inline-block; color: red; text-align: center;">This talk was neither cancelled nor presented</div>	I. Joormann: Analyzing Conflicts in Natural Gas Networks	S. Rebennack, J. Kallrath: Optimal Linear Approximations for MINLP Problems	M. Sini, N. T. Thanh: Recursive Optimization Methods for Inverse Obstacle Scattering Problems

Tuesday, March 6, 2012

	Plenary Session P2 – Meeting hall in the 10th floor				
	Chair: R. Rannacher				
09:00-09:45	K. Kunisch : <i>An Optimal Control Approach to Cardiac Electrophysiology</i>				
09:45-10:30	V. H. Schulz : <i>Fast Methods for Certain and Uncertain Shape Optimization</i>				
10:30-10:55	Coffee break (served in the 7 th floor)				
	Session α4 – Room 702 - M12	Session β4 – Room C15 - M10	Session γ4 – Room C02 - M05	Session δ4 – Room C04-05 - M08	Session ϵ4 – Room C06-07
	Chair: P. Benner	Chair: V. Mehrmann	Chair: P. K. Anh	Chair: F. Rendl	Chair: N. Thoai
10:55-11:25	M. Weiser : <i>Goal-oriented Estimation for Nonlinear Optimal Control Problems</i>	M. A. Freitag , A. Spence: <i>Solving Matrix Nearness Problems using the Implicit Determinant Method</i>	M. Schmidt, M. C. Steinbach , B. M. Willert: <i>Mathematical Challenges in Determining Gas Network Capacities</i>	M. Ballerstein, D. Michaels , R. Weismantel: <i>The Convex Hull of Function Vectors</i>	H. Umeo : <i>Synchronization Algorithms for Multi-Dimensional Cellular Arrays</i>
11:25-11:55	Th. Apel, J. Pfefferer , A. Roesch: <i>Elliptic Neumann Boundary Control Problems: FE Error Estimates for Quasi-uniform and Graded Meshes</i>	P. Kunkel , V. Mehrmann: <i>Stability Concepts for Differential-Algebraic Equations and Corresponding Discretizations</i>	R. Gollmer , R. Schultz, C. Stangl: <i>Structural Considerations in Stationary Models of Gas Transport</i>	M. Jung, S. Sager : <i>The Lagrangian Relaxation for the Combinatorial Integral Approximation Problem</i>	N. Q. Hung , N. Thoai, N. T. Son: <i>Energy-Aware Lease Scheduling in Virtualized Data Centers</i>
11:55-12:25	E. Kammann, F. Tröltzsch : <i>A Posteriori Error Estimation for Optimal Controls with Application to POD</i>	V. H. Linh , V. Mehrmann: <i>QR and SVD Methods for Spectral Analysis of Linear Differential-algebraic Equations</i>	R. Gollmer, R. Schultz, C. Stangl : <i>Feasibility Checks in Stationary Models of Gas Transport</i>	H. Diedam , S. Sager: <i>Global Optimal Control using Direct Multiple Shooting</i>	T. N. Phan , T. K. Dang: <i>FTST-Tree: A Trajectory Privacy Protection-Enabling Spatio-Temporal Index Structure for Moving Object Databases</i>
12:25-13:25	Lunch (served in the 10 th floor)				

Tuesday, March 6, 2012

	Session $\alpha 5$ – Room 702 - M14 Chair: S. Engell	Session $\beta 5$ – Room C15 - M10 Chair: V. H. Linh	Session $\gamma 5$ – Room C02 - M09 Chair: R. H. Möhring	Session $\delta 5$ – Room C04-05 - M06 Chair: R. W. Longman	Session $\epsilon 5$ – Room C06-07 Chair: V. H. Schulz
14:00-14:30	F. Assassa , A. Hartwich, W. Marquardt: A Theoretical Analysis of the Condition of Mathematical Programs Resulting from Direct Shooting Approaches	V. H. Linh, V. Mehrmann : Efficient Computation of Lyapunov and Sacker-Sell Spectra for DAEs with Half-explicit Methods	J. Qian, F. Schalekamp, D. P. Williamson , A. van Zuylen: The Subtour LP for the Traveling Salesman Problem	C.-H. Lee, J.-N. Juang : System Identification for A General Class of Observable and Reachable Bilinear Systems	M. Othman , S. Rakhimov, J. Sulaiman: A Parallel Four Points AOR Iterative Algorithm for Solving Poisson Problem on Shared Memory Architecture
14:30-15:00	J. V. Frasch , L. Wirsching, H. G. Bock, S. Sager: Fast Nonlinear Model Predictive Control of Automotive Systems using Multi-Level Iteration Schemes for Multicore Architectures	T. Mitsui , D. G. Yakubu: Two-step Family of "Look-ahead" Linear Multistep Method for ODEs	G. Heilporn, M. Labbé , P. Marcotte, G. Savard: Network Pricing and Bilevel Optimization	P. Lin, M. Q. Phan, S. A. Ketcham: State-Space Model and Observer/Kalman Filter Gain Identification by a Superspace Method	A. Ngo , P. Bastian, O. Ippisch, R. Schwede, W. Li, O. A. Cirpka: Massively Parallel Geostatistical Inversion of Coupled Processes in Heterogeneous Porous Media
15:00-15:30	K. Hatz , J. P. Schlöder, H. G. Bock: Estimating Parameters in Optimal Control Problems - Numerical Methods and Computational Results for Identifying Cerebral Palsy Gaits	V. N. Phat : Robust Stability and Stabilization of Linear Polytopic Discrete-time Systems with Interval Time-varying Delays	V. Günther, R. H. Möhring, J. Schulz : Green Cities: Network Flow Techniques for Plannig Green Space Provisioning	K.-L. H. Hoang , K. Mombaur, S. Wolf: A 3D Multi-body Model to Investigate Postural Stability in Dynamic Human Locomotion	R.-P. Mundani , E. Rank: Efficient Communication for the Distributed Matrix Assembly towards Massive Parallel HPC
15:30-15:50	Coffee break (served in the 7 th floor)				
	Session $\alpha 6$ – Room 702 - M14 Chair: J. P. Schlöder	Session $\beta 6$ – Room C15 - M04 Chair: R. Rannacher	Session $\gamma 6$ – Room C02 - M09 Chair: M. Labbé	Session $\delta 6$ – Room C04-05 - M06 Chair: J.-N. Juang	Session $\epsilon 6$ – Room C06-07 Chair: T. Mitsui
15:50-16:20	S. Lucia, T. Finkler, D. Basak, S. Engell : Robust Model Predictive Control by Scenario-based Multi-stage Optimization	T. Richter : Fluid Structure Interaction in Fully Eulerian Coordinates	R. H. Möhring : Pricing and Routing in Traffic Networks and Logistics	R. W. Longman , F. Gao: Experience Using SQP Methods to Design Iterative Learning Controllers	H. Milosevic , A. D. Rychkov: Measurement Inaccuracy of Temperature Profile in Solid Propellant by Thermocouple
16:20-16:50	C. de Prada , S. Cristea, R. Mazaeda, L. G. Palacin: Optimum Operation of a Beer Filtration Process	W. Wollner : Adaptive Finite Element Discretizations in Structural Optimization	N.-D. Hoang : Algorithmic Cost Allocation Games	H. M. Brown, M. Q. Phan, S. A. Ketcham: Source Signal Recovery in Short-Duration Large-Domain Wave Propagation	M. D. Thanh : Numerical Treatment in Resonant Regime for Shallow Water Equations with Variable Topography
16:50-17:20	Q. D. Vu , P. Li: An Improved Direct Multiple Shooting Approach Combined with Collocation and Parallel Computing to Handle Path Constraints in Dynamic Nonlinear Optimization	T. Wick : Optimal Control for Fluid-Structure Interaction with Application to Heart Valve Settings	M. Call, D. Karch : New Cutting Planes for the Shortest Path Routing Polytope	J. J. Miao : Analyzing the Experimental Fluid Dynamics Data with Hilbert and Wavelet Transforms	D. D. Thang : On a Lavrentiev Finite Element Solution of the Data Completion problem

Wednesday, March 7, 2012

Plenary Session P3 – Meeting hall in the 10th floor					
Chair: K.-H. Hoffmann					
09:00-09:45	Ch. Schwab : <i>Sparse Tensor Discretizations of PDEs with Random Input</i>				
09:45-10:10	Coffee break (served in the 7 th floor)				
	Session α7 – Room 702 - M03	Session β7 – Room C15 - M04	Session γ7 – Room C02	Session δ7 – Room C04-05	Session ϵ7 – Room C06-07
	Chair: D. A. Aruliah	Chair: T. Richter	Chair: T. X. D. Ha	Chair: M. Corless	Chair: M. Othman
10:10-10:40	U. Ascher , K. van den Doel: Chaotic Regularization	A. M. Gambaruto : Modelling Haemodynamics in Small Vessels	P. T. An , D. T. Giang, H. X. Phu, L. H. Trang: Efficient Convex Hull Algorithms in 2D and 3D based on the Idea of the Method of Orienting Curves	V. F. Chistyakov, T. D. Phuong : Investigation of Stability of Differential Algebraic Equations Using Their Perturbed Analogue	D. N. Hao , T. N. T. Quyen: Convergence Rates for Tikhonov Regularization of Coefficient Identification Problems in Elliptic Equations
10:40-11:10	R. Kircheis , S. Koerkel: Parameter Estimation for PDE Problems using a Reduced Approach in a Multi-experiment Context	S. Ritraksa , S. Siripant, S. Chuai-Aree: Modeling and Visualization of Blood Flow	N. T. B. Kim, N. C. Nam , L. Q. Thuy: An Outcome Space Algorithm for Minimizing the Product of Two Convex Functions over a Convex Set	A. Potschka , H. G. Bock: Optimization with Time-periodic PDE Constraints: Numerical Methods and Applications	D. T. Oanh : On Near-Optimal Scaling Parameters of RBFs for RBF-FD Approximation of Poisson Equation
11:10-12:10	Lunch (served in the 10 th floor)				

Wednesday, March 7, 2012, Afternoon

Hanoi City Tour and Excursion to Bai Dinh Pagoda

Wednesday, March 7, 2012, Evening

Public Lectures

Place: Meeting hall, 10th floor, Ta Quang Buu Library, No. 1 Dai Co Viet Road, Hanoi

Time: Begin at 19:30

1. Surfing the wavelet landscape

Speaker: Prof. Dr. Ingrid Daubechies – President of the International Mathematical Union (IMU)

Abstract: Via internet we can download images from all over the world. Most of these are compressed in some way, to make the transmission and storage more efficient. Mathematics plays an important role in these compression techniques, which the lecture will explore.

2. Combinatorial Optimization in Action

Speaker: Prof. Dr. Martin Grötschel – Secretary of the International Mathematical Union

Abstract: Flying a plane, riding a bus, buying a yoghurt, or making a phone call: Can you imagine that combinatorial optimization has something to do with these activities? This lecture will provide answers and show how the techniques of discrete mathematics influence our daily life.

3. Discussion

Main target groups: Vietnamese students, lecturers and scientists. Other interested people are welcome.

Thursday, March 8, 2012

<p>Plenary Session P4 – Meeting hall in the 10th floor</p> <p>Chair: W. Jäger</p>					
09:00-09:45	<p>F. Allgöwer: Dynamics, Control and Cooperation in Multi-agent Systems</p>				
09:45-10:30	<p>M. Gyllenberg: Dynamics of Structured Populations: Modelling and Analysis</p>				
10:30-10:55	<p>Coffee break (served in the 7th floor)</p>				
	<p>Session α8 – Room 702 - M03</p> <p>Chair: U. Ascher</p>	<p>Session β8 – Room C15 - M16</p> <p>Chair: G. Rozza</p>	<p>Session γ8 – Room C02</p> <p>Chair: L. D. Muu</p>	<p>Session δ8 – Room C04-05 - M06</p> <p>Chair: M. Q. Phan</p>	<p>Session ϵ8 – Room C06-07</p> <p>Chair: D. N. Hao</p>
10:55-11:25	<p>D. A. Aruliah, R. Murray, F. Qureshi, L. Zarrabeitia: Toward Accurate Methods for Forensic Bloodstain Pattern Analysis</p>	<p>D. B. P. Huynh, D. J. Knezevic, A. T. Patera: Certified Static Condensation Reduced Basis Element Method</p>	<p>H. H. Vui: Global Error Bounds for Some Classes of Multivariate Polynomials</p>	<p>K. Mombaur, W. Potthast, T. Stein: A Mathematical Study of Sprinting on Artificial Legs</p>	<p>P. Dutt, A. Husain, A.S.V. Murthy, C.S. Upadhyay: Preconditioners for Three Dimensional Elliptic Problems on Non-smooth Domains</p>
11:25-11:55	<p>H. G. Bock, E. Kostina, J. P. Schlöder: Convergence of Constraint Gauss-Newton Methods, Well-Posedness of Parameter Estimation Problems and the Reliability of Confidence Estimates</p>	<p>P. Benner, T. Breiten: Interpolatory Reduction Methods for Parameter-dependent Dynamic Control Systems</p>	<p>F. D'Andreagiovanni, C. Mannino, A. Sassano: Solving Wireless Network Design Problems by Cycle Deletion</p>	<p>R. Shorten, M. Corless, S. Sajja, S. Solmaz: On Padé Approximations, Quadratic Stability and Discretization of Switched Linear Systems</p>	<p>T. Nguyen, B. Jüttler: Volume Parameterization Methods for Isogeometric Analysis</p>
11:55-12:25	<p>V. Schulz, C. Schillings: On the Treatment of Uncertainties in Aerodynamic Design</p>	<p>P. Benner, L. Feng: Parametric Model Order Reduction Based on Multi-Moment-Matching and an Acceleration Strategy</p>	<p>C. Crespelle, M. Latapy, T. H. D. Phan: Multipartite Graphs as Model of Complex Networks</p>	<p>T. S. Chingtham, G. Sahoo, M. K. Ghose: Autonomous Motion Planning for Self-Organizing Robot Immunity</p>	<p>R. Zivanovic: Automatic Spectral Collocation for Higher-Order ODE State Estimation</p>
12:25-13:25	<p>Lunch (served in the 10th floor)</p>				

This talk was neither cancelled nor presented

Thursday, March 8, 2012

	Session α9 – Room 702 - M11 Chair: U. Ledzewicz	Session β9 – Room C15 - M16 Chair: D. B. P. Huynh	Session γ9 – Room C02 Chair: R. Borndörfer	Session δ9 – Room C04-05 - M18 Chair: K. Mombaur	Session ϵ9 – Room C06-07 Chair: F. Allgöwer
14:00-14:30	S. Aseev, V. M. Veliov : Necessary Optimality Conditions and Approximations for Infinite-Horizon Optimal Control	A. Quarteroni, G. Rozza , T. Lassila, A. Manzoni: Reduced Basis Method and Free-shape Parametrizations as Computational and Geometrical Reduction Strategies	P. G. Hung, L. D. Muu : The Tikhonov Regularization Method Extended to Equilibrium Problems Involving Pseudomonotone Bifunctions	M. Engelhart , J. Funke, S. Sager: Optimization-based Analysis and Training in Complex Problem Solving	R. I. Fernandes, G. Fairweather : An ADI Orthogonal Spline Collocation Method for Nonlinear Reaction-Diffusion Systems
14:30-15:00	S. Pickenhain : Hilbert Space Methods for the Solution of Infinite Horizon Optimal Control Problems	N. V. Bo , M. Buffoni, K. Willcox, B. C. Khoo: Model Reduction for Reacting Flow Applications	B. V. Dinh , L. D. Muu: On Penalty and Gap Function Methods for Bilevel Equilibrium Problems	A. Schubert , K. Mombaur, M. Hager, J. Funke: Mathematical Models of Perception and Generation of Art Works by Dynamic Motions	O. Richter : Modeling Large Scale Invasion of New Species under Temperature Change by Reaction-diffusion Equations
15:00-15:30	D. Wenzke , S. Pickenhain: Integral Transformations of Infinite Horizon Optimal Control Problems	R. M. Freund, H. Men, N. C. Nguyen , J. Peraire, J. Saa-Seoane: Metamaterial Design using Reduced Basis Method and Interior-Point Methods	T. X. D. Ha : Optimality Conditions for Solutions of Set-valued Equilibrium Problems	M. Felis, K. Mombaur , A. Berthoz: Mathematical Modeling of Emotional Body Language during Human Walking	P. Q. Muoi , P. Maass: Sparsity Regularization of the Diffusion Coefficient Identification Problem: Theory and Numerical Solutions
15:30-15:50	Coffee break (served in the 7 th floor)				
	Session α10 – Room 702 - M11 Chair: V. M. Veliov	Session β10 – Room C15 - M16 Chair: L. Feng	Session γ10 – Room C02 - M13 Chair: N. R. Gauger	Session δ10 – Room C04-05 Chair: M. Tabata	Session ϵ10 – Room C06-07 Chair: G. Fairweather
15:50-16:20	A. Rund, H. J. Pesch : New Jump Conditions in State-constrained Optimal Control for a Coupled ODE-PDE System	A.-L. Gerner , K. Veroy: The Certified Reduced Basis Method for Saddle Point Problems	T. Meier, M. Reichelt, A. Walther: Optimization of Nano-structure Devices	K. Tomoeda : Numerical Approach to the Non-stationary Seepage in the Flow through an Absorbing Medium	S. Chuai-Aree , S. Siripant, W. Jäger, H. G. Bock: Algorithm for Plant Growth Measurement Using RGM and VGM
16:20-16:50	T. Huschto , S. Sager: Numerical Solution of an Uncertain Conspicuous Consumption Model in Periods of Recession	S. Götschel, M. Weiser : Lossy Compression of State Trajectories	V. Schulz , S. Schmidt, M. Berggren: Shape Optimization for Wave Emitters	R. Croce , D. Ruprecht, R. Krause: Parallel-in-Space-and-Time Simulation of the Three-Dimensional, Unsteady Navier-Stokes Equations for Incompressible Flow	Z. Win : Strong Branch Weight Centroids of a Tree
16:50-17:20	V. Lykina : On Numerical Aspects of Solving Infinite Horizon Optimal Control Problems	A. Schmidt , S. Körkel, H. G. Bock: Reduced Order Modeling for Experimental Design and Parameter Estimation Problems	A. Nemili, E. Oezkaya, N. R. Gauger , A. Carnarius, F. Thiele: Optimal Active Flow Control Using Discrete Adjoints	N. T. Hieu : Nitsche's Method for a Mass Transport Problem in Two-phase Incompressible Flows	D. V. Dung, N. X. Truc, N. T. Hung : Applying Energy Balance Conditions for Estimating Local Scour Depths at Bridge Piers

Friday, March 9, 2012

<p>Plenary Session P5 – Meeting hall in the 10th floor</p> <p>Chair: H. G. Bock</p>					
09:00-09:45	<p>R. Borndörfer: <i>Railway Optimization and Integer Programming</i></p>				
09:45-10:30	<p>T. Terlaky: <i>Cone Linear Optimization (CLO): From LO, SOCO and SDO towards Mixed Integer CLO</i></p>				
10:30-10:55	<p>Coffee break (served in the 7th floor)</p>				
	<p>Session α11 – Room 702 - M11</p> <p>Chair: H. J. Pesch</p>	<p>Session β11 – Room C15</p> <p>Chair: V. N. Phat</p>	<p>Session γ11 – Room C02 - M17</p> <p>Chair: M. Grötschel</p>	<p>Session δ11 – Room C04-05</p> <p>Chair: T. D. Phuong</p>	<p>Session ϵ11 – Room C06-07</p> <p>Chair: S. Chuai-Aree</p>
10:55-11:25	<p>U. Ledzewicz, H. Schaettler: <i>Analysis and Numerical Simulations of Optimal Controls in Mathematical Models for Cancer Treatments</i></p>	<p>A. Yu. Chebotarev: <i>Stabilization of Unstable Equilibrium States in Magnetohydrodynamics</i></p>	<p>G. Clafßen, A. M. C. A. Koster, M. Kutschka, I. Tahiri: <i>Generalized Metric Inequalities for Robust Network Design</i></p>	<p>M. Tabata: <i>Numerical Simulations of Two-fluid Flow Problems by a Galerkin characteristic Finite Element Scheme</i></p>	<p>K. V. Nefedev, P. D. Andrushchenko: <i>Universal Oder Parameter for Second Kind Phase Transition</i></p>
11:25-11:55	<p>H. Schaettler, U. Ledzewicz: <i>On the Structure of Optimal Controls for Combined Radiotherapy and Anti-Angiogenic Treatments</i></p>	<p>P. T. Nam, P. N. Pathirana, H. Trinh: <i>Static Output Feedback Stabilization for State/Input Delay Systems</i></p>	<p>C. Helmberg, P. Hoffmann: <i>Experiments on Robust Network Capacity Design in Telecommunication based on a Second Order Cone Model for Chance Constraints</i></p>	<p>M. Niezgódka, A. Trykozko: <i>Complex Flows through Multi-scale Porous Media with Variable Dead Core</i></p>	<p>K. V. Nefedev, V. Yu. Kapitan: <i>High Performance Calculation of Magnetic Properties and Simulation of Nonequilibrium Phenomena in Co-nanofilms</i></p>
11:55-12:25	<p>N. Tauchnitz: <i>Time Optimal Control of a Double Water-tank System</i></p>	<p>M. V. Thuan, V. N. Phat: <i>Dynamic Output Feedback Stabilization of Linear Systems with Nonsmooth Time-varying Delays in States and Outputs</i></p>	<p>F. D'Andreagiovanni, M. Grötschel: <i>Improving the Efficiency of Algorithms for Survivable Multi-layer Network Design</i></p>	<p>P. Bastian, C. Engwer, P. Hron, O. Ippisch: <i>Simulation of Multiphase Multicomponent Reactive Flow in the Capillary Fringe</i></p>	<p>V. Yu. Belokon, V. A. Ivanov, K. V. Nefedev: <i>Scalling Algorithm of the Parallel Execution for Numerical Simulation of a Magnetic Dipoles System</i></p>
12:25-13:25	<p>Lunch (served in the 10th floor)</p>				

Friday, March 9, 2012

	Session α12 – Room 702 - M19 Chair: M. Gerdts	Session β12 – Room C15 - M07 Chair: A. Ostermann	Session γ12 – Room C02 Chair: N. D. Yen	Session δ12 – Room C04-05 Chair: A. Trykozko	Session ϵ12 – Room C06-07 Chair: P. T. An
14:00-14:30	O. Tse , R. Pinnau: Optimal Control of Natural Convection-Radiation in Glass Melting Furnaces	A. Koskela , A. Ostermann: Exponential Taylor Methods - Analysis and Implementation	P. K. Anh , C. V. Chung: Parallel CQ-Methods for a Finite Family of Relatively Nonexpansive Mappings	I. Sadek , I. Kucuk, S. Adali: Optimal Vibration Control of Thin Plates with Oblique Piezoelectric Patches	M. Griebel, A. Hullmann : Fast Methods for Dimensionality Reduction Based on the Generative Topographic Mapping
14:30-15:00	G. Keller, S. Praetorius, A. Voigt : Modeling Ink Flow in Paper - a Capillary Driven Two-phase Flow Problem in a Complicated Geometry	V. T. Luan , A. Ostermann: Higher-order Exponential Rosenbrock-type Methods	K. Walkowiak, J. Rak : Optimization Issues in Distributed Computing Systems Design	I. Kucuk , I. Sadek, I. Emiroglu: Active Time-Delayed Control of Smart Plate	M. Griebel, D. R. Wissel : Fast Approximation Algorithms for Kernel Methods
15:00-15:30	N. Marheineke , R. Wegener: Efficient Simulation of Fiber-Fluid Interactions based on Asymptotic Cosserat Models and Homogenization Techniques	A. Dick, O. Koch, R. Maerz, E. B. Weinmüller : Numerical Solution of Nonlinear Singular Index-1 DAEs	D. C.-L. Fong, M. A. Saunders : CG Versus MINRES: An Empirical Comparison	D. Quang A , T. H. Hai: Numerical Solution of a Problem for Plates with a Partial Internal Support	T. Steinle , J. Vrabec, A. Walther: Dynamic Simulation of Particle-filled Hollow Spheres
15:30-15:50	Coffee break (served in the 7 th floor)				
	Session α13 – Room 702 - M19 Chair: E. Kostina	Session β13 – Room C15 - M07 Chair: E. B. Weinmüller	Session γ13 – Room C02 Chair: T. Terlaky	Session δ13 – Room C04-05 Chair: D. Quang A	Session ϵ13 – Room C06-07 Chair: K. V. Nefedev
15:50-16:20	Q. Tran Dinh , I. Necoara, C. Savorgnan, M. Diehl: Smoothing Techniques and Dual Decomposition in Structured Large-Scale Optimization and Applications	M. Calari, A. Ostermann, S. Rainer : Meshfree Integrators for Evolution Equations	H. A. Le Thi, T. Pham Dinh, N. D. Yen : Properties of Two DC Algorithms in Quadratic Programming	V. Varduhn , R.-P. Mundani, E. Rank: Large Scale Flooding Scenario Simulation for Complex Geometries <div style="border: 1px solid black; padding: 2px; display: inline-block; color: red; font-weight: bold;">This talk was cancelled.</div>	N. T. Hoai , G. A. Kurina: Asymptotic Solution of Linear-Quadratic Problems with Discontinuous Coefficients and Cheap Control
16:20-16:50	M. Gerdts : Optimal Control and Parametric Sensitivity Analysis in Driver Assistance Systems	A. Ostermann, K. Schratz : Stability of Exponential Operator Splitting Methods for Non-contractive Semigroups	H. N. Tuan , N. D. Yen: Convergence of Pham Dinh-Le Thi's Algorithm for the Trust-region Subproblem	A. Busaman , S. Chuai-Aree, S. Siripant, W. Kanbua: Algorithm and Software for Simulation and Visualization of Water Flooding in Thailand Based on Shallow Water Equation	P. A. Nguyen , J.-P. Raymond : Nonhomogeneous Navier-Stokes Equations and Control Problems
16:50-17:20	A. Walther : Solving Large-scale Inverse Electromagnetic Scattering Problems: A Parallel AD-based Approach	E. Hansen, A. Ostermann : Splitting Methods for Semilinear Reaction-diffusion Equations	N. T. Hien , O. Kaneko, S. Yamamoto: Data-driven Approach to IMC for Unstable Plants	I. V. Prokhorov : Control Problems of Refractive Index of Immersion Liquids in Imaging of Biological Tissues	P. X. Thanh , O. Steinbach: Boundary Element Methods for Parabolic Boundary Control Problems