

MMSC'09

PRELIMINARY SCIENTIFIC PROGRAM

Wednesday, September 23, 2009

Chair: René Alt

- 16:00–16:30 Jean-Luc Lamotte:
New Architectures for Scientific Computing:
Performance and Constraints
- 16:30–17:00 Gerd Bohlender, Werner Hofschuster,
Walter Krämer, Michael Zimmer:
Extension of the C-XSC Library with Scalar Products
with Selectable Precision
- 17:00–17:30 Evgenija Popova, Lubomir Kolev, Walter Krämer:
Two Approaches to Linear Systems Involving Complex
Interval Parameters
- 17:30–18:00 *Tea Break*

Chair: Jean-Luc Lamotte

- 18:00–18:30 Nikolai L. Manev:
Simulation of Real Communication Systems
- 18:30–19:00 Emanouil Atanassov, Aneta Karaivanova, Sofiya Ivanovska:
GPU-based Generation of Scrambled Sobol Sequence

Thursday, September 24, 2009

Chair: Walter Krämer

- 09:00–09:30 René Alt, Jean-Luc Lamotte, Svetoslav Markov:
Stochastic Arithmetic, Theory and Experiments
- 09:30–10:00 Gerd Bohlender, Ulrich Kulisch:
A Mathematical Basis for an Interval Arithmetic Standard
- 10:00–10:30 Antony Popov:
A New Approach to Fuzzy Arithmetic
- 10:30–11:00 *Coffee Break*

Chair: Nikolai L. Manev

- 11:00–11:30 Aneta Karaivanova:
Quasi-Monte Carlo Algorithms for Matrix Computations
- 11:30–12:00 Emanouil Atanassov, Mariya Durchova:
Efficient Generation of the Scrambled Halton Sequence
Using Specific Optimizations
- 12:30–14:00 *Lunch*
- 14:00 *Excursion*

Friday, September 25, 2009

Chair: Ivan Simeonov

- 09:00–09:30 Venko Beschkov, T. Sapundzhiev, K. Petrov, E. Vasileva::
Mathematical Modeling for Studying Microbial
Processes – Some Examples
- 09:30–10:00 Thilo Gross:
Generalized Modelling: Turning Diagrams into Dynamics
- 10:00–10:30 Maria Angelova, Tania Pencheva, Stoyan Tzonkov:
Parameter Identification of a Fed-batch Cultivation of *S. cerevisiae*
Using Genetic Algorithms
- 10:30–11:00 *Coffee Break*

Chair: Venko Beshkov

- 11:00–11:30 Ivan Simeonov:
Stability Analysis of Some Nonlinear
Anaerobic Digestion Models
- 11:30–12:00 Neli Dimitrova:
Model-Based Biological Control of the
Chemostat: New Results and Applications
- 12:00–12:30 N. Malod-Dognin, R. Andonov, Nikola Yaney:
Maximum Clique and Similarity Measures
- 12:30–14:00 *Lunch*

Friday, September 25, 2009

Chair: Gerd Bohlender

15:00–15:30 Walter Krämer:
Computer-Assisted Proofs and Symbolic Computations

15:30–16:00 Milen Borisov, Neli Dimitrova:
One-Parameter Bifurcation Analysis
of Dynamical Systems Using MAPLE

16:00–16:30 *Coffee Break*

Chair: Nikola Yanev

16:30–17:00 Sette Diop:
On the Ill-Posedness of Observation Problems

17:00–17:30 Mikhail I. Krastanov:
High-Order Control Variations and Small-time
Local Controllability