

Scientific Programme

Friday, September 29, 2000 – Lecture Hall W221:

09:00 – 09:30 **Opening**

09:30 – 10:20 **Gill, Philip E.** (University of California, San Diego)
Recent Developments in Large-Scale Nonlinear Optimization.

10:30 – 11:00 Coffeebreak

11:00 – 12:30 Parallel sections in seminar rooms W121, W122, W220, and W222

12:30 – 13:20 **Pesch, Hans Josef** (University of Bayreuth)
Survey on Offline and Online Methods for Optimal Control and Differential Game Problems with Applications in Industrial Engineering.

15:00 – 15:50 **van Rienen, Ursula** (University of Rostock)
Some Considerations on Solving Linear Systems of Equations in Computational Electrodynamics.

16:00 – 16:30 Coffeebreak

16:30 – 18:00 Parallel sections in seminar rooms W121, W122, W220, and W222

18:00 – 18:50 **Sonar, Thomas** (Technical University of Braunschweig)
A Fresh Look at Artificial Dissipation and Entropy Production.

Friday, September 29, 2000 – Seminar Room W121:

- 09:00 – 09:30 Opening (Lecture Hall W221)
- 09:30 – 10:20 P. E. Gill, (Lecture Hall W221)
- 10:30 – 11:00 Coffeebreak
- 11:00 – 11:25 **Berrut, Jean-Paul** (University of Fribourg)
The Linear Rational Collocation Method with Iteratively
Optimized Poles for Two-Point Boundary Value Prob-
lems.
- 11:30 – 11:55 **Ignatyev, Alexander O.** (University of Donetsk)
On the Stability of a Linear System with Linear Param-
eters.
- 12:00 – 12:25 **Ignatyev, Alexey A.** (University of Donetsk)
On Optimal Stabilization of Almost Periodic Systems.
- 12:30 – 13:20 H. J. Pesch, (Lecture Hall W221)
- 15:00 – 15:50 U. van Rienen, (Lecture Hall W221)
- 16:00 – 16:30 Coffeebreak
- 16:30 – 16:55 **Yanai, Hiroshi** (KEIO University, Yokohama)
Two Differential Equation Models in Hydrology - Draught
in Aral Sea and Floods in Bangladesh.
- 17:00 – 17:25 **Schneider, Klaus R.** (Weierstrass Institute for Applied
Analysis, Berlin)
Excitability of Lasers.
- 17:30 – 17:55 **Radziunas, Mindaugas** (Weierstrass Institute for Ap-
plied Analysis, Berlin)
Modelling of Multisection Semiconductor Laser.
- 18:00 – 18:50 T. Sonar, (Lecture Hall W221)

Friday, September 29, 2000 – Seminar Room W122:

- 09:00 – 09:30 Opening (Lecture Hall W221)
- 09:30 – 10:20 P. E. Gill, (Lecture Hall W221)
- 10:30 – 11:00 Coffeebreak
- 11:00 – 11:25 **Hofferek, Birgit** (Technical University of Hamburg-Harburg)
Eigenvalue Reanalysis and Condensation With General Masters.
- 11:30 – 11:55 **Voß, Heinrich** (Technical University of Hamburg-Harburg)
A Variant of the Inverted Lanczos Method.
- 12:00 – 12:25 **Karlsson, Per W.** (Technical University of Denmark, Lyngby)
The Conducting Disk.
- 12:30 – 13:20 H. J. Pesch, (Lecture Hall W221)
- 15:00 – 15:50 U. van Rienen, (Lecture Hall W221)
- 16:00 – 16:30 Coffeebreak
- 16:30 – 16:55 **zu Castell, Wolfgang** (University of Erlangen-Nuremberg)
 $\|\cdot\|_1$ -radial, Positive Definite Functions.
- 17:00 – 17:25 **Klein, Peter** (Technical University of Clausthal)
Minimal Norms of Positive Irreducible Operators.
- 17:30 – 17:55 **Lasser, Rupert** (GSF - National Research Center for Environment and Health, Neuherberg)
On the Construction of Approximation Kernels for Orthogonal Polynominal Expansions.
- 18:00 – 18:50 T. Sonar, (Lecture Hall W221)

Friday, September 29, 2000 – Seminar Room W220:

- 09:00 – 09:30 Opening (Lecture Hall W221)
- 09:30 – 10:20 P. E. Gill, (Lecture Hall W221)
- 10:30 – 11:00 Coffeebreak
- 11:00 – 11:25 **Callies, Rainer** (Technical University of Munich)
Stabilized Optimal Control with Applications in Aerospace Engineering.
- 11:30 – 11:55 **Quapp, Wolfgang** (University of Leipzig)
Searching Stationary Points of an N-dimensional Surface by a Valley Following Method - A Robust Method.
- 12:00 – 12:25 **Spedicato, Emilio** (University of Bergamo)
ABS methods and ABSPACK.
- 12:30 – 13:20 H. J. Pesch, (Lecture Hall W221)
- 15:00 – 15:50 U. van Rienen, (Lecture Hall W221)
- 16:00 – 16:30 Coffeebreak
- 16:30 – 16:55 **El Manjli, Abdelouahed** (Fès University)
On the Navier-Stokes Equations.
- 17:00 – 17:25 **Morozov, Nikita** (St. Petersburg University)
A Mathematical Description of the Distribution of Pores in a Strained, Elastic Solid.
- 17:30 – 17:55 **Bratkov, Yuri** (Moscow State University)
Geometric Modeling in Mythology.
- 18:00 – 18:50 T. Sonar, (Lecture Hall W221)

Friday, September 29, 2000 – Seminar Room W222:

- 09:00 – 09:30 Opening (Lecture Hall W221)
- 09:30 – 10:20 P. E. Gill, (Lecture Hall W221)
- 10:30 – 11:00 Coffeebreak
- 11:00 – 11:25 **Bastian, Marion** (Technical University of Dresden)
Range Restricted Hermite Interpolation by Parametric
Quadratic Splines on Powell-Sabin Refinements.
- 11:30 – 11:55 **Micula, Gheorghe** (Babeş-Bolyai University, Cluj-Napoca)
New and Old Aspects of Spline Function Theory.
- 12:00 – 12:25 **Kolumban, J.** (Babeş-Bolyai University, Cluj-Napoca)
On the Ky Fan Minimax Equation.
- 12:30 – 13:20 H. J. Pesch, (Lecture Hall W221)
- 15:00 – 15:50 U. van Rienen, (Lecture Hall W221)
- 16:00 – 16:30 Coffeebreak
- 16:30 – 16:55 **Irićanin, Bratislav D.** (University of Belgrade)
A Note on a Clothoid and the Gamma Function.
- 17:00 – 17:25 **Meyer-Spasche, R.** (MPI für Plasmaphysik, Garching)
Runge-Kutta Schemes as Exact Schemes.
- 17:30 – 17:55 —
- 18:00 – 18:50 T. Sonar, (Lecture Hall W221)

Saturday, September 30, 2000 – Lecture Hall W221:

- 09:00 – 09:50 **Troger, Hans** (Technical University of Vienna)
Dynamics of Tethered Satellite Systems: A Challenge for
Applied and Numerical Mathematics.
- 10:00 – 10:30 Coffeebreak
- 10:30 – 12:00 Parallel sections in seminar rooms W121, W122, and W220
- 12:00 – 12:50 **Yserentant, Harry** (University of Tübingen)
The Finite Mass Method.

Saturday, September 30, 2000 – Seminar Room W121:

- 09:00 – 09:50 H. Troger, (Lecture Hall W221)
- 10:00 – 10:30 Coffeebreak
- 10:30 – 10:55 **Koshelev, Alexander** (University of St. Petersburg)
On Some Non-Linear Problems in the Theory of Elasticity.
- 11:00 – 11:25 **Janovská, Drahoslava** (Prague Institute of Chemical
Technology)
A the Numerical Analysis of Imperfect Symmetry-Breaking
Bifurcation Problems.
- 11:30 – 11:55 **Janovsky, Vladimir** (Charles University Prague)
On a 1-D Model of Stress Relaxation in a Solidifying
Glass.
- 12:00 – 12:50 H. Yserentant, (Lecture Hall W221)

Saturday, September 30, 2000 – Seminar Room W122:

- 09:00 – 09:50 H. Troger, (Lecture Hall W221)
- 10:00 – 10:30 Coffeebreak
- 10:30 – 10:55 **Coppola, Gennaro** (University of Napoli Federico II)
Interpolation and Reconstruction Problems Correlated to Compact Schemes.
- 11:00 – 11:25 **Shevchuk, Igor A.** (National Taras Shevchenko University of Kyiv)
On Coconvex Polynomial Approximation.
- 11:30 – 11:55 **Markov, Svetoslav** (University of Sofia)
On the Algebra of Convex Bodies and Errors.
- 12:00 – 12:50 H. Yserentant, (Lecture Hall W221)

Saturday, September 30, 2000 – Seminar Room W220:

- 09:00 – 09:50 H. Troger, (Lecture Hall W221)
- 10:00 – 10:30 Coffeebreak
- 10:30 – 10:55 **Čiegis, Raimondas** (Vilnius Gediminas Technical University)
On Efficient Difference Schemes for Modelling a Moisture Movement in Wood.
- 11:00 – 11:25 **Krause, Egon** (Technical University of Aachen)
The Sonic Singularity of the Parabolized Navier-Stokes Equations.
- 11:30 – 11:55 **Tsybulin, Vyacheslav** (Rostov State University, Rostov on Don)
Preservation of Cosymmetry by Finite-Difference Approximations for Filtrational Convection Problems.
- 12:00 – 12:50 H. Yserentant, (Lecture Hall W221)