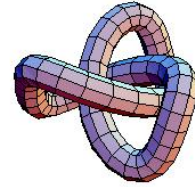




Chemnitz University of Technology  
Department of Mathematics  
Analysis – Inverse Problems



# Chemnitz Symposium on Inverse Problems 2007

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## Conference Program

# Important Facts

- Location:** Chemnitz University of Technology  
Straße der Nationen 62 (Böttcher-Bau)  
Conference hall „Altes Heizhaus“  
09111 Chemnitz, Germany
- Dates:** September 27 and September 28, 2007
- Scientific Board:** Bernd Hofmann (Chemnitz)  
Peter Mathé (Berlin)  
Ulrich Tautenhahn (Zittau)  
Lothar von Wolfersdorf (Freiberg)
- Honorary Chairpersons:** Rudolf Gorenflo (Berlin)  
Eberhard Schock (Kaiserslautern)
- Organizing Committee:** Bernd Hofmann  
Marcus Meyer  
Nadja Rückert  
Matthias Schieck  
Kerstin Seidel
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# Short program and overview

<b>Day 1: Thursday, September 27, 2007</b>		<b>Day 2: Friday, September 28, 2007</b>	
09.00 - 09.15	<b>Symposium Opening</b>	09.00 - 10.20	<b>Session 6 (Tautenhahn)</b> Barbara Kaltenbacher Thomas Schuster
09.15 - 11.20	<b>Session 1 (Chair: Mathé)</b> Andreas Neubauer Teresa Regińska Sergey I. Kabanikhin	10.20 - 10.45	<b>Coffee Break</b>
11.20 - 12.30	<b>Lunch Break</b>	10.45 - 12.20	<b>Session 7 (Kaltenbacher)</b> Christiane Pöschl Dirk Lorenz Frank Bauer
12.30 - 13.40	<b>Session 2 (Gorenflo)</b> Peter Mathé Ulrich Tautenhahn	12.20 - 13.25	<b>Lunch Break</b>
13.40 - 13.50	<b>Short Break</b>	13.25 - 14.55	<b>Session 8 (Hofmann)</b> Tom Lahmer Kai Sandfort Marcus Meyer Nadja Rückert
13.50 - 15.20	<b>Session 3 (Schock)</b> Adrian Doicu Herbert Egger Helmut Harbrecht	14.55 - 15.00	<b>Closing / Conclusions</b>
15.20 - 15.45	<b>Coffee Break</b>		
15.45 - 17.00	<b>Session 4 (Reinhardt)</b> Sybille Handrock Romy Krämer Bernd Hofmann		
17.00 - 17.10	<b>Short Break</b>		
17.10 - 18.00	<b>Session 5 (Rösch)</b> Klaus Krumbiegel Matthias Schieck		
19.00	<b>Come Together</b>		

# Day 1: Thursday, September 27, 2007

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09.00 - 09.15 **Opening**

Inaugural address by **Dietrich Zahn**  
(Research Vice-Rector of TU Chemnitz)

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09.15 - 11.20 **Session 1, Chair: Peter Mathé (Berlin)**

09.15 - 10.00 **Andreas Neubauer** (Linz, Austria):  
*„Solution of ill-posed problems via adaptive grid regularization“*

10.00 - 10.40 **Teresa Regińska** (Warsaw, Poland):  
*„Regularization property of wavelet moment method for Cauchy problems“*

10.40 - 11.20 **Sergey I. Kabanikhin**  
(Novosibirsk, Russia and Almaty, Kazakhstan):  
*„Multidimensional analog of the Gel'fand-Levitan equation“*

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11.20 - 12.30 **Lunch Break**

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12.30 - 13.40 **Session 2, Chair: Rudolf Gorenflo (Berlin)**

12.30 - 13.05 **Peter Mathé** (Berlin):  
*„Local analysis of inverse problems“*

13.05 - 13.40 **Ulrich Tautenhahn** (Zittau):  
*„Regularized total least squares: Computational aspects and error bounds“*

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13.40 - 13.50 **Short Break**

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13.50 - 15.20 **Session 3, Chair: Eberhard Schock (Kaiserslautern)**

13.50 - 14.20 **Adrian Doicu** (Oberpfaffenhofen):  
*„A regularization tool for atmospheric remote sensing“*

14.20 - 14.50 **Herbert Egger** (Aachen):  
*„Regularization under large noise“*

14.50 - 15.20 **Helmut Harbrecht** (Bonn):  
*„Fast methods in 3D inverse obstacle scattering“*

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15.20 - 15.45 **Coffee Break**

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15.45 - 17.00	<b>Session 4, Chair: Hans-Jürgen Reinhardt (Siegen)</b>
15.45 - 16.10	<b>Sybille Handrock</b> (Chemnitz): <i>„Inverse problems for the Grad-Shafranov equation“</i>
16.10 - 16.35	<b>Romy Krämer</b> (Chemnitz): <i>„On some new results concerning a benchmark problem in inverse option pricing“</i>
16.35 - 17.00	<b>Bernd Hofmann</b> (Chemnitz): <i>„A note on regularization revisiting P. Mathé’s qualification concept“</i>

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17.00 - 17.10	<b>Short Break</b>
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17.10 - 18.00	<b>Session 5, Chair: Arnd Rösch (Duisburg)</b>
17.10 - 17.35	<b>Klaus Krumbiegel</b> (Duisburg): <i>„On the regularization error of a state constrained Neumann optimal control problem - a virtual control concept“</i>
17.35 - 18.00	<b>Matthias Schieck</b> (Chemnitz): <i>„The influence of conditional stability on convergence rates for the regularization of linear inverse problems“</i>

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19.00	<b>Conference Dinner in Restaurant ‘Ratskeller’</b>
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## Day 2: Friday, September 28, 2007

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09.00 - 10.20 **Session 6, Chair: Ulrich Tautenhahn (Zittau)**

09.00 - 09.40 **Barbara Kaltenbacher** (Stuttgart):  
*„Goal oriented adaptive discretization in parameter identification for PDEs“*

09.40 - 10.20 **Thomas Schuster** (Hamburg):  
*„Iterative solution of the split feasibility problem in Banach spaces using metric and Bregman projections“*

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10.20 - 10.45 **Coffee Break**

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10.45 - 12.20 **Session 7, Chair: Barbara Kaltenbacher (Stuttgart)**

10.45 - 11.20 **Christiane Pöschl** (Innsbruck, Austria):  
*„A convergence rates result in Banach spaces with non-smooth operators“*

11.20 - 11.50 **Dirk Lorenz** (Bremen):  
*„Is sparsity regularizing?“*

11.50 - 12.20 **Frank Bauer** (Linz, Austria):  
*„Choosing regularization parameters without knowing the noise level in an optimal way“*

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12.20 - 13.25 **Lunch Break**

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13.25 - 14.55 **Session 8, Chair: Bernd Hofmann (Chemnitz)**

13.25 - 13.50 **Tom Lahmer** (Erlangen):  
*„Modified Landweber’s iteration in a multilevel setting applied to parameter identification in piezoelectricity“*

13.50 - 14.15 **Kai Sandfort** (Karlsruhe):  
*„Two inversion schemes and their relations to regularization theory“*

14.15 - 14.35 **Marcus Meyer** (Chemnitz):  
*„Gradient based methods and evolutionary strategies for the solution of a parameter identification problem - numerical studies“*

14.35 - 14.55 **Nadja Rückert** (Chemnitz):  
*„Numerical aspects of Dupire’s formula“*

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14.55 - 15.00 **Closing and Conclusions**

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