

Curriculum Vitae

Prof. Dr. Roland Griesse

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Personal Information

Date of Birth July 31, 1974
Place of Birth Hannover, Germany
Citizenship German

Professional Record

March 2008–present W3 (full) professor in *Numerical Methods and Partial Differential Equations*, Chemnitz University of Technology, Germany

August 2007 offer for a W3 professorship in *Numerical Methods and Partial Differential Equations* from Chemnitz University of Technology, Germany (accepted in November 2007)

August 2007 offer for a W2 professorship in *Continuous Optimization* from RWTH Aachen, Germany (declined)

July 2007 offer for a W2 professorship in *Numerical Methods in Optimal Control* from TU Dresden, Germany (declined)

October 2006–February 2007 W3 (full) replacement professorship in *Numerical Mathematics and Partial Differential Equations*, Chemnitz University of Technology, Germany

September 2004 offer for a junior professorship from the University of Hamburg, Germany (declined)

- August 2004–February 2008 Senior Scientist, Johann Radon Institute for Computational and Applied Mathematics (RICAM), Austrian Academy of Sciences, Linz, Austria
- March 2003–July 2004 Postdoctoral Research Assistant, Karl-Franzens-University Graz, Austria
- October 1999–February 2003 Scientific Assistant, University of Bayreuth, Germany

Education

- February 2003 Doctorate degree from the University of Bayreuth, Germany. Title of Dissertation: *Parametric Sensitivity Analysis for Control-Constrained Optimal Control Problems Governed by Systems of Parabolic Partial Differential Equations* (Supervisor Prof. Hans Josef Pesch, second supervisor Prof. Fredi Tröltzsch), in English
- October 1999–February 2003 Study for doctorate degree at the University of Bayreuth
- August 1999 Diploma with Honors in Applied Mathematics from Clausthal University of Technology, Germany, Title of Thesis: *Optimal and Suboptimal Control of the Navier-Stokes Equations* (Supervisor Prof. Hans Josef Pesch)
- 1996–1997 First year Ph.D. program in Mathematics at Tulane University, New Orleans
- 1994–1999 Study in Applied Mathematics (Minors: Mechanical Engineering, Fluid Dynamics and Computer Science), Clausthal University of Technology, Germany

Teaching Experience

- March 2008 Middle East Technical University, Ankara, Turkey: Short Source on Sensitivity Analysis
- April 2007 Universidad Autónoma de Aguascalientes, Mexico: Short Course on Optimal Control of PDEs

- 2006–2007 Chemnitz University of Technology, Germany:
Lecture and tutorial classes in Numerical Methods for
ODEs, and Optimal Control of PDEs
- January 2006 University of Bremen (invited by Prof. Peter Maaß):
Short Course on Infinite-Dimensional Optimization
- 2005 Johannes Kepler University Linz, Austria:
Lecture and tutorial classes in Control Theory
- 2004–2005 Johannes Kepler University Linz, Austria:
Tutorial classes in Real Analysis
- 2003–2004 Karl-Franzens-University Graz, Austria:
Occasional stand-in lectures in Numerical Analysis
- 1999–2003 University of Bayreuth, Germany:
Full time Teaching Assistant for Mathematics for En-
gineers and advanced courses in applied mathemat-
ics, occasional stand-in lectures in Mathematics for
Engineers and Optimal Control
- 1997–1999 Clausthal University of Technology, Germany:
Teaching Assistant for Mathematics for Engineers
and Real Analysis
- 1996–1997 Tulane University, New Orleans, USA:
Teaching Assistant for various Calculus classes, in-
cluding honors classes
- 1995–1996 Clausthal University of Technology, Germany:
Teaching Assistant for Real Analysis

Educational Training

- November 2003 English Presentation Skills
- June 2002 Didactic Training: Planning a lecture
- September 1996 Training for Teaching Assistants, Tulane University

Fellowships

- 1998–1999 Fellow of the German National Merit Foundation
(Studienstiftung des Deutschen Volkes)
- 1996–1997 Fellowship Tulane University

Membership in Professional Societies

SIAM, and member of its activity group on optimization (SIAG/OPT)

DMV (German Mathematical Society)

DHV (German Association of University Professors and Lecturers)

Professional Responsibilities

October 2004–October 2007 Chairman of the Employees of the Johann Radon Institute for Computational and Applied Mathematics

Funded Research Projects

- August 2007–present *Optimal Control of Stefan Problems with Constraints*, investigator: Martin Bernauer, FWF research grant (€102 753), together with Karl Kunisch, Graz, Austria
- September 2005–present *SSC and SQP for Mixed Constrained Optimal Control Problems*, investigator: Nataliya Metla, FWF research grant (€95 141), together with Arnd Rösch, Duisburg, Germany

Master's Theses Supervised

Gerd Wachsmuth, current

Carolin Kraft, current

Silvia Wieser, 2008 *Numerical Solution of Optimal Control Problems using FENICS*

Frank Schmidt, 2007 *Inexact Newton Methods and their Applications in Solving Semilinear PDEs*

Martin Bernauer, 2007 *A Robustification Approach in Unconstrained Optimization and its Application in Optimal Control*

Kerstin Brandes, 2005 *Robustness of optimal solutions for optimal control problems with PDEs*

Activities as Organizer

- April 2008 Organization of the section *Flow Control*, GAMM Annual Scientific Meeting, Bremen (together with Andre Thess, Ilmenau, Germany)
- July 2007 Organization of a minisymposium on *PDE-Constrained Optimization: Numerical Analysis and Scientific Computing*, sponsored by the SIAM Activity Group on Optimization, ICIAM, Zurich, Switzerland (together with Arnd Rösch, Duisburg, Germany)
- February 2006 Organization of a special session on *Optimal Control of Applications described by DAEs/PDEs/PDAEs*, MATHMOD, Vienna, Austria (together with Kurt Chudej, Bayreuth, Germany)
- October–December 2005 Organization of a section on *Control and Optimization Problems in Mechanics* within the Special Semester on Computational Mechanics, RICAM, Linz, Austria (together with Karl Kunisch, Graz, Austria, Ekkehard Sachs, Trier, Germany, and Boris Vexler, Linz, Austria)
- May 2005 Organization of a minisymposium on *Numerical Methods in PDE-Constrained Optimization*, SIAM Meeting on Optimization, Stockholm, Sweden (together with Stefan Volkwein, Graz, Austria)
- March 2005 Organization of a Young Researchers' Minisymposium on *Computational Optimization with Differential Equations*, GAMM Annual Scientific Meeting, Luxemburg (together with Andrea Walther, Dresden, Germany)

Manuscripts Refereed for Journals

Communications in Mathematical Sciences

Computational Optimization and Applications (2x)

IET Systems Biology

Journal of Computational Physics

Journal of Applied Mathematics and Mechanics
Mathematical and Computer Modelling of Dynamical Systems (2x)
Mathematical Methods in Applied Sciences
Nonlinear Analysis: Real World Applications
Nonlinear Analysis: Modelling and Control
Numerical Algorithms
Numerische Mathematik
Optimization Methods and Software (2x)
Optimal Control Applications and Methods
SIAM Journal on Control and Optimization (2x)
SIAM Journal on Optimization (2x)
SIAM Journal on Scientific Computing
Zeitschrift für angewandte Mathematik und Mechanik (2x)

Publications

Publications in Journals

1. R. GRIESSE AND D. WACHSMUTH: *Sensitivity Analysis and the Adjoint Update Strategy for Optimal Control Problems with Mixed Control-State Constraints*, to appear in: Computational Optimization and Applications, 2008
2. R. GRIESSE AND D. LORENZ: *A Semismooth Newton Method for Tikhonov Functionals with Sparsity Constraints*, Inverse Problems, 24, 035007 (19pp), 2008
3. J.C. DE LOS REYES AND R. GRIESSE: *State-Constrained Optimal Control of the Stationary Navier-Stokes Equations*, to appear in: Journal of Mathematical Analysis and Applications, 2008
4. R. GRIESSE, T. GRUND AND D. WACHSMUTH: *Update Strategies for Perturbed Nonsmooth Equations*, to appear in: Optimization Methods and Software, 2007
5. R. GRIESSE AND M. WEISER: *On the Interplay Between Interior Point Approximation and Parametric Sensitivities in Optimal Control*, Journal of Mathematical Analysis and Applications, 337(2), p.771-793, 2008

6. K. BRANDES AND R. GRIESSE: *Quantitative Stability Analysis of Optimal Solutions in PDE-Constrained Optimization*, Journal of Computational and Applied Mathematics, 206(2), p.809–826, 2007
7. R. GRIESSE AND B. VEXLER: *Numerical Sensitivity Analysis for the Quantity of Interest in PDE-Constrained Optimization*, SIAM Journal on Scientific Computing, 29(1), p.22–48, 2007
8. R. GRIESSE AND K. KUNISCH: *Optimal Control for a Stationary MHD System in Velocity-Current Formulation*, SIAM Journal on Control and Optimization, 45(5), p.1822–1845, 2006
9. A. BORZÌ AND R. GRIESSE: *Distributed Optimal Control of Lambda-Omega Systems*, Journal of Numerical Mathematics 14(1), p.17–40, 2006
10. R. GRIESSE: *Lipschitz Stability of Solutions to Some State-Constrained Elliptic Optimal Control Problems*, Journal of Analysis and its Applications, 25(4), p.435–444, 2006
11. R. GRIESSE, M. HINTERMÜLLER AND M. HINZE: *Differential Stability of Control Constrained Optimal Control Problems for the Navier-Stokes Equations*, Numerical Functional Analysis and Optimization 26(7–8), p.829–850, 2005
12. C. BÜSKENS AND R. GRIESSE: *Parametric Sensitivity Analysis of Perturbed PDE Optimal Control Problems with State and Control Constraints*, Journal of Optimization Theory and Applications 131(1), p.17–35, 2006
13. A. BORZÌ AND R. GRIESSE: *Experiences with a Space-Time Multigrid Method for the Optimal Control of a Chemical Turbulence Model*, International Journal for Numerical Methods in Fluids 47(8–9), p.879–885, 2005
14. R. GRIESSE AND S. VOLKWEIN: *A Primal-Dual Active Set Strategy for Optimal Boundary Control of a Reaction-Diffusion System*, SIAM Journal of Control and Optimization 44(2), p.467–494, 2005
15. R. GRIESSE: *Parametric Sensitivity Analysis in Optimal Control of a Reaction-Diffusion System—Part I: Solution Differentiability*, Numerical Functional Analysis and Optimization 25(1–2), p.93–117, 2004

16. R. GRIESSE: *Parametric Sensitivity Analysis in Optimal Control of a Reaction-Diffusion System—Part II: Practical Methods and Examples*, Optimization Methods and Software 19(2), p.217–242, 2004
17. R. GRIESSE AND A. WALTHER: *Parametric Sensitivities for Optimal Control Problems using Automatic Differentiation*, Optimal Control Applications and Methods 24(6), p.297–314, 2003
18. R. GRIESSE AND A. WALTHER: *Evaluating Gradients in Optimal Control — Continuous Adjoints versus Automatic Differentiation*, Journal of Optimization Theory and Applications 122(1), p.63–86, 2004

Submitted Publications

19. R. GRIESSE, N. METLA AND A. RÖSCH: *Local Quadratic Convergence of SQP for Elliptic Optimal Control Problems with Nonlinear Mixed Control-State Constraints*, submitted, 2008
20. R. GRIESSE AND K. KUNISCH: *A Semismooth Newton Method for Solving Elliptic Equations with Gradient Constraints*, submitted, 2007
21. R. GRIESSE AND A.J. MEIR: *Modeling of an MHD Free Surface Problem Arising in CZ Crystal Growth*, submitted, 2007
22. R. GRIESSE, N. METLA AND A. RÖSCH: *Local Quadratic Convergence of SQP for Elliptic Optimal Control Problems with Mixed Control-State Constraints*, submitted, 2007
23. W. ALT, R. GRIESSE, N. METLA AND A. RÖSCH: *Lipschitz Stability for Elliptic Optimal Control Problems with Mixed Control-State Constraints*, submitted, 2006

Publications in Proceedings

24. R. GRIESSE, A.J. MEIR AND K. KUNISCH: *Control Issues in Magneto-hydrodynamics*, in: Optimal Control of Free Boundaries, Mathematisches Forschungsinstitut Oberwolfach, Report No. 8/2007, p.20–23, 2007

25. R. GRIESSE AND A.J. MEIR: *Modeling of an MHD Free Surface Problem Arising in CZ Crystal Growth*, in: Proceedings of the 5th IMACS Symposium on Mathematical Modelling (5th MATHMOD), I. Troch, F. Breitenecker (eds), ARGESIM Report 30, Vienna, 2006
26. R. GRIESSE AND K. KUNISCH: *Optimal Control in Magnetohydrodynamics*, in: Optimal Control of Coupled Systems of PDE, Mathematisches Forschungsinstitut Oberwolfach, Report No. 18/2005, p.1011–1014, 2005
27. R. GRIESSE AND A. WALTHER: *Towards Matrix-Free AD-Based Preconditioning of KKT Systems in PDE-Constrained Optimization*, Proceedings of the GAMM 2005 Annual Scientific Meeting, PAMM 5(1), p.47–50, 2005
28. R. GRIESSE AND S. VOLKWEIN: *Parametric Sensitivity Analysis for Optimal Boundary Control of a 3D Reaction-Diffusion System*, in: Large-Scale Nonlinear Optimization, G. Di Pillo, M. Roma (eds), Proceedings of the Workshop Large Scale Nonlinear Optimization, Erice, 2004, Volume 83 of *Nonconvex Optimization and its Applications*, Springer, Berlin, 2006
29. R. GRIESSE AND S. VOLKWEIN: *A Semi-Smooth Newton Method for Optimal Boundary Control of a Nonlinear Reaction-Diffusion System*, Proceedings of the Sixteenth International Symposium on Mathematical Theory of Networks and Systems (MTNS), Leuven, Belgium, 2004
30. R. GRIESSE AND A. WALTHER: *Using AD-generated Derivatives in Optimal Control of an Industrial Robot*, Progress in Industrial Mathematics at ECMI 2002, Volume 5, p.127–132, 2004
31. R. GRIESSE: *A Reduced SQP Algorithm for the Optimal Control of Semilinear Parabolic Equations — and its Application to Reaction-Diffusion Systems*, Proceedings of the 20th IFIP TC 7 Conference, p.239–253, 2003
32. R. GRIESSE: *Some Aspects for Instantaneous Boundary Control of Backward-facing Step Flow*, Proceedings of the GAMM 2000 Annual Scientific Meeting, Zeitschrift für Angewandte Mathematik und Mechanik 81 (S2), p.251–252, 2001

Further Documents

33. R. GRIESSE: *Stability and Sensitivity Analysis in Optimal Control of Partial Differential Equations*, Cumulative Habilitation Thesis, submitted, 2007
34. R. GRIESSE: *The RICAM Information Leaflet (Information for Incoming Ph.D. Students, Postdocs, and Visiting Scientists)*, 2005
35. R. GRIESSE: *Parametric Sensitivity Analysis for Control-Constrained Optimal Control Problems Governed by Systems of Parabolic Partial Differential Equations*, Dissertation, University of Bayreuth, 2003
36. R. GRIESSE: *Optimale und suboptimale Steuerung der Navier-Stokes-Gleichungen* (in German), Diploma Thesis, Clausthal University of Technology, 1999.

Presentations

Invited Conference Talks

1. *Stability and Sensitivity Analysis in PDE-Constrained Optimization*, Czech-French-German Conference on Optimization, Heidelberg, Germany, September 2007
2. *Optimal Control Challenges in Magnetohydrodynamics*, Simposium Internacional de Optimización y Ecuaciones Diferenciales, Universidad Autónoma de Aguascalientes, Mexico, April 2007
3. *Finite Elements for Magnetohydrodynamics and its Optimal Control*, FEM Symposium, Chemnitz, September 2006
4. *Optimal Control in Magnetohydrodynamics*, New Trends in Simulation and Control of PDEs, WIAS, Berlin, September 2005

Conference Talks in Minisymposia

5. *An SQP Method for Semilinear Optimal Control Problems with Mixed Constraints*, ENUMATH 2007, Graz, Austria, September 2007

6. *Update Strategies for Perturbed Nonsmooth Equations*, IFIP TC7 (System Modeling and Optimization), Cracow, Poland, July 2007
7. *KKT Systems in Optimal Control of Magnetohydrodynamics*, ICIAM, Zurich, Switzerland, July 2007
8. *Mathematical Methods in MHD Flow Control*, GAMM Annual Scientific Meeting (within ICIAM), Zurich, Switzerland, July 2007
9. *Elliptic Optimal Control Problems with Mixed Constraints*, DMV Annual Meeting, Bonn, September 2006
10. *Preconditioning of Linear Systems Arising in the Optimal Control of Magnetohydrodynamics*, GAMM-SIAM Conference on Applied Linear Algebra, Düsseldorf, Germany, July 2006
11. *Optimal Control in Magnetohydrodynamics*, MAFELAP, Uxbridge, Great Britain, June 2006
12. *Postcorrection Strategies for Perturbed Nonsmooth Equations*, High Performance Scientific Computing, Hanoi, Vietnam, March 2006
13. *Modeling of an MHD Free Surface Problem Arising in CZ Crystal Growth*, MATHMOD Vienna, Austria, February 2006
14. *Optimal Control in Magnetohydrodynamics*, ÖMG/DMV (Austrian/German Mathematical Society) Annual Meeting, Klagenfurt, September 2005
15. *Optimal Control in Magnetohydrodynamics*, IFIP TC7 (System Modeling and Optimization), Turin, Italy, July 2005
16. *Matrix-Free AD-Based Preconditioning of KKT Systems*, GAMM 2005, Luxembourg, March 2005
17. *Parametric Sensitivity Analysis for 3D Reaction-Diffusion Control Problems*, DMV (German Mathematical Society) Annual Meeting, Heidelberg, Germany, September 2004
18. *Parametric Sensitivities for Perturbed Reaction-Diffusion Optimal Control Problems*, EUCCO, Dresden, Germany, March 2004

19. *Post-optimal Parametric Sensitivity Analysis for Control-Constrained Reaction-Diffusion Optimal Control Problems*, SCICADE, Trondheim, Norway, July 2003
20. *Using AD-generated Adjoint in Optimal Control of an Industrial Robot*, Dresden University of Technology, Germany, ECMI (European Consortium of Mathematics in Industry), Jurmala, Latvia, September 2002

Other Conference Talks

21. *A Semismooth Newton Method for Solving Elliptic Equations with Gradient Constraints*, Workshop: Optimal Control of Coupled PDE Systems, Oberwolfach, Germany, March 2008
22. *A Semismooth Newton Method for Tikhonov Functionals with Sparsity Constraints*, Workshop: Hybrid Imaging, Sparsity, and Mathematical Biology, Obergurgl, Austria, January 2008
23. *Optimal Control for MHD Flows*, Colloquium of SFB 609, Schmochtitz, Germany, September 2007
24. *Optimal Boundary Control of Phase Transitions in a Crystal Growth Process*, Workshop: Optimization Methods, Approximation, and Adaptivity in PDE-Constrained Optimization (DFG Priority Program 1253), RICAM Linz, Austria, March 2007
25. *Control Issues in Magnetohydrodynamics*, Miniworkshop: Control of Free Boundaries, Oberwolfach, Germany, February 2007
26. *Optimal Control in Magnetohydrodynamics*, GAMM Annual Scientific Meeting, Berlin, March 2006
27. *Modeling and Optimal Control in Instationary Magnetohydrodynamics*, Workshop: Control of Complex Fluids, Special Semester on Computational Mechanics, RICAM Linz, Austria, October 2005
28. *Optimal Control in Magnetohydrodynamics*, Workshop: Optimal Control of Coupled PDE Systems, Oberwolfach, Germany, April 2005
29. *Parametric Sensitivity Analysis and Applications*, Workshop: Inverse Problems and 1st Austrian Numerical Analysis Day, Obergurgl, Austria, April 2005

30. *Parametric Sensitivity Analysis for a Perturbed 3D Reaction-Diffusion Problem*, Nonlinear Large Scale Optimization, Erice, Italy, June 2004
31. *A Nonlinear Primal-Dual Active Set Method for Optimal Boundary Control of a 3D Reaction-Diffusion Model*, EUCCO, Dresden, Germany, March 2004
32. *Optimal Control of a Reaction-Diffusion Process*, Workshop: Optimization in Partial Differential Equations and Applications, Heidelberg, Germany, October 2002
33. *Optimal Control of Time-dependent Partial Differential Equations with Strict Terminal Conditions*, Workshop: Adjoints — Analysis and Applications, Děčín, Czech Republic, September 2001
34. *Distributed and Neumann Boundary Control of Reaction-Diffusion Equations*, IFIP TC7 (System Modeling and Optimization), Trier, Germany, July 2001
35. *Neumann Boundary Control of Reaction-Diffusion Equations*, SIAM Optimal Control and Applications, San Diego, July 2001
36. *Calculation of Sensitivity Derivatives for Perturbed Parabolic Optimal Control Problems*, Workshop: Stability and Sensitivity of Continuous Control Problems, Burg, Germany, April 2001
37. *An Adaptive POD Algorithm for Optimal Control Problems of the Heat Equation*, Workshop on POD and its applications, Graz, Austria, May 2000
38. *Instantaneous Control of the Navier-Stokes Equations*, GAMM Annual Scientific Meeting 2000, Göttingen, Germany, April 2000

Colloquium and Seminar Talks

39. *Optimal Control in Magnetohydrodynamics*, Middle East Technical University, Ankara, Turkey, March 2008
40. *Optimal Control Challenges in Magnetohydrodynamics*, University of Regensburg, Germany, July 2007
41. *The SQP Method for Optimal Control Problems with Mixed Control-State Constraints*, University of Trier, Germany, June 2007

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42. *Stability and Sensitivity in Optimization with Partial Differential Equations*, TU Kaiserslautern, Germany, June 2007
 43. *Coupled Field Problems in Magnetohydrodynamics and Their Optimal Control*, TU Chemnitz, Germany, May 2007
 44. *Optimal Control Challenges in Magnetohydrodynamics*, University of Edinburgh, UK, March 2007
 45. *Numerical Methods for Large-Scale Optimal Control Problems*, University of Basel, Switzerland, February 2007
 46. *Numerical Methods in PDE-Constrained Optimization*, TU Chemnitz, Germany, January 2007
 47. *From Finite-Dimensional Optimization to Optimal Control*, RWTH Aachen, Germany, January 2007
 48. *Analytical and Numerical Treatment of Optimal Control Problems in Magnetohydrodynamics*, TU Dresden, Germany, January 2007
 49. *Continuous Optimization — Applications and Prospects*, TU Kaiserslautern, Germany, July 2006
 50. *Numerical Methods in PDE-Constrained Optimization*, TU Darmstadt, Germany, May 2006
 51. *Optimal Control in Magnetohydrodynamics*, RICAM Scientific Board Meeting, Linz, Austria, April 2006
 52. *Analysis, Numerical Simulation and Optimal Control of Coupled PDE Systems*, University of Münster, Germany, December 2005
 53. *A Stokes-MHD Problem*, RICAM Linz, Austria, December 2005
 54. *Modeling and Optimal Control in Magnetohydrodynamics*, TU Berlin, Germany, September 2005
 55. *Preconditioning of Linear Systems in PDE-Constrained Optimization*, RICAM Linz, Austria, July 2005

56. *Parametric Sensitivity Analysis for Constrained Optimal Control Problems*, ZIB, Berlin, Germany, February 2005
57. *Towards Simulation and Control in Magnetohydrodynamics*, RICAM Linz, Austria, February 2005
58. *Parametric Sensitivity Analysis for 3D Reaction-Diffusion Control Problems*, TU Vienna, Austria, November 2004
59. *Parametric Sensitivity Derivatives of Perturbed Optimal Control Problems*, TU Chemnitz, Germany, June 2004
60. *Recent Advances in Magnetohydrodynamics*, Karl-Franzens-University Graz, Austria, May 2004
61. *Parametric Sensitivity Derivatives of Constrained Optimal Control Problems*, University of Hamburg, Germany, May 2004
62. *Parametric Sensitivities for Perturbed Reaction-Diffusion Optimal Control Problems*, University of Heidelberg, Germany, March 2004
63. *Automatic Differentiation and Constrained Optimization*, Karl-Franzens-University Graz, Austria, December 2003
64. *Post-Optimal Sensitivity Analysis for Control-Constrained Optimal Control Problems*, Karl-Franzens-University Graz, Austria, March 2003
65. *Strongly Regular Generalized Equations and Sensitivity Derivatives for Perturbed Parabolic Control Problems*, Dresden University of Technology, Germany, January 2003
66. *Parametric Optimization and Applications*, University of Jena, Germany, January 2003
67. *Parametric Sensitivity Analysis for Perturbed Reaction-Diffusion Control Problems*, Karl-Franzens-University Graz, Austria, July 2002
68. *Computation of Sensitivity Derivatives for Perturbed Parabolic Control Problems*, Dresden University of Technology, Germany, December 2001

69. *The Newton-Lagrange Method and Variants for Optimal Control of Time-dependent Partial Differential Equations*, Berlin University of Technology, Germany, September 2001
70. *Optimal Control of a Reaction-Diffusion Process — Comparison of Time Integration Methods*, Dresden University of Technology, Germany, January 2001
71. *The Newton-Lagrange Method for Solving Unconstrained Optimal Control Problems with Partial Differential Equations*, Berlin University of Technology, August 2000
72. *Suboptimal Control Problems for the Navier-Stokes Equations using FEAT-FLOW*, University of Dortmund, Germany, March 2000

Volunteer Activities

1992–1999 Active Member of the Volunteer Fire Department,
Gleidingen, Germany

Foreign Language Skills

German (native language)

English (fluent in written and oral), TOEFL score of 657/660

Spanish (good knowledge)

French (good knowledge)

Swedish (beginning level)

Hobbies

Photography

Marathon race (personal best: 3:24:15, Berlin 2007)

References

Available upon request