

Contents

| | |
|--|------------|
| Direct Multiple Shooting and Generalized Gauss-Newton Method for Parameter Estimation Problems in ODE Models | 1 |
| Hans Georg Bock, Ekaterina Kostina, and Johannes P. Schlöder | |
| Direct and Indirect Multiple Shooting for Parabolic Optimal Control Problems | 35 |
| Thomas Carraro and Michael Geiger | |
| 50 Years of Time Parallel Time Integration | 69 |
| Martin J. Gander | |
| Direct Multiple Shooting for Nonlinear Optimum Experimental Design | 115 |
| Dennis Janka, Stefan Körkel, and Hans Georg Bock | |
| Parameter Estimation for High-Dimensional PDE Models Using a Reduced Approach | 143 |
| Robert Kircheis and Stefan Körkel | |
| Direct Multiple Shooting for Parabolic PDE Constrained Optimization | 159 |
| Andreas Potschka | |
| Multiple Shooting in a Microsecond | 183 |
| Rien Quirynen, Milan Vukov, and Moritz Diehl | |
| Preconditioners Based on “Parareal” Time-Domain Decomposition for Time-Dependent PDE-Constrained Optimization | 203 |
| Stefan Ulbrich | |
| Space-Time Discontinuous Galerkin Methods for Optimal Control Problems Governed by Time Dependent Diffusion-Convection-Reaction Equations | 233 |
| Tuğba Akman and Bülent Karasözen | |

| | |
|--|-----|
| Reducing Memory Requirements in Scientific Computing and Optimal Control | 263 |
| Sebastian Götschel, Christoph von Tycowicz, Konrad Polthier, and Martin Weiser | |
| Optimal Control of Heat and Fluid Flow for Efficient Energy Utilization | 289 |
| Yosuke Hasegawa | |
| A Unified Approach to Integration and Optimization of Parametric Ordinary Differential Equations | 305 |
| Daniel Kaschek and Jens Timmer | |
| A Variational Approach for Physically Based Image Interpolation Across Boundaries | 315 |
| Matthias Klinger | |
| Statistics for Model Calibration | 355 |
| Clemens Kreutz, Andreas Raue, and Jens Timmer | |
| On Time Discretizations of Fluid-Structure Interactions | 377 |
| Thomas Richter and Thomas Wick | |
| Parareal Time-Stepping for Limit-Cycle Computation of the Incompressible Navier-Stokes Equations with Uncertain Periodic Dynamics | 401 |
| Michael Schick | |

Multiple Shooting and Time Domain Decomposition
Methods

MuS-TDD, Heidelberg, May 6-8, 2013

Carraro, Th.; Geiger, M.; Körkel, S.; Rannacher, R. (Eds.)

2015, X, 422 p., Hardcover

ISBN: 978-3-319-23320-8