

Wissenschaftliche Publikationen:
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Bücher, Sonderhefte und Buchbeiträge

1. Rauh, Andreas; Hofer, Eberhard P.: *Interval Arithmetic Optimization Techniques for Uncertain Discrete-Time Systems*, Proc. of the 13th Intl. Workshop on Dynamics and Control 2005, Wiesensteinig, Germany, *Modeling and Control of Autonomous Decision Support Based Systems*, E. P. Hofer and E. Reithmeier (editors), pp. 141–148, Shaker Verlag, Aachen, 2005.
2. Minisini, Johanna; Rauh, Andreas; Hofer, Eberhard P.: *Carleman Linearization for Approximate Solutions of Nonlinear Control Problems: Part 1 – Theory*, presented at the 14th Intl. Workshop on Dynamics and Control, Moscow-Zvenigorod, Russia, *Advances in Mechanics: Dynamics and Control: Proceedings of the 14th International Workshop on Dynamics and Control*, F. L. Chernousko, G. V. Kostin, V. V. Saurin (editors), pp. 215–222, Nauka, Moscow, 2008.
3. Rauh, Andreas; Minisini, Johanna; Hofer, Eberhard P.: *Carleman Linearization for Approximate Solutions of Nonlinear Control Problems: Part 2 – Applications*, presented at the 14th Intl. Workshop on Dynamics and Control, Moscow-Zvenigorod, Russia, *Advances in Mechanics: Dynamics and Control: Proceedings of the 14th International Workshop on Dynamics and Control*, F. L. Chernousko, G. V. Kostin, V. V. Saurin (editors), pp. 266–273, Nauka, Moscow, 2008.
4. Rauh, Andreas; Hofer, Eberhard P.: *Interval Methods for Optimal Control*. In A. Frediani, G. Buttazzo (editors): Proc. of the 47th Workshop on *Variational Analysis and Aerospace Engineering*, Erice, Italy, 2007. pp. 397–418, Springer–Verlag, New York, 2009.
5. Rauh, Andreas: *Theorie und Anwendung von Intervallmethoden für Analyse und Entwurf robuster und optimaler Regelungen dynamischer Systeme*, Dissertation, Universität Ulm, Fortschritt-Berichte VDI, Reihe 8, Nr. 1148, 2008.
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7. Rauh, Andreas; Auer, Ekaterina: Minisymposium on *Validated Methods: Applications to Modeling, Analysis, and Design of Systems in Medicine and Engineering*, In: A.D. Fitt, J. Norbury, H. Ockendon, and E. Wilson (Eds.), Progress in Industrial Mathematics at ECMI 2008, London, UK, pp. 547–548, Springer–Verlag, 2010.
8. Freihold, Mareile; Rauh, Andreas; Hofer, Eberhard P.: *Derivation of Physically Motivated Constraints for Efficient Interval Simulations Applied to the Analysis of Uncertain Models of Blood Cell Dynamics*, Minisymposium on *Validated Methods: Applications to Modeling, Analysis, and Design of Systems in Medicine and Engineering*, In: A.D. Fitt, J. Norbury, H. Ockendon, and E. Wilson (Eds.), Progress in Industrial Mathematics at ECMI 2008, London, UK, pp. 563–569, Springer–Verlag, 2010.
9. Rauh, Andreas; Minisini, Johanna; Hofer, Eberhard P.: *Verification Techniques for Sensitivity Analysis and Design of Controllers for Nonlinear Dynamical Systems with Uncertainties*, Minisymposium on *Validated Methods: Applications to Modeling, Analysis, and Design of Systems in Medicine and Engineering*, In: A.D. Fitt, J. Norbury, H. Ockendon, and E. Wilson (Eds.), Progress in Industrial Mathematics at ECMI 2008, London, UK, pp. 549–555, Springer–Verlag, 2010.
10. Rauh, Andreas; Aschemann, Harald: *Interval Methods for Verification and Implementation of Robust Controllers*, In: J. Lévine and P. Müllhaupt (Eds.), *Advances in the Theory of Control, Signals and Systems, with Physical Modelling*, Lecture Notes in Control and Information Sciences Series, vol. 407, (Series Editors: M. Thoma, F. Allgöwer, M. Morari), pp. 201–211, Springer–Verlag, 2011.
11. Leska, Maik; Prabel, Robert; Rauh, Andreas; Aschemann, Harald: *Simulation and Optimization of the Longitudinal Dynamics of Parallel Hybrid Railway Vehicles*, Proc. of FORMS/FORMAT-2010, Braunschweig, Germany, Part 2, E. Schnieder and G. Tarnai (eds.), pp. 155–164, vol. 281, Springer–

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 13. Rauh, Andreas; Aschemann, Harald: *Structural Analysis for the Design of Reliable Controllers and State Estimators for Uncertain Dynamical Systems*, In: A. Rauh and E. Auer (Eds.), *Modeling, Design, and Simulation of Systems with Uncertainties*, Mathematical Engineering, (Series Editors: C. Hillermeier, J. Huber, S. Schäffler, A. Gilg), pp. 43–68, Springer-Verlag, 2011.
 14. Saurin, Vasily V.; Kostin, Georgy V.; Rauh, Andreas; Aschemann, Harald: *Adaptive Control Strategy in Heat Transfer Problems with System Parameter Uncertainties Based on a Projective Approach*, In: A. Rauh and E. Auer (Eds.), *Modeling, Design, and Simulation of Systems with Uncertainties*, Mathematical Engineering, (Series Editors: C. Hillermeier, J. Huber, S. Schäffler, A. Gilg), pp. 309–332, Springer-Verlag, 2011.
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 17. Rauh, Andreas; Senkel, Luise: *Variable-Structure Approaches for Analysis, Simulation, Robust Control and Estimation of Uncertain Dynamic Processes*, Mathematical Engineering, (Series Editors: C. Hillermeier, J. Schröder, B. Weigand), Springer-Verlag, 2016.
 18. Rauh, Andreas; Senkel, Luise: *Interval Methods for Robust Sliding Mode Control Synthesis of High-Temperature Fuel Cells with State and Input Constraints*, In: A. Rauh and L. Senkel (Eds.), *Variable-Structure Approaches for Analysis, Simulation, Robust Control and Estimation of Uncertain Dynamic Processes*, Mathematical Engineering, (Series Editors: C. Hillermeier, J. Schröder, B. Weigand), pp. 53–85, Springer-Verlag, 2016.
 19. Senkel, Luise; Rauh, Andreas; Aschemann, Harald: *Experimental and Numerical Validation of a Reliable Sliding Mode Control Strategy Considering Uncertainty with Interval Arithmetic*, In: A. Rauh and L. Senkel (Eds.), *Variable-Structure Approaches for Analysis, Simulation, Robust Control and Estimation of Uncertain Dynamic Processes*, Mathematical Engineering, (Series Editors: C. Hillermeier, J. Schröder, B. Weigand), pp. 87–122, Springer-Verlag, 2016.
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