

Complete List of Scientific Publications:

Prof. Dr.-Ing. habil. Andreas Rauh (Last update: September 19, 2022)

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Monographs, Special Issues, Book Chapters

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.
6. Rauh, Andreas; Auer, Ekaterina; Hofer, Eberhard P.; Luther, Wolfram (editors): *Verified Methods: Applications in Medicine and Engineering*, Special Issue of the International Journal of Applied Mathematics and Computer Science AMCS, Vol. 19, No. 3, 2009.
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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 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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 16. Rauh, Andreas; Ritzke, Jöran; Aschemann, Harald: *Error Estimates for Finite-Dimensional Approximations in Control of Distributed Parameter Systems*, in *Minisymposium on Modeling, Design, and Simulation of Systems with Uncertainties*, In: M. Günther, A. Bartel, S. Schöps, M. Striebel, and M. Brunk (Eds.), *Progress in Industrial Mathematics at ECMI 2010, Mathematics in Industry 17*, Wuppertal, Germany, pp. 593–599, Springer-Verlag, 2012.
 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.
 20. Rauh, Andreas; Senkel, Luise; Aschemann, Harald: *Interval-Based Sliding Mode Control for High-Temperature Fuel Cells under Actuator Constraints*, in *Minisymposium on Robust Variable-Structure Approaches for Control and Estimation of Uncertain Dynamic Processes*, In: G. Russo, V. Capasso, G. Nicosia, and V. Romano (Eds.), *Progress in Industrial Mathematics at ECMI 2014, Mathematics in Industry 22*, Taormina, Italy, pp. 667–674, Springer-Verlag, 2016.
 21. Senkel, Luise; Rauh, Andreas; Aschemann, Harald: *Experimental Validation of State and Parameter Estimation using Sliding-Mode Techniques with Bounded and Stochastic Uncertainty*, in *Minisymposium on Robust Variable-Structure Approaches for Control and Estimation of Uncertain Dynamic Processes*, In: G. Russo, V. Capasso, G. Nicosia, and V. Romano (Eds.), *Progress in Industrial Mathematics at ECMI 2014, Mathematics in Industry 22*, Taormina, Italy, pp. 659–666, Springer-Verlag, 2016.
 22. Rauh, Andreas: *Sensitivity Methods for Analysis and Design of Dynamic Systems with Applications in Control Engineering: Feedforward Control – Feedback Control – Robust Control – State Estimation*, Habilitation, Universität Rostock, Shaker-Verlag, Aachen, 2017.

23. Rauh, Andreas (editor): *Algorithms for Reliable Estimation, Identification and Control*, Special Issue of the MDPI Journal Algorithms, 2020, www.mdpi.com/journal/algorithms/special_issues/reliable_estimation_identification_robust_optimal.
24. Auer, Ekaterina; Kersten, Julia; Rauh, Andreas (editors): *Special Issue of the 11th Summer Workshop on Interval Methods*, Acta Cybernetica, Vol. 24, No. 3, 2020.
25. Rauh, Andreas; Jaulin, Luc; Alexandre dit Sandretto, Julien (editors): *Algorithms for Reliable Estimation, Identification and Control II*, Special Issue of the MDPI Journal Algorithms, 2021, www.mdpi.com/journal/algorithms/special_issues/reliable_estimation_identification_robust_optimal_II.
26. Rauh, Andreas; Auer, Ekaterina; Gehan, Olivier; Tibken, Bernd (editors): *Reliable Modeling, Simulation, Identification, Control and State Estimation for Dynamic Systems with Uncertainty*, Special Issue of Frontiers in Control Engineering, 2021, www.frontiersin.org/research-topics/19749/reliable-modeling-simulation-identification-control-and-state-estimation-for-dynamic-systems-with-un.

Peer-reviewed journal publications

1. Rauh, Andreas; Hanebeck, Uwe D.: *Calculating Moments of Exponential Densities Using Differential Algebraic Equations*. IEEE Signal Processing Letters, Volume 10, Number 5, pp. 144–147, 2003.
2. Rauh, Andreas; Kletting, Marco; Aschemann, Harald; Hofer, Eberhard P.: *Reduction of Overestimation in Interval Arithmetic Simulation of Biological Wastewater Treatment Processes*, Proc. of the 11th GAMM-IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics SCAN 2004, Fukuoka, Japan, *Journal of Computational and Applied Mathematics*, Vol. 199 (2), pp. 207–212, 2007.
3. Kletting, Marco; Rauh, Andreas; Aschemann, Harald; Hofer, Eberhard P.: *Consistency Tests in Guaranteed Simulation of Nonlinear Uncertain Systems with Application to an Activated Sludge Process*, Proc. of the 11th GAMM-IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics SCAN 2004, Fukuoka, Japan, *Journal of Computational and Applied Mathematics*, Vol. 199 (2), pp. 213–219, 2007.
4. Rauh, Andreas; Kletting, Marco; Hofer, Eberhard P.: *Interval Techniques for Enclosures of Regions of Reachability and Controllability and for Guaranteed State and Parameter Estimation of Dynamical Systems*, Proc. of the 6th Intl. Congress on Industrial and Applied Mathematics, Minisymposium *Taylor Model Methods and Interval Methods – Applications*, Zurich, Switzerland, PAMM, Volume 7, Number 1, pp. 1023009–1023010, 2007.
5. Rauh, Andreas; Auer, Ekaterina; Minisini, Johanna; Hofer, Eberhard P.: *Extensions of VALENCIA-IVP for Reduction of Overestimation, for Simulation of Differential Algebraic Systems, and for Dynamical Optimization*, Proc. of the 6th Intl. Congress on Industrial and Applied Mathematics, Minisymposium *Taylor Model Methods and Interval Methods – Applications*, Zurich, Switzerland, PAMM, Volume 7, Number 1, pp. 1023001–1023002, 2007.
6. Rauh, Andreas; Brill, Michael; Günther, Clemens: *A Novel Interval Arithmetic Approach for Solving Differential-Algebraic Equations with ValEnCIA-IVP*, Special Issue of the International Journal of Applied Mathematics and Computer Science AMCS on *Verified Methods: Applications in Medicine and Engineering*, Vol. 19, No.3, pp. 381–397, 2009.
7. Rauh, Andreas; Minisini, Johanna; Hofer, Eberhard P.: *Verification Techniques for Sensitivity Analysis and Design of Controllers for Nonlinear Dynamical Systems with Uncertainties*, Special Issue of the International Journal of Applied Mathematics and Computer Science AMCS on *Verified Methods: Applications in Medicine and Engineering*, Vol. 19, No.3, pp. 425–439, 2009.
8. Rauh, Andreas; Auer, Ekaterina; Freihold, Mareile; Hofer, Eberhard P.; Aschemann, Harald: *Detection and Reduction of Overestimation in Guaranteed Simulations of Hamiltonian Systems with Applications in Mechanics*, Special Issue of Reliable Computing, 13th GAMM-IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics SCAN2008, El Paso, USA, 2008.

- Reliable Computing, Vol. 15, No. 4, pp. 321–332, 2011.
9. Rauh, Andreas; Auer, Ekaterina: *Verified Simulation of ODEs and DAEs in ValEncIA-IVP*, Special Issue of Reliable Computing, 13th GAMM-IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics SCAN2008, El Paso, USA, 2008. Reliable Computing, Vol. 15, No. 4, pp. 370–381, 2011.
 10. Rauh, Andreas; Minisini, Johanna; Hofer, Eberhard P.; Aschemann, Harald: *Robust and Optimal Control of Uncertain Dynamical Systems with State-Dependent Switchings Using Interval Arithmetic*, Special Issue of Reliable Computing, 13th GAMM-IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics SCAN2008, El Paso, USA, 2008. Reliable Computing, Vol. 15, No. 4, pp. 333–344, 2011.
 11. Krasnochtanova, Irina; Rauh, Andreas; Kletting, Marco; Aschemann, Harald; Hofer, Eberhard P.; Schoop, Karl-Michael: *Interval Methods as a Simulation Tool for the Dynamics of Biological Wastewater Treatment Processes with Parameter Uncertainties*, Applied Mathematical Modeling, Elsevier, Vol. 34, No. 3, pp. 744–762, 2010.
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 14. Aschemann, Harald; Minisini, Johanna; Rauh, Andreas: *Interval Arithmetic Techniques for the Design of Controllers for Nonlinear Dynamical Systems with Applications in Mechatronics – Part 1*, Izvestiya RAN. Teoriya i sistemy upravleniya (Journal of Computer and Systems Sciences International), No. 5, pp. 5–16, 2010 (Journal of Computer and Systems Sciences International, Vol. 49, No. 5, pp. 683–695, 2010).
 15. Aschemann, Harald; Minisini, Johanna; Rauh, Andreas: *Interval Arithmetic Techniques for the Design of Controllers for Nonlinear Dynamical Systems with Applications in Mechatronics – Part 2*, Izvestiya RAN. Teoriya i sistemy upravleniya (Journal of Computer and Systems Sciences International), No. 6, pp. 3–15, 2010 (Journal of Computer and Systems Sciences International, Vol. 49, No. 6, pp. 833–846, 2010).
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 19. Rauh, Andreas; Auer, Ekaterina; Dötschel, Thomas; Aschemann, Harald: *Verified Stability Analysis of Continuous-Time Control Systems with Bounded Parameter Uncertainties and Stochastic Disturbances*, Presented at 14th GAMM-IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics SCAN2010, Lyon, France, 2010. Computing: Volume 94, No. 2–4, pp. 345–356, 2012.
 20. Rauh, Andreas; Aschemann, Harald: *Parameter Identification and Observer-Based Control for Distributed Heating Systems — The Basis for Temperature Control of Solid Oxide Fuel Cell Stacks*, Mathematical and Computer Modelling of Dynamical Systems, Volume 18, No. 4, pp. 329–353, 2012.

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22. Cichy, Błażej; Gałkowski, Krzysztof; Dąbkowski, Paweł; Aschemann, Harald; Rauh, Andreas: *A New Procedure for the Design of Iterative Learning Controllers using a 2D Systems Formulation of Processes with Uncertain Spatio-Temporal Dynamics*, *Control and Cybernetics*, Vol. 42, No. 1, pp. 9–26, 2013.
23. Rauh, Andreas; Butt, Saif S.; Aschemann, Harald: *Nonlinear State Observers and Extended Kalman Filters for Battery Systems*, *International Journal of Applied Mathematics and Computer Science AMCS*, Vol. 23, No. 3, pp. 539–556, 2013.
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31. Senkel, Luise; Rauh, Andreas; Aschemann, Harald: *Sliding Mode Techniques for Robust Trajectory Tracking as well as State and Parameter Estimation*, *Mathematics in Computer Science*, Vol. 8, Issue 3–4, pp. 543–561, 2014.
32. Cichy, Błażej; Hładowski, Łukasz; Gałkowski, Krzysztof; Rauh, Andreas; Aschemann, Harald: *Iterative Learning Control of an Electrostatic Microbridge Actuator with Polytopic Uncertainty Models*, *IEEE Transactions on Control Systems Technology*, Vol. 23, Issue 5, pp. 2035–2043, 2015.
33. Aschemann, Harald; Kostin, Georgy V.; Rauh, Andreas; Saurin, Vasily V.: *Optimal Control of a Viscoelastic Rack Feeder Based on the Method of Integrodifferential Relations*, *Izvestiya RAN. Teoriya i sistemy upravleniya (Journal of Computer and Systems Sciences International)*, No. 2, pp. 126–138, 2015 (*Journal of Computer and Systems Sciences International*, Vol. 54, No. 2, pp. 294–306, 2015).
34. Rauh, Andreas; Senkel, Luise; Aschemann, Harald: *Interval-Based Sliding Mode Control Design for Solid Oxide Fuel Cells with State and Actuator Constraints*, *IEEE Transactions on Industrial Electronics, Special Section on Modeling, diagnosis and control of fuel cell based technologies and their integration in smart grids and automotive systems*, Vol. 62, Issue 8, pp. 5208–5217, 2015.
35. Rauh, Andreas; Senkel, Luise; Aschemann, Harald; Saurin, Vasily V.; Kostin, Georgy V.: *An Integrodifferential Approach to Modeling, Control, State Estimation and Optimization for Heat Transfer Systems*, *International Journal of Applied Mathematics and Computer Science AMCS*, Vol. 26, No. 1,

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 37. Rauh, Andreas; Tiede, Susann; Klenke, Cornelia: *An Interval-Based Algorithm for Feature Extraction from Speech Signals*, Reliable Computing: Special volume containing papers from SCAN 2016, Uppsala, Sweden, Vol. 25, pp. 100–117, 2017.
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 51. Rauh, Andreas; Kersten, Julia: *From Verified Parameter Identification to the Design of Interval Observers and Cooperativity-Preserving Controllers — An Experimental Case Study*. Acta Cybernetica, Vol. 24, No. 3, pp. 509–537, 2020.

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55. Rauh, Andreas; Kersten, Julia: *Toward the Development of Iteration Procedures for the Interval-Based Simulation of Fractional-Order Systems*. Acta Cybernetica, Vol. 25, No. 1, pp. 21–48, 2021. <https://doi.org/10.14232/actacyb.285660>
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Invited talks

1. Rauh, Andreas: *Intervallmethoden für Analyse und Entwurf von Steuerungen und Regelungen — Theorie, Implementierung und Anwendungen*, Automatisierungstechnisches Kolloquium, Ruhr-Universität Bochum, Germany, April 28, 2009.
2. Rauh, Andreas: *Interval-Based Robust Control Design with State and Disturbance Estimation for Distributed Parameter Systems*, Technical University of Varna, Bulgaria, October 7, 2009.
3. Rauh, Andreas; Aschemann, Harald: *Interval Techniques for Reliable Control of Dynamical Systems with Applications to Control of Distributed Heating Systems*, A. Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, Moscow, March 25, 2010.
4. Rauh, Andreas; Aschemann, Harald: *Sensitivity Analysis for the Synthesis of Open-Loop and Closed-Loop Controllers*, A. Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, Moscow, September 09, 2010.
5. Rauh, Andreas; Aschemann, Harald: *An Introduction to Sensitivity Analysis for the Design of Open-*

- Loop and Closed-Loop Controllers*, Technical University of Varna, Bulgaria, September 23, 2010.
6. Rauh, Andreas: *Synthesis of Open-Loop and Closed-Loop Controllers Using Sensitivity Analysis Techniques*, Institute of Control and Computation Engineering, University of Zielona Gora, Poland, November 04, 2010.
 7. Rauh, Andreas; Aschemann, Harald: *Observer Design for State and Parameter Estimation in Distributed Heating Systems*, A. Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, Moscow, March 22, 2011.
 8. Rauh, Andreas; Dittrich, Christina; Senkel, Luise; Aschemann, Harald: *Design of State and Parameter Estimation Strategies for Water Supply Systems*, A. Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, Moscow, October 06, 2011.
 9. Rauh, Andreas; Senkel, Luise; Dittrich, Christina; Aschemann, Harald; Kostin, Georgy V.; Saurin, Vasily V.: *Reliable Finite-Dimensional Modeling and Control of a Distributed Heating System*, Institute of Control and Computation Engineering, University of Zielona Gora, Poland, April 19, 2012.
 10. Rauh, Andreas; Senkel, Luise; Dittrich, Christina; Aschemann, Harald: *Observer-Based Predictive Temperature Control for Distributed Heating Systems Based on the Method of Integrodifferential Relations*, Institute of Physics, University of Torun, Poland, November 08, 2012.
 11. Rauh, Andreas; Senkel, Luise; Aschemann, Harald: *Experimental Validation of Feedback Control Strategies for a Spatially Two-Dimensional Heat Transfer Process: A Comparison Between Finite Volume and Finite Element Models*, A. Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, Moscow, October 01, 2013.
 12. Aschemann, Harald; Schindele, Dominik; Rauh, Andreas: *Norm-Optimal Iterative Learning Control for a Heating Rod Based on the Method of Integro-Differential Relations*, A. Ishlinsky Institute for Problems in Mechanics, Russian Academy of Sciences, Moscow, October 01, 2013.
 13. Rauh, Andreas: *Why is Interval Analysis Useful for the Real-Time Implementation of Variable-Structure Control Laws?*, International Workshop on Enclosure Methods, Freudenstadt, Germany, 2016.
 14. Rauh, Andreas; Tiede, Susann; Klenke, Cornelia: *An Interval-Based Algorithm for Feature Extraction from Speech Signals*, Institute of Physics, University of Torun, Poland, December 02, 2016.
 15. Rauh, Andreas; Prabel, Robert; Aschemann, Harald: *Oscillation Attenuation for Crane Payloads by Controlling the Rope Length Using Extended Linearization Techniques*, Institute of Control and Computation Engineering, University of Zielona Gora, Poland, March 30, 2017.
 16. Rauh, Andreas; Kersten, Julia: *An Interval Observer-Based Branch-and-Bound Procedure for Verified Parameter Identification of Cooperative Systems*, Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences, Moscow, Russia, October 11, 2018.
 17. Rauh, Andreas; Kersten, Julia: *A Unified Interval Approach for Parameter Identification, State Estimation and Robust Control of Spatially Distributed Heating Systems with Uncertainty*, 5-Part Lecture Series, Université Paris-Saclay, Evry, France, March 18–21, 2019. <https://www.ibisc.univ-evry.fr/deux-seminaires-organises-a-ibisc-les-18-et-21-mars-2019-site-pelvoux-en-presence-de-andreas-rauh-et-de-julia-kersten-univ-rostock-allemande/>.
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 19. Rauh, Andreas: *Fractional-Order System Models and Their Verified Numerical Analysis Using Interval Methods*, International Online Seminar on Interval Methods in Control Engineering, January 15, 2021. <http://dx.doi.org/10.13140/RG.2.2.13293.00486>.
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25. Rauh, Andreas: *Comparison of Stochastic and Interval-Based Modeling Approaches for the Online Optimization of the Fuel Efficiency of SOFC Systems*, International Online Seminar on Interval Methods in Control Engineering, April 08, 2022. https://www.researchgate.net/publication/356413018_Comparison_of_Stochastic_and_Interval-Based_Modeling_Approaches_for_the_Online_Optimization_of_the_Fuel_Efficiency_of_SOFC_Systems.
26. Rauh, Andreas: *Robuste Modellbildung, Regelung und Zustandsschätzung für Hochtemperatur-Brennstoffzellen auf Basis mengenbasierter und stochastischer Ansätze zur Unsicherheitsbeschreibung*, VDI-Vortrag, Kassel (online), May 31, 2022.
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31. Rauh, Andreas: *Offline and Online Use of Interval Analysis for the Design and Implementation of Robust Control and State Estimation Strategies*, Continuity, Computability, Constructivity: From Logic to Algorithms, Padova, Italy, September 21, 2022.

Patents

[DE] *Verfahren und Anordnung sowie Computerprogramm mit Programmcode-Mitteln und Computerprogramm-Produkt zur Ermittlung einer ausgewählten Position einer mobilen Kommunikationseinrichtung in einem Kommunikationsnetz*

[EN] *Method, Configuration and Computer Program Comprising Program Code Means and Computer Program Product for Determining a Selected Position of a Mobile Communications Device within a Communi-*

cations Network

[FR] *Procédé et système ainsi que programme informatique comprenant des moyens de code de programme et produit-programme informatique pour déterminer une position sélectionnée d'un dispositif de communication mobile dans un réseau de communication*

Publication number: WO002004095868A3

Intl. application date: March 29, 2004

Date of publication: November 4, 2004

Inventors: Bamberger, Joachim; Briechle, Kai; Grigoras, Marian; Hanebeck, Uwe D.; Hoffmann, Clemens; Rauh, Andreas (in alphabetic order)

Applicants: SIEMENS AG; Bamberger, Joachim; Briechle, Kai; Grigoras, Marian; Hanebeck, Uwe D.; Hoffmann, Clemens; Rauh, Andreas

[US] *Method, Configuration and Computer Program Comprising Program Code Means and Computer Program Product for Determining a Selected Position of a Mobile Communications Device within a Communications Network*

Publication number: US2007/0099633A1

Date of publication: May 03, 2007

Inventors: Bamberger, Joachim; Briechle, Kai; Grigoras, Marian; Hanebeck, Uwe D.; Hoffmann, Clemens; Rauh, Andreas (in alphabetic order)