

Academic Curriculum Vitae



Personal data Prof. Dr. Hannes Meinlschmidt
Chair of Dynamics, Control and Numerics
Department of Data Science
FAU Erlangen-Nürnberg
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Date of birth: June 21, 1985 in Groß-Gerau (Germany)

Nationality: German

Marital status: married, no children

ORCID iD <https://orcid.org/0000-0002-5874-8017>.

Academic education

- 04/2005–08/2011 Diploma studies in mathematics (minor: computer science) at TU Darmstadt (final grade: very good)
- 10/2011–03/2017 Doctoral studies in mathematics at TU Darmstadt (final grade: with distinction, “summa cum laude”), Dissertation title:
Analysis and optimal control of quasilinear parabolic evolution equations in divergence form on rough domains.

Academic positions

- 10/2008–09/2011 Instructor (Department of Mathematics at TU Darmstadt)
- 10/2011–08/2017 Research and teaching assistant (Nonlinear Optimization, group of Prof. Stefan Ulbrich, Department of Mathematics at TU Darmstadt)
- 09/2017–02/2021 Research scientist, PostDoc (Optimization and Optimal Control, group of Prof. Karl Kunisch, RICAM)
- 03/2021–today W1 professorship “Applied Analysis”, associated to the Chair of Dynamics, Control and Numerics (Department of Data Science, FAU Erlangen Nürnberg)

Awards

Award for outstanding scientific achievements for the best dissertation in mathematics in 2017, awarded by Vereinigung von Freunden der Technischen Universität zu Darmstadt e.V.

10 selected publications

- [1] H. Meinlschmidt, J. Rehberg: *Hölder-estimates for non-autonomous parabolic problems with rough data*, Evol. Equ. Control Theory, 5 (2016), pp. 147–184.
- [2] H. Meinlschmidt, C. Meyer, J. Rehberg: *Optimal control of the thermistor problem in three spatial dimensions, part 1: Existence of optimal solutions*, SIAM J. Control Optim., 55 #5 (2017), pp. 2876–2904.
- [3] H. Meinlschmidt, C. Meyer, J. Rehberg: *Optimal control of the thermistor problem in three spatial dimensions, part 2: Optimality conditions*, SIAM J. Control Optim., 55 #4 (2017), pp. 2368–2392.
- [4] H. Meinlschmidt: *Analysis and optimal control of quasilinear parabolic evolution equations in divergence form on rough domains*. PhD thesis, 2017.
- [5] D. Horstmann, H. Meinlschmidt, J. Rehberg: *The full Keller-Segel model is well posed on nonsmooth domains*, Nonlinearity, 31 #4 (2018), pp. 1560–1592.
- [6] H. Meinlschmidt, C. Meyer, J. Rehberg: *Regularization for optimal control problems associated to nonlinear evolution equations*, J. Convex Anal. 27 #2 (2020), pp. 443–485.
- [7] K. Kunisch, H. Meinlschmidt: *Optimal control of an energy-critical semilinear wave equation in 3D with spatially integrated control constraints*, J. Math. Pures Appl. 138 (2020), pp. 46–87.
- [8] H. Meinlschmidt, C. Meyer, S. Walther: *Optimal control of an abstract evolution variational inequality with application to homogenized plasticity*, J. Nonsmooth Anal. Optim. 1 (2020).
- [9] R. Chill, H. Meinlschmidt, J. Rehberg: *Explicit and uniform estimates for second order divergence operators on L^p spaces*, J. Evol. Equ. (2020).
- [10] H. Meinlschmidt, J. Rehberg: *Extrapolated elliptic regularity for semiconductor equations*, J. Differ. Eq. 280 (2021), pp. 375–404.

Presentations

- 04/2021 *Optimal control of the drift in Fokker-Planck equations*
CAA-AvH mini workshop, online
- 03/2021 *Optimal control of a Fokker-Planck equation with BV-drift*
GAMM e.V. Jahrestagung 2021, online
- 02/2022 *Extrapolated elliptic regularity for the van Roosbroeck system of semiconductors*
Chemnitzer Seminar zur Optimalsteuerung, Haus im Ennstal, Austria
- 07/2019 *Maximal parabolic regularity: an overview*
AANMPDE 12, Strobl, Austria (invited keynote speaker)
- 02/2019 *Optimal control of a semilinear critical wave equation in 3d*
GAMM e.V. Jahrestagung 2019, Vienna, Austria

- 02/2019 *Optimal control of a semilinear critical wave equation in 3d*
 Chemnitzer Seminar zur Optimalsteuerung, Haus im Ennstal, Austria
- 11/2018 *Maximal regularity in optimal control for quasilinear parabolic evolution equations*
 Berliner Oberseminar: Nichtlineare partielle Differentialgleichungen (Langenbach-Seminar), WIAS Berlin, Germany
- 07/2018 *Optimal control of a semilinear critical wave equation in 3d*
 IFIP TC07 2018, Essen, Germany
- 05/2018 *Maximal regularity in optimal control for quasilinear parabolic evolution equations*
 Oberseminar Lehrstuhl für Angewandte Mathematik Universität Bayreuth, Germany
- 04/2018 *Optimal Control of the 3D Thermistor Problem*
 Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany
- 03/2018 *Compactness by coercivity for nonlinear optimal control problems*
 GAMM e.V. Jahrestagung 2018, Munich, Germany
- 03/2018 *Compactness by coercivity for nonlinear optimal control problems*
 Chemnitzer Seminar zur Optimalsteuerung, Haus im Ennstal, Austria
- 01/2018 *Maximal regularity in optimal control for quasilinear parabolic evolution equations*
 Karl-Franzens Universität Graz, Austria
- 05/2017 *Optimal control of quasilinear parabolic equations with state constraints*
 SIAM Conference on Optimization, Vancouver, Canada
- 04/2017 *Optimal control of quasilinear parabolic equations with state constraints*
 Karl-Franzens Universität Graz, Austria
- 03/2017 *Analysis and optimal control of quasilinear parabolic evolution equations in divergence form on rough domains*
 Thesis defense, TU Darmstadt, Germany
- 08/2016 *Optimal control of the 3D Thermistor-Problem*
 ICCOPT 2016, Tokyo, Japan
- 07/2016 *The full Keller-Segel model is well posed*
 Berliner Oberseminar: Nichtlineare partielle Differentialgleichungen (Langenbach-Seminar), WIAS Berlin, Germany
- 03/2016 *Hölder-Schranken für nichtautonome parabolische Probleme und Anwendung für quasilineare Probleme*
 Chemnitzer Seminar zur Optimalsteuerung, Haus im Ennstal, Austria
- 01/2016 *Hölder estimates for non-autonomous parabolic problems with rough data and applications to quasilinear problems*
 Berliner Oberseminar: Nichtlineare partielle Differentialgleichungen (Langenbach-Seminar), WIAS Berlin, Germany
- 08/2015 *Optimal control problems with quasilinear parabolic equations in divergence form*
 Kolloquium Lehrstuhl Optimalsteuerung, TU München, Germany

- 07/2015 *Optimal Control of PDAEs as Abstract DAEs of Index 1*
ISMP 2015, Pittsburgh, USA
- 07/2015 *PDAEs and Optimal Control*
IFIP TC07 2015, Sophia Antipolis, France
- 02/2015 *Quasilineare und nichtautonome parabolische Optimalsteueraufgaben.. und Kompaktheit für Steuerungen*
Chemnitzer Seminar zur Optimalsteuerung, Haus im Ennstal, Austria
- 01/2015 *Optimalsteuerung des 3D Thermistor-Problems*
Seminar Nonlinear Optimization and Inverse Problems, WIAS Berlin, Germany
- 05/2014 *Optimal Control of Index 1 PDAEs*
SIAM Conference on Optimization, San Diego, USA
- 02/2014 *Das Thermistor-Problem in 3D*
Chemnitzer Seminar zur Optimalsteuerung, Haus im Ennstal, Austria
- 10/2013 *Optimal Control of PDAEs*
IFIP TC07 2013, Klagenfurt, Austria
- 07/2013 *Optimal Control of PDAEs*
ICCOPT 2013, Lisbon, Portugal
- 07/2013 *Das Thermistor-Problem in 3D: Analysis und ein wenig optimale Steuerung*
Oberseminar Angewandte Analysis, Martin-Luther Universität Halle-Wittenberg, Germany