Mario Teixeira Parente

Academic CV

Boltzmannstraße 3
85748 Garching near Munich
Germany
✉ *parente@ma.tum.de*
www.mateipa.de

Education

10/2016 – now *Technical University of Munich (TUM)*
Applied mathematics (Ph.D.)
PhD Thesis Algorithms in Uncertainty Quantification

10/2013 – 04/2016 *Ludwig-Maximilians-Universität Munich (LMU)*
Mathematics (M.Sc.)
Master Thesis Brownian Motion and the Dirichlet Problem

10/2010 – 09/2013 *University of Applied Sciences Munich (HM)*
Scientific computing (B.Sc.)
Bachelor Thesis N.V. Krylov's Proof of the de Moivre-Laplace Theorem

Scholarships

04/2012 – 05/2016 **German Academic Scholarship Foundation** (Studienstiftung des deutschen Volkes)
04/2012 – 04/2016 **Max Weber-Program of the State of Bavaria** (Max Weber-Programm Bayern)
10/2011 – 03/2012 **Deutschlandstipendium**

Teaching

Summer 2019 **Numerics of PDEs for Engineers**, *Exercise coordinator*, TUM
Winter 2018/19 **Modeling and Simulation with ODEs**, *Tutor*, TUM
Summer 2018 **Numerics for ODEs**, *Tutor*, TUM
Winter 2017/18 **Introduction to Numerical Linear Algebra**, *Tutor*, TUM
Summer 2017 **Introduction to Programming**, *Tutor*, TUM
Summer 2017 **Hauptseminar: Uncertainty Quantification with Efficient Monte Carlo Methods**, TUM
Winter 2015/16 **Stochastics**, *Tutor*, LMU
Winter 2014/15 **Analysis I**, *Tutor*, LMU
Winter 2011/12 **Linear algebra and Software engineering**, *Tutor*, HM

Certificates

2017 – 2019 **Certificate for Teaching in Higher Education of the Bavarian Universities**, *Introductory* and *Advanced Level*, TUM ProLehre

Publications

Preprints

02/2019 D. Bittner, **M. TP.**, S. Mattis, B. Wohlmuth, and G. Chiogna, *On the relationship between parameters and discharge data for a lumped karst aquifer model*
01/2019 **M. TP.**, D. Bittner, S. Mattis, G. Chiogna, B. Wohlmuth, *Bayesian calibration and sensitivity analysis for a karst aquifer model using active subspaces*
09/2018 **M. TP.**, *A probabilistic framework for approximating functions in active subspaces*

Journal papers

04/2019 **M. TP.**, S. Mattis, S. Gupta, C. Deusner, and B. Wohlmuth. Efficient parameter estimation for a methane hydrate model with active subspaces. *Comput Geosci* (2019) **23**:355–372.

Talks, Conferences, etc.

05/2019 **Statistics Seminar**, *Active subspaces in Bayesian inverse problems*, Department of Statistics, Lund University

03/2018 **M2 Oberseminar**, *Active subspaces for Bayesian inversion, Application for a methane hydrate model*, Garching (slides)

09/2017 **FrontUQ** (Frontiers of Uncertainty Quantification in Engineering), Munich

Trainings

03/2017 **Parallel Programming of High Performance Systems**, Leibniz Computing Centre (LRZ)

02/2017 **Advanced C++ with Focus on Software Engineering**, Regionales RechenZentrum Erlangen (RRZE)

Experience

05/2019 **Research stay abroad**, Department of Statistics, Lund University, Topic: Theory of active subspaces

02/2019 – 03/2018 **Research stay abroad**, University of Texas at Austin (UT), Project: UNcertainties due to boundary conditions in predicting MIXing in groundwater (UNMIX)

06/2016 – 09/2016 **Student assistant**, HM, Project: Modeling and simulation of pedestrian movement

04/2016 – 05/2016 **Research internship**, Yale University (USA), Image processing of nanoscopic images in cell biology

10/2012 – 11/2013 **Student assistant**, HM, Project: Modeling and simulation of pedestrian movement

Munich, June 16, 2019