

Peter Nicholas Krämer

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📅 January 30, 2019

RESEARCH INTERESTS

Uncertainty quantification, Bayesian computations, probabilistic numerics

EDUCATION

MSc Mathematics Oct 2016 – Present

University of Bonn

Thesis: Gaussian Processes and Uncertainty Quantification

Thesis supervisor: Priv.-Doz. Dr. Christian Rieger

Expected graduation: May 2019

BSc Mathematics in Business and Economics Sep 2013 – Jun 2016

University of Mannheim

Thesis: Numerisches Lösen von Eigenwertproblemen (German; English title: Numerical Solution of Eigenvalue Problems)

Thesis supervisor: Prof. Dr. Oliver Kolb

Higher Education Entrance Qualification Sep 2004 – Jun 2013

Carl-Fuhlrott-Gymnasium Wuppertal

Advanced courses: Mathematics, Social science, Spanish, English

RESEARCH AND TEACHING EXPERIENCE

Part-time research assistant Sep 2017 – Present

Institute for Numerical Simulation, University of Bonn

Area: scattered data approximation, programming

Supervisor: Priv.-Doz. Dr. Christian Rieger

Tutor for Analysis for Computer Scientists Mar 2017 – Sep 2017

University of Bonn

Exercise classes and marking of ~25 exercise sheets (weekly), marking of the final exams

Tutor for Linear Algebra II Jan 2016 – May 2016

University of Mannheim

Exercise classes and marking of ~25 exercise sheets (weekly)

Tutor for Linear Algebra I Sep 2015 – Jan 2016

University of Mannheim

Exercise classes and marking of ~25 exercise sheets (weekly)

INTERNSHIPS

Management Consultancy Jun 2016 – Aug 2016

avantum consult AG

Düsseldorf, Germany

Performance Improvement & Transformation

Accountancy/Consultancy Jun 2015 – Jul 2015

RINKE Treuhand GmbH Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

Wuppertal, Germany

Financial Reporting and Planning

SKILLS

Programming

Python, MATLAB, C/C++

Good knowledge

R, Visual Basic for Applications (VBA), Latex, Git, ssh, bash, makefiles, html, css

Basic knowledge

Languages

German, English

Proficient

Spanish

Basic knowledge

GRADUATE COURSES

Numerical Mathematics

Scientific Computing I

Numerical Algorithms

Numerical Simulation: Optimal Control and Reinforcement Learning

Practical Lab in Computational Finance

Numerical Methods in Uncertainty

Quantification

Optimisation (in Mannheim)

Analysis

Functional Analysis and Partial Differential Equations

Nonlinear Partial Differential Equations II

Global Analysis

Dynamical Systems (in Mannheim)

Functional Analysis (in Mannheim)

Probability

Introduction to Stochastic Analysis

Stochastic Simulation (in Mannheim)

Financial Mathematics (in Mannheim)

Graduate Seminars

Numerical Methods in Statistical Simulation and Machine Learning

Shape Spaces and Shape Representations

High-Dimensional Approximation and

Uncertainty Quantification

ATTENDED EVENTS

Winter school on hierarchical matrices

Kiel University

Feb 2018 – Mar 2018

Kiel, Germany

Minicourse on the Navier-Stokes equations

Institute of Mathematics of the Czech Academy of Sciences

Feb 2018

Prague, Czech Republic

Summer school on mathematical modeling in the life sciences

Centro De Giorgi

Sep 2017

Pisa, Italy

SELECTED TALKS

Gaussian process approximations in Bayesian inverse problems

Institute for Numerical Simulation, University of Bonn

Post-graduate seminar

Dec 2018

H2Lib – A short introduction

Institute for Numerical Simulation, University of Bonn

Post-graduate seminar

May 2018

MEMBERSHIPS

Society for Industrial and Applied Mathematics (SIAM)

Mar 2017 – Present

ACADEMIC REFERENCES

Priv.-Doz. Dr. Christian Rieger

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University of Bonn

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53115 Bonn

Email: riege@ins.uni-bonn.de

Prof. Thomas Hangelbroek

Department of Mathematics

University of Hawai'i at Mānoa

2565 McCarthy Mall

Honolulu, HI 96822

Email: hangelbr@math.hawaii.edu