

# Peter Nicholas Krämer

Institut for Numerical Simulation  
Endenicher Allee 19b  
53115 Bonn  
Germany

+49 (0)172 5287446  
✉ [nicholas.kraemer@t-online.de](mailto:nicholas.kraemer@t-online.de)  
🌐 [pnkraemer.github.io](https://pnkraemer.github.io)  
📅 March 1, 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

avantum consult AG

Performance Improvement & Transformation

Jun 2016 – Aug 2016

Düsseldorf, Germany

### Accountancy/Consultancy

RINKE Treuhand GmbH Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft Wuppertal, Germany

Financial Reporting and Planning

Jun 2015 – Jul 2015

## SKILLS

---

### Programming

Python, MATLAB, C/C++

Good knowledge

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

Basic knowledge

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

Dec 2018

Institute for Numerical Simulation, University of Bonn

Post-graduate seminar

H2Lib – A short introduction

May 2018

Institute for Numerical Simulation, University of Bonn

Post-graduate seminar

## MEMBERSHIPS

---

Society for Industrial and Applied Mathematics (SIAM)

Mar 2017 – Present

## ACADEMIC REFERENCES

---

Priv.-Doz. Dr. Christian Rieger

Institute for Numerical Simulation

University of Bonn

Endenicher Allee 19b

53115 Bonn

Email: [rieger@ins.uni-bonn.de](mailto:rieger@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](mailto:hangelbr@math.hawaii.edu)