

# Erik Hintz

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erik.hintz@uwaterloo.ca  
<https://uwaterloo.ca/scholar/ehintz>

## Current Position

**Lecturer**, Department of Statistics and Actuarial Science, University of Waterloo

## Education

**Doctor of Philosophy** in Statistics, 2022, University of Waterloo (Canada)

Overall GPA: 97%

Thesis title: “Randomized quasi-Monte Carlo methods with applications to quantitative risk management”

**Master of Science** in Mathematics and Management, 2017, University of Ulm (Germany)

Overall grade: 1.4 (very good)

Thesis title: “Numerical Methods for Pricing Parisian Options”

**Master of Mathematics** in Statistics, 2016, University of Waterloo (Canada)

Overall GPA: 94%

Research Paper title: “Simulating Copulas using Quasi-Random Numbers – a Numerical Study on Gaussian and  $t$  Copulas”

**Bachelor of Science** in Mathematics and Management, 2014, University of Ulm (Germany)

Overall grade: 1.6 (good)

Thesis title: “Valuation of the Ruin-Contingent Life Annuity”

## Professional Development

**Certificate in University Teaching**, Centre of Teaching Excellence, University of Waterloo

*Completed 4 workshops on course design, interactive teaching methods and assessment methods; conducted research project on Group Work in Online Classes; undertook two teaching observations.*

**Fundamentals of University Teaching**, Centre of Teaching Excellence, University of Waterloo

*Completed 6 workshops on classroom management, delivery skills, lesson planning; delivered three microteaching lessons to participants and facilitators.*

## Teaching Experience

**2015 – 2016 and 2017 – present: University of Waterloo (Canada)**

*Instructor* for STAT 340: Stochastic Simulation Methods (Spring 2020, online).

Conceptualized an online course and recorded lectures; held interactive live tutorials; prepared online course materials, including quizzes, assignments, midterms, exams; held office hours; supervised graduate teaching assistants.

*Instructor* for ACTSC445/845: Quantitative Risk Management (Spring & Fall 2019).

Planned and delivered weekly lectures and bimonthly tutorials; created lecture materials, assignments, practice questions, exams; held office hours; supervised graduate teaching assistants.

*Teaching Assistant or Head Teaching Assistant* for courses in probability theory and statistics (STAT 206, STAT 230, STAT 231, STAT 240, STAT 330, STAT 333, STAT 850, STAT 901), actuarial science (ACTSC 445/845) and simulation methods (STAT 340, STAT 906) more than 15 times since Fall 2015.

Duties included grading assignments and exams, holding office hours, monitoring the online Q&A platform Piazza, preparing and delivering tutorials.

**Winter 2017: Baden-Wuerttemberg Cooperative State University, Heidenheim (Germany)**

*External lecturer* for a first year mathematics course for economics students.

Planned and delivered 30 hours of lectures; created practice questions and exam; graded the exam.

## 2013 – 2015, 2016 – 2017: University of Ulm (Germany)

Teaching Assistant or Head Teaching Assistant for courses in Linear Algebra and Analysis.

Held tutorials and guest lectures; created and graded assignments and exams; held office hours.

## Talks

Erik Hintz\*, Marius Hofert and Christiane Lemieux (2019). *Computing Multivariate Normal Variance Mixture Distributions with Quasi-Monte Carlo Methods*. Talk held at the SIAM Conference on Computational Science and Engineering.

## Publications

Erik Hintz, Marius Hofert and Christiane Lemieux (2022). Quasi-Random Sampling with Black Box or Acceptance-Rejection Inputs. *Advances in Modeling and Simulation*.

Erik Hintz, Marius Hofert, Christiane Lemieux and Yoshihiro Taniguchi (2022). Single-Index Importance Sampling with Stratification. *Methodology and Computing in Applied Probability*.

Erik Hintz, Marius Hofert and Christiane Lemieux (2022). Computational challenges of t and related copulas. *Journal of Data Science*. 20(1):95-110.

Erik Hintz, Marius Hofert and Christiane Lemieux (2022). Multivariate Normal Variance Mixtures in R: The R Package nvmix. *Journal of Statistical Software*. 102 (2)

Erik Hintz, Marius Hofert and Christiane Lemieux (2021). Normal variance mixtures: Distribution, density and parameter estimation. *Computational Statistics and Data Analysis* (175C) 107175.

Erik Hintz, Marius Hofert and Christiane Lemieux (2020). Grouped Normal Variance Mixtures. *Risks* (8) 103.

Marius Hofert, Erik Hintz and Christiane Lemieux (2020). *nvmix: Multivariate Normal Variance Mixtures*. R package version 0.0-5. <https://CRAN.R-project.org/package=nvmix>

## Awards

**Math Senate Graduate Scholarship**, University of Waterloo (Winter 2019)

**Statistics and Actuarial Science Research Presentation Award**, University of Waterloo (Winter 2019)

**International Doctoral Student Award**, University of Waterloo (Fall 2017 – Spring 2020)

**University of Waterloo Graduate Scholarship**, University of Waterloo (Fall 2015, Fall 2017, Winter 2018, Winter 2019, Spring 2019)

**Teaching Assistant Award**, University of Waterloo (Winter 2018, Fall 2020, Winter 2020)

**Comprehensive Exam Scholarship**, University of Waterloo (Winter 2018)

**Statistics and Actuarial Science Doctoral Entrance Award**, University of Waterloo (Fall 2017)

**Statistics and Actuarial Science Chair's Award**, University of Waterloo, (Winter 2016, Spring 2016, Fall 2019, Winter 2020, Fall 2020, Spring 2021)

**International Masters Student Award**, University of Waterloo, (Fall 2015 – Spring 2016)

## Languages and Skills

German (native), English (fluent), French (basic).

Excellent programming skills in R and basic skills in C and Python, professional use of MsOffice and L<sup>A</sup>T<sub>E</sub>X.

## Hobbies

Camping, skydiving, travelling, cooking, walking dogs and working on my green thumb.

## Legal Status

German citizen with valid Work Permit in Canada.