

johannesappl

mathematician & CFD scholar

contact information

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languages

german mother tongue
english fluent
french basic knowledge

programming

♥ Julia, Python, Matlab, R,
C++, Git, Shell

education

- since 2017 **Doctor of Philosophy** University of Innsbruck
I am currently working on accelerating computationally expensive numerical simulations of incompressible fluids through machine learning techniques.
- 2015–2017 **Master of Science** in Technical Mathematics University of Innsbruck
Specialization: functional analysis, topology, signal processing
Thesis: *Efficient Data Representation for Automotive Radar*
Adviser: Univ.-Prof. Dr. Markus Haltmeier
Together with an employee of Infineon specialized in computer engineering I conducted research on convenient methods for radar image data compression. This is of particular interest concerning the automotive sector.
- 2012–2015 **Bachelor of Science** in Technical Mathematics University of Innsbruck
Specialization: complex analysis, discrete mathematics, optimization
Thesis: *Spherical Harmonics and their Application in Simulating Interactions with Fullerenes*
I implemented a numerical solution to the time-dependent Schrödinger equation and condensed the theoretical framework of spherical harmonics.
Thesis: *Splitting Methods in the Context of Simulating Interactions with Fullerenes*
Sequel of first thesis dealing with the higher dimensional case and efficient implementation thereof.
- 2007–2011 **High School** Bundesrealgymnasium Wörgl
Specialization: mathematics, physics, english
Honor roll four years running, graduated with honors

experience

- 2017 **MCI Management Center Innsbruck** Innsbruck, AT
Mathematician
Together with a colleague we developed algorithms for the EU-funded project OpenSKIMR that aims at matchmaking between employees, jobs and the required learning to support people in creating their personal career routes.
- 2016–2017 **University of Innsbruck** Innsbruck, AT
Scientific Employee
I was employed by Infineon Technologies on a part-time basis in order to compress radar image data. The goal was to develop a method with sufficient compression ratio and tolerable error rate so as not to lose important information in the process.
- since 2015 **University of Innsbruck** Innsbruck, AT
External Lecturer
Posing Analysis and Linear Algebra exercises which the students then had to solve with my aid during the seminar.
- 2014-2015 **University of Innsbruck** Innsbruck, AT
Tutor
Giving small lectures on introductory topics in Analysis to first semester math students and helping them with potential questions.

additional education

- 2014–2015 **Notfallsanitäter** Samariterbund Tirol
Over the course of one year I have been receiving advanced theoretical and practical paramedic training in my spare time.
- 2011 **Rettungssanitäter** Samariterbund Tirol
Two-month training at the start of social service.

other experience

- since 2011 **Samariterbund Tirol** Kirchbichl, AT
Paramedic
More than 2500 hours of volunteer work.
- 2011 **Samariterbund Tirol** Kirchbichl, AT
Paramedic
Full-time employee for two months after completing social service.
- 2011–2012 **Samariterbund Tirol** Kirchbichl, AT
Social Servant
Responding to emergency calls and transportation of sick patients.

interests

professional: Navier–Stokes equations, machine learning, computational fluid dynamics, statistics, numerical mathematics
personal: literature, eSports, Linux, medicine, DIY, motorcycle