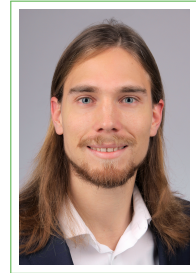


Julian Bitterwolf

Rheingoldstr. 12
76133 Karlsruhe
☎ +49 (1577) 4266 419
✉ julian.bitterwolf@gmail.com
📄 j-cb.github.io



Education

- 2014 **MSc Mathematics**, *École Polytechnique & Université Paris Sud 11*, Palaiseau/Orsay, FR, avg. grade: 15.3/20.
Program: "Mathematics: Analysis, Arithmetics and Geometry"
- 2017 **BSc Mathematics**, *Karlsruhe Institute of Technology*, Karlsruhe, DE, 1.1.
Bachelor in Mathematics. Thesis on "Models for Synthetic Differential Geometry" with supervisors Prof. F. Herrlich and Dr. Felix Wellen, Institute of Algebra and Geometry
- 2015 **BSc Physics**, *Karlsruhe Institute of Technology*, Karlsruhe, DE, 1.3.
Bachelor in Physics with minor in Business Administration. Thesis with the title "Path Integration via Infinitesimal Complex Time Phases" on instantons with supervisors Prof. J. Schmalian and Dipl.-Phys. Pia Gagel, Institute for Theoretical Condensed Matter Physics
- 2012-2013 **Erasmus Year**, *École Polytechnique*, Palaiseau.
3rd year of EP's mathematics program. Final presentations on representation theory and quantum groups
- 2009 **Abitur**, *Lessing-Gymnasium*, Karlsruhe, 1.4.

Master thesis

- title **The Eilenberg-MacLane Theorem for Simplicial Sheaves**
- supervisor Prof. Dr. Fabien Morel, LMU München
- description In this work, I showed that the result $H^n(X, M) \cong [X, K(M, n)]$, linking homology and homotopy, does not only hold in the classical context where X is a simplicial set and M an abelian group with its Eilenberg-MacLane space $K(M, n)$, but also in the generalization of X as a simplicial sheaf and M as a sheaf of abelian groups.

Experience

Vocational

- 2015, 2016, 2017 **Lecturer: Preparatory course in physics for geodesy and transportation management/civil engineering/economics**, *Karlsruhe University of Applied Sciences*, Karlsruhe, DE.
Preparing and holding a week of introductory physics lectures for beginning students.
- 2017 **Lecturer: Preparatory course in mathematics for economics.**

2009–2010 **Combat Signaller**, *Command Support Battalion 291 of the Bundeswehr*, Sigmaringen, DE, Obligatory military service in the German armed forces, including basic military training and training as an IT-soldier.

Miscellaneous

2016 **Gap Year**, TH, LA, KH, MY, ID, SG.

Travelling Asia, learning a lot about different cultures, life in challenging circumstances, extreme weather situations, and myself

2016 **Dive Master**, *Scuba Junkie Komodo*, Flores, ID.

Six week internship program, leading to the PADI Dive Master certification which qualifies for working as diving group leader

2011–2015 **Secretary of Hector-Seminar-Alumni e.V.**, Heidelberg, DE.

Being part of the association's board of this non-profit association meant, beneath being responsible for its bureaucratic duties, organising several events per year, like a visit at CERN or study information days for Gymnasium-graduates

2011–2012 **IT System Administrator**, *for the research group Number Theory and Algebraic Geometry, Institute of Algebra and Geometry, KIT*, Karlsruhe, DE.

Maintaining the group's IT infrastructure, including group-wide OS updates and acquisition of hardware and introduction to the available systems for new staff.

2010–2011 **Tutor**, *Institute of Algebra and Geometry, KIT*, Karlsruhe, DE.

Holding a tutorial accompanying the lecture "Linear Algebra and Analytic Geometry I" by Prof. D. Hug and Prof. W. Tuschmann.

2008 **Project leader on human flows measurement**, *Hector-Seminar*, Karlsruhe, DE.

Conceptualizing, planning, organizing and executing a 5-month weekly project for 18 participants.

Languages

German native speaker

English near native/fluent

French very good command

Computer skills

Programming C++, Python

Graphics Inkscape, GIMP

Calculation MATLAB, Mathematica

Office LaTeX, LibreOffice

Proving Isabelle, Lean, Coq

Prizes, honours and extracurricular education

2017 Participant at the EUTypes Summer School in Ohrid, MK

2012 – 2013 **Deutschlandstipendium**

2002 – 2009 Participant of the **Hector-Seminar**, a weekly seminar class on mathematics, computer science, natural science and technology, for selected highly gifted pupils.

2009 Second place in the regional **Jugend forscht**-competition with the chemistry project „Nitration of toluene – challenging poorly documented school book statements“

2007 Invited participant at a workshop on spacetime descriptions within the Deutsche Schülerakademie with a talk on gravitational waves