

Raphael Julian Senghaas

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I'm a PhD student in physics at the University of Heidelberg in the group of Prof. Johannes Walcher. I'm working at the interface between Mathematics and Physics with focus on Supersymmetry, Mirror Symmetry, and Algebraic Geometry.

Education

- Sep 2007 – Jun 2015 **Abitur**, *Elly-Heuss-Knapp-Gymnasium*, Heilbronn, 1.2.
- Oct 2015 – Mar 2019 **BSc Physics**, *University of Heidelberg*, 1.1.
Thesis supervisor: Prof. Johannes Walcher
- Apr 2019 – Jan 2023 **MSc Physics**, *University of Heidelberg*, 1.0.
Thesis supervisor: Prof. Johannes Walcher
- May 2023 – **PhD Candidate in Mathematical Physics**, *University of Heidelberg*.
Supervisor: Prof. Johannes Walcher

Teaching

- 2020 **Teaching Assistant**, *Linear Algebra I*.
Prof. Anna Wienhard
- 2021 **Teaching Assistant**, *Algebra II*.
Prof. Alexander Schmidt
- 2021 **Head Tutor**, *String Theory*.
Prof. Johannes Walcher
- 2022 **Helpdesk Tutor**, *Analysis II & Linear Algebra II*.
- 2023 **Head Tutor**, *String Theory*.
Prof. Johannes Walcher

Additional Experiences

- Sep 2018 – Jun 2019 **Exchange Program**, *Tsinghua University*, Beijing.
- 2021 **Summer School**, *CIMPA School*, Hodge Theory and p -adic Hodge Theory.
- 2022 **Summer School**, *Domoschool*, Gauge Theory and the Langlands Program.
- 2022 **Workshop**, *Schöntalworkshop*, Renormalization and Effective Field Theory.
- 2023 **Talk**, *Thübingen University*, Exponential Networks for Linear Partitions.

Skills

- Programming** Excellent knowledge of C++, Python and Linux
Working with modern C++ libraries such as Asio, GiNaC and Arb
Experience with Cuda, Nvptx and Assembly
Comfortable with HTML, JavaScript and Latex
- Languages** German (Native/C2)
English (Fluent/C1)
Mandarin Chinese (Pre-Intermediate/B1)