

# Ruben Leuzinger

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## General Information

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- **Full Name:** Ruben Enrico Leuzinger (Male)
- **Year of Birth:** 2005
- **Nationality:** Swiss (Switzerland)

Some of my academic interests include quantum computing and other applications of quantum technology, digital circuits, chaos theory, and applied optimization methods.

## Education

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**Eidgenössische Technische Hochschule Zürich (ETH Zurich)**, BSc in Physics Sept 24 – Oct 27 (expected)

- **Current Grade average:** 5.92/6.0
- **Coursework:** Analysis, Linear Algebra, Physics, Computer Science, Data Analysis

**Kantonsschule Uster**, Matura focused on Applied Mathematics and Physics July 19 – July 23

- **Grade average:** 5.0/6.0
- **Noteworthy Courses:** Applied Mathematics, Python

## Projects

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**Smart Pass Manager: A Noise-Aware Transpiler Pass for Qiskit** June 25

- Developed a Python Qiskit transpiler plugin that uses graph-theoretic heuristics to map circuits onto the least-noisy subset of qubits on IBM noisy intermediate-scale quantum (NISQ) hardware.
- Links: Code, Short Paper

**Personal Website** Feb 25

- Created personal website, to share academic documents and personal insights, using Wordpress.
- rubenleuzinger.com

**Das Doppelpendel: Zufall oder Chaos? Eine Analyse chaotischen Verhaltens** Oct 22

- Simulated a double pendulum using Python and studied the chaotic behavior under consideration of attractors in phase space and Lyapunov-Exponents.
- Maturitätsarbeit supervised by Dr. Florian Leupold

## Competitions

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**Náboj** Mar 23

- Náboj is an international Mathematics Team Competition for high-school students.
- 1st place Switzerland

**National physics olympiad** 22/23

- 16th place at the second round of the national physics Olympiad, qualifying for final round and training weekend in Lausanne.

## Work Experience

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I had already had the opportunity to gain work experience in different fields. During my time in school I tutored math. I completed the mandatory basic training in the swiss army as a Panzergrenadier, worked briefly in a pharmacy, and in a primary school as a teaching assistant. I did fundraising for non-profit organizations where I was promoted to team leader, being responsible for a team of five employees.

## Skills

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**Languages:** German (Native), English (Fluent), French (B2)

**Programming:** C++, Python (with Qiskit)

**Others:** LaTeX, Wordpress