

Louis DETZEN

Born 23 October 1999
French citizen

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SKILLS

Languages:
- French: native
- English: C1
- German: C1

Working knowledge of basic numerical methods for mathematics

Computer skills:
- Word/Excel/PowerPoint: advanced
- LaTeX: advanced
- Python: advanced

EDUCATION

2024 – present **Université Paris Dauphine-PSL**
- PhD in Mathematics, Mathematical Physics
- Additional teaching duties (tutorials and lab sessions)

2023 – 2024 **Université Paris Dauphine-PSL**
- M2 in Applied and Theoretical Mathematics (MATH)

2019 – 2023 **École Polytechnique, PALAISEAU**
- 1st year: initial military training, human development internship and common core curriculum
- 2nd year: multidisciplinary track (Mathematics, Physics, Computer Science)
- 3rd year: advanced programme in Mathematics
- 4th year: M2 Fundamental Physics and Applications: Astronomy, Astrophysics and Space Engineering; Dynamics of Gravitational Systems track (Sorbonne Université)

2017 – 2019 **Lycée Kléber STRASBOURG – CPGE** (Grandes Écoles preparatory classes)
- 1st year: MPSI (Maths, Physics, Engineering Sciences)
- 2nd year: MP* (Maths, Physics – advanced "star" class)

2014 – 2017 **Lycée Charlemagne THIONVILLE**
- Série S (science track, Mathematics specialisation, Latin and Ancient Greek options), ABIBAC section (French Baccalauréat and German Abitur)

DEGREES AND CERTIFICATES

2024 *Diplôme de l'École polytechnique* and title of *Ingénieur diplômé de l'École polytechnique* (engineering degree, Master's level)

2024 Master's degree in Mathematics and Applications, track: Theoretical and Applied Mathematics

2023 Master's degree in Fundamental Physics and Applications, track: Astronomy, Astrophysics and Space Engineering (AAIS)

June 2021 TOEIC – Listening and Reading (900/990)

June 2019 CPGE completion certificate, MP track – grade A

June 2017 Baccalauréat, Série S – Mention Très Bien (highest honours)

June 2017 Abitur (German university entrance diploma) – Grade 1.0 (890/900)

PROFESSIONAL EXPERIENCE

Mar.–June 2023 **M2 research internship** at **IMCCE, Paris – Institut de mécanique céleste et de calcul des éphémérides,** supervised by **Gwenaël BOUE,** on *"Deformation of ultra-short-period hot Jupiters"*
Built an analytical and numerical model relating the internal density profile of the planet to the deformation of its surface, at linear and nonlinear order in the perturbations

Mar.–July 2022 **M1 research internship** at the **Mathematisches Institut, Eberhard Karls Universität Tübingen (Germany),** supervised by **Peter PICKL**, on *"Mathematical analysis of the arrow of time"* in statistical physics
Investigated models producing macroscopic irreversibility from reversible microscopic laws, without assuming special initial conditions on the system

June–Sept. 2021 **BGL BNP Paribas Bank (Luxembourg)** – "Hub Automation/DataLab" department
- Retrained a machine learning model for the detection of fraud and unusual customer transactions, using Python
- Analysis of the company's operations, organisational structure and management.

Dec. 2019 – Mar. 2020 **Val de Briey Gendarmerie Company** – Military internship

HONOURS AND AWARDS

Mathematics Laureate of the prize for the 3 best Collective Scientific Projects (PSC – December 2021) for the project "Spectral rigidity", supervised by Carlos MATHEUS SILVA SANTOS at École Polytechnique.

Mathematics 11th place in the Olympiades Académiques de Mathématiques (regional mathematics olympiad, 2016)