Mathematics

Degree conferred
Scientiarum doctor in mathematica / Doctor of Philosophy in Mathematics (PhD)

Commencement of studies
An application for admission may be submitted at any time.

Regulation
https://studies.unifr.ch/go/1Q *(French and German only)*

Application procedure
Candidates with Swiss qualifications
https://studies.unifr.ch/go/Ui3b4
Candidates with foreign qualifications
https://studies.unifr.ch/go/2KPbe

Fribourg profile

The Department of Mathematics offers a PhD programme in Mathematics. This programme comprises a personal research project leading to a doctoral thesis to be completed over 3-4 years. PhD candidates participate in the scientific life at the Department through seminars, advanced courses, workshops or other activities at the Department or in the framework of the *Swiss Doctoral Program in Mathematics*.

The following is a list of professors supervising doctoral theses and of their areas of specialisation.

- **Prof. Anand Dessai**

– Algebraic and differential topology, Riemannian geometry; group actions, positive curvature and symmetry, equivariant index theory

- **Prof. Enrico Le Donne**

– Metric and differential geometry, geometric measure theory, geometric analysis; in particular: Lipschitz analysis on metric spaces, sub-Riemannian geometry, group actions, rectifiability on Carnot groups, geometric group theory, asymptotic geometry, embedding problems

- **PD Dr Livio Liechti**

– Low-dimensional geometry and topology; knot theory, in particular the theory of fibred links, mapping class groups, Teichmüller theory, in particular pseudo-Anosov homeomorphisms and algebraic properties of their stretch factors

- **Prof. Ioan Manolescu**

– Probability; problems inspired by statistical mechanics, lattice models such as percolation, random-cluster and Potts models, self-avoiding walk

- **Prof. Christian Mazza**

– Applied probability; stochastic models in ecology and systems biology, biological networks, complex ecosystems, mathematical models of plant growth

- **Prof. Hugo Parlier**

– Geometry and combinatorics; low-dimensional manifolds and their moduli, curves on surfaces, systolic type inequalities, geometry and spectra of hyperbolic surfaces, high genus random surfaces, mapping class groups, the geometry of Teichmüller and moduli spaces, infinite type surfaces

- **Prof. Stefan Wenger**

– Geometric measure theory, metric geometry; currents in metric spaces, Lipschitz analysis, isoperimetric inequalities, minimal surfaces, asymptotic geometry

Studies organisation

Structure of studies

No ECTS credits can be earned.

Doctoral school

https://math.cuso.ch

Admission

In order to be admitted to a doctorate the candidate must have been awarded an academic **bachelor's and master's degree** or an equivalent qualification from a university recognised by the University of Fribourg.

Before applying for a doctorate the candidate must contact **a professor** who would be willing to supervise the thesis work.

There is **no general right** to be admitted to a doctorate.

The respective conditions of admission for each doctoral study programme are reserved.

Contact

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