

# Course offerings 24/25 | AS24

Study programme description

Doctorat

# **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

http://studies.unifr.ch/qo/Pm-6q (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. 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

# • Prof. Anand Dessai

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

### • Prof. Ruth Kellerhals

 Hyperbolic geometry; geometry of discrete groups, geometric group theory, discrete and convex geometry, volumes and polylogarithms

### • Prof. Ioan Manolescu

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

#### · Prof. Christian Mazza

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

## · 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

Faculty of Science and Medicine
Department of Mathematics
Chemin du Musée 9
1700 Fribourg
Switzerland
Dr Patrick Ghanaat, study advisor
patrick.ghanaat@unifr.ch
http://studies.unifr.ch/go/mathematicsresearch

# **Doc-Postdoc-portal**

http://www.unifr.ch/phd