MATH-610 **Turbulence in fluids and PDEs**

Invited lecturers (see below), Various lecturers

Cursus	Sem.	Type
Mathematics		Obl.

Language of teaching	English
Credits	3
Session	
Exam	Oral presentation
Workload	90h
Hours	**56**
Courses	18
TP	38
Number of positions	**80**

Frequency

Only this year

Remark

Next Time : from 27.01.2020 to 31.01.2020

Summary

This workshop is to gather together leading experts in the field of turbulent phenomena in PDEs, such as the Navier-Stokes equations in fluid dynamics, kinetic and dispersive equations, and to promote this topic among students and young researchers in Switzerland.

Content

This workshop will be a valuable occasion to learn from outstanding experts in the field of turbulence in Partial Differential Equations. In particular we are contacting
- Prof. Vlad Vicol (Princeton University, USA);
- Prof. Laure Saint-Raymond (\'Ecole Normale Sup\'erieure de Lyon, France);
- Prof. Gigliola Staffilani (Massachusetts Institute of Technology, USA).

The aforementioned speakers will teach 3 minicourses, to be held in the morning. For the afternoon we will invite speak-ers including several specialists in PDEs.

Keywords

Turbulence, Navier-Stokes equations, kinetic equations, dispersive PDEs

Learning Prerequisites

Required courses

All basic Analysis courses; a course in PDEs; a course in measure theory.

Learning Outcomes

By the end of the course, the student must be able to:

- To have an overview of the current research with respect to different turbulent phe-nomena in PDEs.

Resources

Bibliography

References will be added to the webpage