



The **Vienna School of Mathematics (VSM)** is a joint graduate school of the mathematics faculties of the **University of Vienna** and the **TU Wien**. The VSM is devoted to top-level PhD education in all branches of mathematics. It fosters intra- and interdisciplinary scientific cooperation and networking among students and advisors and aims at increasing the international visibility of the Vienna area as a center for mathematics.

The VSM currently announces a PhD position in the area of

Regularisation of differential equations by random processes (TU Wien, Supervisor: M. Gerencsér)

It has been known since the early days of stochastic analysis that the addition of a random source term into an ill-posed deterministic differential equation can restore well-posedness. This phenomenon is called “regularisation by noise”. The stochastic differential equations obtained this way have various intriguing properties, with connections to partial differential equations and rough paths, among others.

The objective of the Ph.D. project is to study such stochastic differential equations, understand their theoretical foundations, regularity and stability properties, as well as their numerical aspects with regards to rigorous analysis of approximation schemes.

The basic requirement for the position is solid background in measure theory, probability theory, and analysis. Previous knowledge of stochastic analysis is not a requirement but is welcome.

The advertised position is associated with the Institute of Analysis and Scientific Computing of **TU Wien** in the Research Group on Stochastic Differential Equations of Ass.-Prof. Dr. Máté Gerencsér. The successful candidate will become a member of the Vienna School of Mathematics and is expected to actively contribute to its activities. The extent of employment is 30 hours per week. The position will start as soon as a suitable candidate has been found.

Application Requirements and Procedure

The candidates must have a master degree (or equivalent) in Mathematics at the moment the PhD position starts. The application documents should contain a letter of motivation; the scientific CV with publications list; higher education certificates/diplomas; and letter(s) of recommendation preferably sent directly to mate.gerencser@tuwien.ac.at by the person writing the letter. Applications have to be sent to mate.gerencser@tuwien.ac.at, if possible **in a single PDF file**. The deadline for applications is **December 6, 2021**.