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

Spectral theory and complex analysis
(University of Vienna, Supervisor: A. Kostenko)

The direct and inverse spectral theory of linear differential operators is an active area of research in which tools from complex analysis play an important role. The problems to be investigated occur from equations taking a prominent role in mathematical physics, like the Korteweg—de Vries or nonlinear Schrödinger equations. Performing a spectral analysis, in particular solving inverse spectral problems, brings together methods and tools from operator theory, differential equations, and complex analysis. The concrete thesis project will be developed jointly with the successful applicant.

Good background on spectral theory of self-adjoint and symmetric operators in Hilbert spaces and functions theory of one complex variable (in particular, theory of entire functions and de Branges spaces) is a basic requirement for the position. Prior experience with the study of Hamiltonian systems and completely integrable equations, in particular the Korteweg—de Vries equation and the Toda equation, is an advantage but not strictly required. Similarly, background on the theory of ordinary and partial differential equations, will be advantageous but not strictly required.

The advertised position is associated with the Faculty of Mathematics of the **University of Vienna** in the Research Group of Dr. Aleksey Kostenko. 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 on December 1, 2020.

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. Applications have to be sent to office@vsmath.at. The deadline for applications is **October 20, 2020.**