

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

### **High-order methods for wave propagation (TU Wien, Supervisor: J.M. Melenk)**

*The project is concerned with the analysis of high order methods for acoustic scattering problems. Such problems describe, e.g., how an impinging wave of a given frequency interacts with an object. Mathematically, such problems are modelled by the Helmholtz equation, an elliptic equation that depends on the frequency under consideration. Of particular interest is the high-frequency regime. It has been shown that high order numerical methods are to be preferred. The focus of the project is to consider polyhedral scatterers in  $R^3$ , understand the solution structure and to design and analyze high order methods.*

*The topic is in the field of numerical analysis of elliptic PDEs. Prior knowledge in finite element methods and/or analysis of PDEs is a plus..*

The advertised position is associated with the Institute of Analysis and Scientific Computing of **TU Wien** in the Research Group Prof. J. M. Melenk. 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 can start on April 1, 2026.

#### **Application Requirements and Procedure**

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 [melenk@tuwien.ac.at](mailto:melenk@tuwien.ac.at) by the person writing the letter. Applications have to be done through the application procedure at <https://jobs.tuwien.ac.at/Job/263180>. The deadline for applications is **February 19, 2026**