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

Mathematical Logic with connections to Mathematical Physics (University of Vienna, Supervisor: Aristotelis Panagiotopoulos)

*The position is part of the **Logic · Quantum · Spacetime (LQS)** program, funded by **John Templeton Foundation**.*

The doctoral research will be rooted in mathematical logic, with the aim of developing applications and connections to mathematical physics. Possible directions include descriptive set-theoretic approaches to observables in general relativity, and model-theoretic approaches to quantum symmetries and quantum reference frames. The dissertation topic will be developed in discussion with the successful candidate, taking account of their background and research interests.

*The candidate will be based at the **Kurt Gödel Research Center for Mathematical Logic (KGRC)**, with office space there. The LQS program aims to bring together researchers in **mathematical logic, theoretical physics, and philosophy of physics**, and to develop collaborations at the interfaces between these disciplines. The research network supporting the position includes **Marios Christodoulou's group at IQOQI Vienna** and **Jeremy Butterfield and collaborators at the University of Cambridge**. Joint seminars and workshops with both groups will provide regular opportunities for interaction and collaboration.*

The successful candidate will develop original research towards a doctoral dissertation, participate actively in KGRC and project seminars and working groups, and engage in discussions and collaborations across the participating research communities. Support is available for conference participation and research visits.

The advertised position is associated with the Faculty of Mathematics of the **University of Vienna**. 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 is planned to start on **1 September 2027**, with the possibility of starting earlier, e.g. on 1 March 2027, by agreement.

The employment is initially limited to two years at 30 hours per week. This initial period will allow the candidate and supervisor to develop the doctoral project and assess progress and the fit between the candidate's interests and the project's research directions. We expect to secure further funding to support the candidate, subject to satisfactory progress, for up to four years. This should be sufficient for completion of the PhD.

Application Requirements and Procedure

Applicants should have a strong mathematical background and some grounding in theoretical physics. A master's degree in mathematics or a closely related discipline should be completed before the appointment begins.

The ideal candidate will combine:

1. A background in **descriptive set theory** or **model theory** (ideally including **Fraïssé theory**); and
2. A background in **general relativity or quantum mechanics**, with the latter understood broadly to include **quantum information theory** or **operator algebras**.

Applications should be submitted by **10 January 2027** to **aristotelis.panagiotopoulos@univie.ac.at**, using the subject line **LQS - PhD Application (First name Last name)**, with the applicant's name in parentheses.

Applications should include:

1. A cover letter describing the applicant's background, research interests, and motivation for the position;
2. An academic CV;
3. The names and email addresses of **two or three referees** who have been informed of the application and have agreed to provide a recommendation letter if requested.

Please submit the cover letter and CV as a **single PDF attachment**. Applicants who would prefer an earlier starting date, such as **1 March 2027**, should indicate this in their application email.

Recommendation letters are not required with the initial application. Letters will be requested for shortlisted candidates, whose referees will be contacted by **15 January 2027**. Selection decisions will be made in **early February 2027**.

Informal enquiries welcome at **aristotelis.panagiotopoulos@univie.ac.at**.