

Postdoctoral position on the quantum information structure of spacetime at ULB

Thu, 2019-12-05 19:08 - [Ognyan Oreshkov](#) [1] **At:** Université libre de Bruxelles
Deadline: 30 December, 2019

Location

Centre for Quantum Information and Communication Av. F. D. Roosevelt 50
Brussels 1050 Belgium

Dear colleagues,

Applications are invited for a postdoctoral position in quantum foundations at the Centre for Quantum Information and Communication at the Université libre de Bruxelles (ULB). The researcher will work with Dr. Ognyan Oreshkov within the framework of the consortium project "The Quantum Information Structure of Spacetime (QISS)", funded by the John Templeton Foundation. This is a multinational research effort at the intersection of quantum gravity, quantum computing, and quantum foundations, which aims to understand the structure of spacetime from an informational perspective through collaboration between experts from different fields (see).

The position in Brussels will investigate the concept of causal structure in quantum theory, with particular focus on approaches to quantum theory in the absence of predefined causal structure, the notion of causal nonseparability and its relevance at the intersection of quantum mechanics and gravity, as well as the link between causal structure and quantum reference frames.

The position is for a period of 2 years. The start date can be no later than 1 September 2020.

Applicants are expected to have a doctoral degree in Physics, Computer Science, Mathematics, or a related discipline before the start date of the position. Due to conditions of the grant, they should have obtained their doctoral degree no more than 8 years before the start date of the position and should not have resided in Belgium for more than 2 years during the past 3 years.

Applicants should have a strong interest in foundations, as well as a proven record of research, including strong publications in at least one of the areas of quantum foundations, quantum information science, quantum field theory, or quantum gravity. Excellent scientific writing ability and good communication skills are essential.

Applications should be sent to Dr. Ognyan Oreshkov at and should include: 1) motivation letter; 2) CV including a list of publications; 3) research statement; 4) reference letters by two referees sent directly by the referees.

For full consideration, applications should be submitted by 30 December 2019.

Please direct informal enquiries to:

- [Postdoc](#) [2]

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