

Two postdoctoral positions on quantum causal structures at ULB

Fri, 2018-10-05 16:25 - [Ognyan Oreshkov](#) [1] **At:** Brussels

Deadline: 11 November, 2018

Location

ULB Brussels Belgium

Applications are invited for two postdoctoral positions on the subject of quantum causal structures at the Centre for Quantum Information and Communication at the Université Libre de Bruxelles.

The researchers will work with Dr. Ognyan Oreshkov within the framework of the project “Quantum Physics and Information with Indefinite Causal Structure” funded by the ARC Consolidation scheme of the Wallonia-Brussels Federation. The aim of the project is to investigate the link between causal structure and quantum theory from a foundational perspective, with specific emphasis on the concept of quantum indefinite causal structures, their information processing power, physical realizability, and potential role in fundamental physics.

One of the positions is envisioned to focus primarily on information-theoretic aspects and possible applications of quantum causal structures. The other position is envisioned to focus on fundamental physics questions, such as the role of causal structure in quantum field theory and at the interface of quantum theory and general relativity. Applicants are invited to express a preference, if any, towards one of these two angles.

Each position is for a period of 2 years. The start dates are flexible.

Applicants must have a doctoral degree in Physics, Computer Science, Mathematics, or a related discipline before the start date of the position. Due to the 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 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 [oreskov \[at\] ulb \[dot\] ac \[dot\] be](mailto:oreskov@ulb.ac.be) 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 received by 11 November 2018.

Please direct informal enquiries to: [oreskov \[at\] ulb \[dot\] ac \[dot\] be](mailto:oreskov@ulb.ac.be)

- [Postdoc](#) [2]

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