



2015-IPR-G-000-6073

Quantum logics as specification language

<p>Position for:</p> <p>Trainee</p>	<p><u>Short description of activity:</u></p> <p>The project JRC-867 QuantumTec aims at preparing a study on the present and possible future development of quantum technologies in Europe. "Quantum technologies" is the common name for a very broad field of research and technical development based on the principles of modern physics. With this general meaning, "quantum technology" involves disciplines like computing, sensing, and measurement together with specific applications of optics and design of atomic-scale computing devices. In this context, reviews of the literature are done during the development of the project with the aim at showing whether a specific technology or research field can have relations to quantum technologies and be consequently included in the final study.</p> <p>The field of Quantum Logics is an active field of research since the publications of the seminal paper by Garrett Birkhoff and John von Neumann in 1956. Following this publication, a series of papers has explored the field both on the perspective of the algebraic models for quantum logics and its expressive power as logical language. In this latter aspect, relevant authors are Jacek Malinowski and Robert Goldblatt.</p> <p>The successful candidate will, in close cooperation with the staff of the QuantumTec project and possibly in agreement with a person responsible for his/her university studies, produce a review of the basic literature on quantum logics and explore the consequences of the articles studied with respect to the use of quantum logics as languages for the technical specification of devices exploiting quantum properties.</p> <p><u>Qualifications:</u> <u>Essential.</u></p> <p>The candidate should have or should be close to attain a university degree in one of the</p>
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	<p>following disciplines: mathematics, philosophy physics or computer science.</p> <p>Knowledge of languages according to the Rules governing JRC traineeship scheme indicated below.</p> <p><u>Advantage.</u> Knowledge of mathematical logic or algebra is desired.</p> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>
Institute/Directorate Unit	<p>IPSC G05 Further information: http://ipsc.jrc.ec.europa.eu</p>
Indicative duration	5 months
Preferred starting date	01/02/2016
JRC Site	Ispra
Country	Italy
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact: JRC-ESRA@ec.europa.eu</p>