



Industrial PhD Student position within Quantum Communication

You have a research interest in Quantum physics as well in Industrial Communication? You would like to research in the interdisciplinary field of quantum physics and industrial communication, as well apply your PhD studies in an industrial context? Then join our team of highly motivated researchers to develop the foundations of the next generations of ABB connectivity offerings in this industrial PhD role.

Tasks

The interdisciplinary field of quantum information processing and communication connects quantum mechanics/optics/electronics with classical information theory, which enables solutions in information and communication that are impossible with classical methods. This fusion has led to new concepts such as the qubit, quantum teleportation, quantum cryptography, and quantum computing. Quantum information has also revitalized the discussions about the foundations of quantum theory. The field is currently very active and is driving for progress in both physics and information technology.

In collaboration with Stockholm University and the research program Wallenberg Centre for Quantum Technology, ABB offers this Industrial PhD student position within quantum communication and the following research question: “How to achieve the so-called ‘perfectly secured’ key distribution by quantum techniques taking industrial aspects of long distance, diverse physical media and multi-party communications into account?” To investigate suitable ways of implementation for verification and demonstration of the results is also foreseen.

A PhD education at Stockholm University is four years (48 months). The 4-year PhD program includes at least 3 years of research and at most one year of course work.

Requirements

For this role, you have a MSc. degree in physics, applied physics, engineering physics, electrical engineering or similar and a strong interest in communication systems, information theory, and quantum physics. You have good communication skills and a team player attitude, as well an eagerness to learn and develop on new topics. We expect you to have cross-cultural communication skills and to bring creativity, initiative, enthusiasm, and result orientation to drive your research. Proficient English skills are mandatory.

Additional information

Recruiting Manager, Linus Thrybom, +46 21 32 36 09, and the main supervisor: Mohamed Bourennane, + 46 8 55 37 87 36, will answer your questions about the position.

Union representatives - Sveriges Ingenjörer: Ulf Westblom +46 21 32 30, Unionen: Krista Andersson +46 213 40 285, Ledarna: Lenny Larsson +46 213 28 547.

Welcome with your application before January 20, 2019

The Department of Physics at Stockholm University is located in the AlbaNova University Center and has approximately 220 employees, 250 students at undergraduate level and 90 graduate students. For information about the Department of Physics, see www.fysik.su.se.

Location	Västerås,Vaestmanland County,Sweden
Business unit	-
Sovellus aloituspäivä	21.12.2018
Jobbfunktion	Research and Development
Job Reference Code	SE67556436_I1

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