

## PhD fellow in Theoretical Quantum Optics (Copenhagen)

Tue, 2019-05-21 10:30 - [Anders Sorensen](#) [1] **At:** Center for Hybrid Quantum Networks (Hy-Q), Niels Bohr Institute, University of Copenhagen

**Deadline:** 26 May, 2019

### Location

Niels Bohr Institute, University of Copenhagen Blegdamsvej 17  
Copenhagen DK-2100 Denmark

Phone: +45 24661377

See map: [findvej.dk](#) [2], [Rejseplanen](#) [3]

The Niels Bohr Institute, Faculty of Science at University of Copenhagen is offering a PhD scholarship in theoretical quantum optics commencing 01.09.2019 or as soon as possible thereafter.

### Description of the scientific environment

The theoretical quantum optics group <https://theoretical-quantum-optics.nbi.ku.dk> [4] investigates a broad range of topics in theoretical quantum optics and quantum information. The main focus is on the implementation of quantum information processing in a variety of physical systems, ranging from solid state systems to quantum optical systems. Currently most of the research is focused on quantum communication and light matter interactions.

The research group is part of the newly established Center for Hybrid Quantum Networks (Hy-Q) <http://hy-q.nbi.ku.dk> [5], which aims at exploiting photons to merge disparate quantum systems. The group is also part of the Quantum Internet Alliance (QIA) <http://quantum-internet.team/> [6], a European effort to build a global quantum internet.

### Project description

The Ph.D. project should be within the general research area of Hy-Q. The precise content of the project will be agreed upon with the successful candidate but possible topics could be

- Quantum limits of sensing
- Strong photon-photon interactions induced by material systems
- Quantum communication with single photon emitters.

Principal supervisor is Professor Anders Søndberg Sørensen, Center for Hybrid Quantum Networks (Hy-Q) and The Niels Bohr Institute, email: anders [dot] sorensen [at] nbi [dot] dk, phone: (+45) 24661377.

### Job description

The position is available for a 3-year period and your key tasks as a PhD student at SCIENCE are:

- To manage and carry through your research project
- Attend PhD courses
- Write scientific articles and your PhD thesis
- Teach and disseminate your research

- To stay at an external research institution for a few months, preferably abroad
- Work for the department

### Formal requirements

Applicants should hold an MSc degree in Physics or other related area with good results and good English skills. As criteria for the assessment of your qualifications emphasis will also be laid on previous publications (if any) and relevant work experience.

### Terms of employment

The position is covered by the Memorandum on Job Structure for Academic Staff. Terms of appointment and payment accord to the agreement between the Ministry of Finance and The Danish Confederation of Professional Associations on Academics in the State.

The starting salary is currently at a minimum DKK 325.625 (approx. €43,400) including annual supplement (+ pension up to DKK 44,980). Negotiation for salary supplement is possible.

### Application Procedure

The application, in English, must be submitted electronically by clicking APPLY NOW below.

### Please include

- Cover Letter, detailing your motivation and background for applying for the PhD project.
- CV
- Diploma and transcripts of records (BSc and MSc)
- Acceptance Letter for the relevant MSc Programme at SCIENCE, if any
- Other information for consideration, e.g. list of publications (if any),
- Full contact details (Name, address, telephone & email) of 1-3 professional referees

The University wishes our staff to reflect the diversity of society and thus welcomes applications from all qualified candidates regardless of personal background.

\*The deadline for applications is 23rd of June, 2019, 23:59 GMT +2. After the expiry of the deadline for applications, the authorized recruitment manager selects applicants for assessment on the advice of the Interview Committee. Afterwards an assessment committee will be appointed to evaluate the selected applications. The applicants will be notified of the composition of the committee and the final selection of a successful candidate will be made by the Head of Department, based on the recommendations of the assessment committee and the interview committee. The main criterion for selection will be the research potential of the applicant and the above mentioned skills. The successful candidate will then be requested to formally apply for enrolment as a PhD student at the PhD school of Science. You can read more about the recruitment process at <http://employment.ku.dk/faculty/recruitment-process/> [7] .

Questions For specific information about the PhD scholarship, please contact the principal supervisor Professor Anders Søndberg Sørensen, email: anders [dot] sorensen [at] nbi [dot] dk , phone (+45) 24661377.

General information about PhD programmes at SCIENCE is available at <http://www.science.ku.dk/phd> [8] .

- [PhD](#) [9]

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[3] [http://www.rejseplanen.dk/bin/query.exe/mn?Z=Blegdamsvej\\_17, DK-2100 Copenhagen &ZADR=1](http://www.rejseplanen.dk/bin/query.exe/mn?Z=Blegdamsvej_17,_DK-2100_Copenhagen&ZADR=1)

[4] <https://theoretical-quantum-optics.nbi.ku.dk>

[5] <http://hy-q.nbi.ku.dk>

[6] <http://quantum-internet.team/>

[7] <http://employment.ku.dk/faculty/recruitment-process/>

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