

## Postdoctoral position in Cold Atom Physics

Wed, 2012-12-12 09:59 - [Klaus Moelmer](#) [1] **At:** Aarhus University, Denmark

**Deadline:** 20 December, 2012

### Location

Aarhus Denmark  
56° 9' 46.5804" N, 10° 12' 14.1156" E  
See map: [findvej.dk](#) [2], [Rejseplanen](#) [3]

Postdoc position combining experimental and theoretical work in cold atom physics in the Department of Physics and Astronomy, Aarhus University, Denmark.

Research Field(s): Ultra-cold atoms, quantum optics, many-body dynamics, optical lattices

A one-year postdoctoral position starting during the spring 2013 with good prospects of prolongation for at least an additional year is hereby announced at the Department of Physics and Astronomy, Aarhus University.

The theoretical efforts will be supervised by Asst. Prof. Jacob Sherson and Professor Klaus Mølmer. The experiments will be conducted in the ultra-cold quantum gases group under the supervision of the former.

Both activities will focus on three prominent research directions: quantum state engineering using non-destructive measurements, control of many-body dynamics in optical lattices, and the investigation of many-body tunneling in few-well systems with the prospect of realizing atomtronics dynamics.

Theory: The successful candidate is expected to conduct numerical and analytical work on macroscopic descriptions and detailed microscopic dynamics of cold atoms. Focus will be on the possibility to actively manipulate the quantum states of cold bosonic atoms using dynamic control and non-destructive monitoring.

Experiment: The successful candidate is expected to participate in the final phase of the construction of and first experiments with a new setup involving ultra-cold bosonic atoms in novel optical lattice geometries. The goal will be to implement control of quantum states in optical lattices using measurements and feedback.

More information about the center activities is available at the home pages:

<http://phys.au.dk/forskning/forskningsomraader/ltc/> [4]

<http://phys.au.dk/forskning/forskningsomraader/uqgg0/> [5]

<http://phys.au.dk/forskning/forskningsomraader/coder/> [6]

Applicants must hold a PhD degree in Physics acquired during the past three years. The salary and appointment terms are consistent with the current collective agreement for Danish Universities.

Information about salary, tax, health insurance, accommodation etc. is available on the websites:

<http://phys.au.dk/forskning/forskningsomraader/ltc/internal-information/...> [7]

<http://ias.au.dk/international-academic-staff-ias/> [8]

Please e-mail applications to the center Secretary [flarup\[at\]phys\[dot\]au\[dot\]dk](mailto:flarup@phys.au.dk) (Grete Flarup).

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Applications must contain: 1) a curriculum vitae, 2) a list of publications, and 3) the names, affiliations and email addresses of three references. All documents must be packed into a single pdf-file, and the application must be submitted by December 20, 2012.

Please quote "Position in cold atom physics" in the subject header of the email.

- [Postdoc](#) [9]

**Source URL:** <http://qurope.eu/db/jobs/postdoctoral-position-cold-atom-physics>

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[3] <http://www.rejseplanen.dk/bin/query.exe/mn?Z=Aarhus&ZADR=1>

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