



UNIVERSITETET  
I OSLO

**Jobbnorge ID:** 195718  
**Deadline:** 11/30/2020  
**Website:** <http://www.uio.no/>  
**Scope:** Fulltime  
**Duration:** Fixed Term

## Postdoctoral Research Fellow in Solar Physics

### Job description

1-2 Positions as Postdoctoral Research Fellow available at the Rosseland Centre for Solar Physics (RoCS) at the Institute of Theoretical Astrophysics (ITA).

No one can be appointed for more than one Postdoctoral Research Fellowship at the University of Oslo. Starting date upon agreement but no later than 01.10.2021.

The appointment is a fulltime position and is made for a period of up to three years (10% of which is devoted to required duties, usually in the form of teaching activities).

### More about the position

The postdoctoral fellowship is connected to the Rosseland Centre for Solar Physics (RoCS) funded by the Research Council of Norway and the University of Oslo from November 1st, 2017. The primary goal of RoCS 10-year effort lies in understanding the workings of the energetic Sun. To attack this goal a concerted effort of numerical modelling, both fluid (extended MHD) and particle oriented, will be combined with high quality observations taken at ground based and space based observatories to produce models of the active Sun. The Solar group at the ITA is presently led by Mats Carlsson, who is also the leader of RoCS. The group has an internationally leading competence in radiative transfer and radiative hydrodynamics. Observationally, the group has access to the Swedish 1-meter Solar Telescope on La Palma, to ALMA, to several space based satellites such as NASA's IRIS and SDO, JAXA's Hinode and ESA's Solar Orbiter. The group make extensive use of local and national High-Performance Computing facilities. With the RoCS centre of excellence, the Solar group is expanding significantly.

The available positions are dedicated to the following projects:

- 1) **WHOLE SUN.** The position is connected to the ERC Synergy grant "Whole Sun Project: Untangling the complex physical mechanisms behind our eruptive magnetic star and its twins", a collaboration between RoCS and Commissariat à l'Energie Atomique et aux Energies Alternatives, Paris, France, Max Planck Institute for Solar System Research, Göttingen, Germany, University of St. Andrews, Scotland, UK and Instituto de Astrofísica de Canarias, Tenerife, Spain. The WHOLE SUN project attempts to link the eruptive phenomena observed in the solar atmosphere to the motions of plasma deep in the interior of the Sun, where its magnetic field is generated.
- 2) **RoCS.** This is an open postdoc position with a project within any of the activities of the centre.

The main purpose of a postdoctoral fellowship is to provide the candidates with enhanced skills to pursue a scientific top position within or beyond academia. To promote a strategic career path, all postdoctoral research fellows are required to submit a professional development plan no later than one month after commencement of the postdoctoral period.

### Qualification requirements

The Faculty of Mathematics and Natural Sciences has a strategic ambition of being a leading research faculty. Candidates for these fellowships will be selected in accordance with this, and expected to be in the upper segment of their class with respect to academic credentials.

- Applicants must hold a degree equivalent to a Norwegian doctoral degree in astronomy, astrophysics or a related field. Appointment is dependent on the defence of the doctoral thesis being approved, if it has not been held by the application deadline.
- We seek a candidate with a background preferably in solar or stellar physics, who has experience with numerical simulations and/or the analysis of observations incl. the handling of large data sets. Experience in non-LTE radiative transfer, hydrodynamic and/or radiation hydrodynamics and/or particle oriented modeling is welcomed.
- The candidate will have to program in Fortran90, C/C++ or IDL/Python. Programming skills are therefore an essential requirement.
- Fluent oral and written communication skills in English.

### We offer

- Salary NOK 526 000 - 608 200 per annum depending on qualifications in position as Postdoctoral Research Fellowship (position code 1352)
- Personal travel funds of NOK 50 000 per annum
- Excellent computer infrastructure
- Attractive [welfare benefits](#) and a generous pension agreement
- Professionally stimulating working environment
- Vibrant international academic environment

- Postdoctoral development programmes
- Oslo's family-friendly surroundings with their rich opportunities for cultural and outdoor activities

## How to apply

The application must include:

- Cover letter (statement of motivation, summarizing scientific work and research interest)
- Project description of how the applicant envisions to carry out research within the Rosseland Centre for Solar Physics in support of the vision "understanding the workings of the energetic Sun"
- CV (summarizing education, positions, pedagogical experience, administrative experience and other qualifying activity)
- Copies of educational certificates, academic transcript of records
- A complete list of publications
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

The application with attachments must be delivered in our electronic recruiting system, please follow the link "apply for this job". Foreign applicants are advised to attach an explanation of their University's grading system. Please note that all documents should be in English (or a Scandinavian language).

In assessing the applications, special emphasis will be placed on the documented academic qualifications, the project description, and the quality of the project as well as the candidate's motivation and personal suitability. Interviews with the best qualified candidates will be arranged.

It is expected that the successful candidate will be able to complete the project in the course of the period of employment.

## Formal regulations

Please see the [guidelines and regulations](#) for appointments to Postdoctoral fellowships at the University of Oslo.

According to the Norwegian Freedom of Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

The University of Oslo has an [agreement](#) for all employees, aiming to secure rights to research results etc.

The University of Oslo aims to achieve a balanced gender composition in the workforce and to recruit people with ethnic minority backgrounds.

## Contact information

For further information please contact: Mats Carlsson, phone: +47 99032357, e-mail: [mats.carlsson@astro.uio.no](mailto:mats.carlsson@astro.uio.no)

For technical questions regarding the application system, please contact HR Adviser Elin Thoresen, +47 22 85 71 96, e-mail: [elin.thoresen@mn.uio.no](mailto:elin.thoresen@mn.uio.no)

## About the University of Oslo

**The University of Oslo** is Norway's oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

**The Rosseland Centre for Solar Physics** is situated at the Institute of Theoretical Astrophysics, the Faculty of Mathematics and Natural Sciences.

## Additional information

### Place of service:

Institutt for teoretisk astrofysikk, UiO 0313 Oslo (Oslo Municipality)