

Postdoctoral Research Associate in Experimental
Nonlinear Optics
University of Sydney

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Posted Apr. 14, 2025, set to expire May 14, 2025

Job Title Postdoctoral Research Associate in Experimental Nonlinear Optics
Department School of Physics
Institution University of Sydney
Sydney, New South Wales, Australia

Date Posted Apr. 14, 2025

Application Deadline May 14, 2025

Position Start Date Available immediately

Job Categories Post-Doc

Academic Field(s) Physics - General
Physics - Atomic/Molecular/Optical/Plasma

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Apply By Email

Job Description

- Full time, 12 months fixed term. Located on the Camperdown Campus

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- **Exciting opportunity to contribute to one of the leading Physics departments in Australia**
- **Base Salary, Level A\$105,314 - \$116,679a + 17% superannuation**

About the opportunity:

The University of Sydney's School of Physics are welcoming applicants for a **Postdoctoral Research Associate in Experimental Nonlinear Optics** to work closely with [Professor Martijn de Sterke](#) and Dr Antoine Runge and co-workers investigating soliton physics.

The successful candidate will join the team and be a part of an **ARC-funded Discovery Project** aimed to generate and investigate several novel families of nonlinear optical soliton pulses by using a dispersion-managed laser developed at the University of Sydney. The project will first focus on furthering our understanding of the properties of these novel solitons via laboratory experiments and numerical simulations. Subsequently, these novel solitons may also lead to unique and superior laser-operating regimes.

Your key responsibilities will be to:

- carry out laboratory-based research and numerical analysis at the forefront of ultrafast science and nonlinear optics
- work closely with the team with the goal to generate novel soliton pulses and harness their properties in photonic applications
- develop and refine research skills and independent research under the supervision of more senior academic staff within the School/ Faculty (with an increasing degree of autonomy)
- contribute to a positive workplace culture in which diversity of thought, contribution, collaboration, excellence and achieving outcomes are valued.

If you would like to find out more about the School of Physics leading research, click [here](#)

About you:

The University values courage and creativity; openness and engagement; inclusion and diversity; and respect and integrity. As such, we see the importance of recruiting talent aligned to these values and are looking for a **Postdoctoral Research Associate** who has:

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- a PhD in Physics, Electrical Engineering or a related subject (candidates who are near completion may also be considered)
- proven ability in experimental nonlinear optics or ultrafast laser science, and preferably in both
- strong numerical simulation skills
- the ability to work autonomously
- an excellent track record in conducting original research
- excellent written and oral communications skills
- experience with the visualisation of results from experiments and from computer simulations.

To keep our community safe, please be aware of our [COVID safety precautions](#) which form our conditions of entry for all staff, students and visitors coming to campus.

Pre-employment checks

Your employment is conditional upon the completion of all role required pre-employment or background checks in terms satisfactory to the University. Similarly, your ongoing employment is conditional upon the satisfactory maintenance of all relevant clearances and background check requirements. If you do not meet these conditions, the University may take any necessary step, including the termination of your employment.

EEO statement

At the University of Sydney, our shared values include [diversity and inclusion](#) and we strive to be a place where everyone can thrive. We are committed to creating a University community which reflects the wider community that we serve. We deliver on this commitment through our people and culture programs, as well as key strategies to increase participation and support the careers of [Aboriginal and Torres Strait Islander People](#), [women](#), [people living with a disability](#), [people from culturally and linguistically diverse backgrounds](#), and those who identify as [LGBTIQ](#). We welcome applications from candidates from all backgrounds.

How to apply

Applications (including a cover letter, CV, and any additional supporting documentation) can be

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submitted via the **Apply** button at the top of the page.

EEO/AA Policy

We are committed to diversity and social inclusion. We welcome applications from women (particularly for senior and non-traditional roles), Aboriginal and Torres Strait Islander people, people with a disability, people who identify as LGBTIQ, and people from culturally and linguistically diverse backgrounds. (c) The University of Sydney

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

The University of Sydney
Sydney
Australia