

Post-doctoral position in quantum imaging and microscopy in Paris

In short

Supervisor: [Hugo Defienne](#)

Topics: Quantum imaging, quantum optics in scattering media, quantum entanglement.

The lab: Quantum Imaging Paris group, part of the Paris Institute of Nanosciences (INSP).

Located at Sorbonne University, in the center of Paris.

Funding: Two years funding (ERC starting grant).

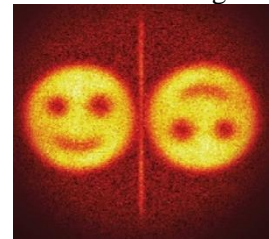
How to apply? Email to hugo.defienne@insp.upmc.fr with a CV | **Deadline:** September 2023

Link: <https://emploi.cnrs.fr/Offres/CDD/UMR7588-HUGDEF-002/Default.aspx?lang=EN>

Come join our team as we strive to develop a cutting-edge quantum microscope! Leveraging the non-classical properties of light, including quantum entanglement, we aim to push the boundaries of classical imaging with innovative protocols. **We are currently seeking a highly motivated post-doctoral researcher with experience in experimental quantum optics or related fields to join us from September 2023.** A passion for physics, a problem-solving mindset, and a strong team spirit are essential attributes for the successful candidate. Join us on this exciting journey towards advancing the frontiers of quantum technology!

Our current topics:

- Developing quantum microscopes and imaging protocols
- Exploring quantum optics in complex media
- Investigating interactions between entangled light and nanomaterials
- Deciphering high-dimensional quantum entanglement
- **Your idea?**



Quantum image from
[Nat.Phys.17 \(2021\)](#)

Expertise and equipment: Our laboratory is state-of-the-art, fully equipped, and generously funded to support many ongoing experiments. Our expertise spans experimental and theoretical quantum optics, quantum imaging, light structuring, optics in scattering media, and computational imaging. Of particular note, our team has extensive experience with various single-photon cameras, including EMCCD, SPAD, and Tpx3cam.

Research environment: The new post-doc will join the Quantum Imaging Paris team (quantumimagingparis.fr). It is based in Sorbonne University, at the Paris Institute of Nanosciences (INSP), located at the center of Paris (4 place Jussieu, 75005 Paris). The team, led by Dr. Hugo Defienne, comprises 5 international PhDs and post-docs and enjoys the exceptional scientific environment of Sorbonne University with its numerous experimental and theoretical physics groups. In particular, we have a strong ongoing collaboration with the group of Prof. Sylvain Gigan. We care for a fully open and inclusive atmosphere.

Funding: We are pleased to offer two years of funding through an ERC starting grant. The gross salary varies between 52k€ and 73k€ depending on the candidate prior experience (set by the CNRS scale). Moreover, we encourage the new postdoctoral fellow to apply for additional postdoctoral funding opportunities, such as a Marie Skłodowska-Curie fellowship (deadline September 13, 2023). Our team, CNRS and Sorbonne University resources are available to train and support the postdoc in this endeavor.

Professional development: As a team, we prioritize the professional development of our post-doctoral fellows, providing opportunities for mentorship, grant writing, and career-enhancing experiences. Group leader H. Defienne actively supports the unique career goals and aspirations of our post-docs while also dedicating a portion of his time to lab work alongside them. During recruitment interviews, we discuss each post-doc's motivations and expectations, as well as potential research projects. Our approach balances both scientific rigor and individualized support for post-doctoral fellows as they pursue their career goals.

Relevant publications : [Defienne et al. Nature Physics 17 \(5\), 591-597 \(2021\)](#) | [Courme et al. PRX Quantum 4 \(1\), 010308 \(2023\)](#) | [Courme et al. arXiv preprint arXiv:2302.03756 \(2023\)](#)