Postdoctoral Fellow or Research Engineer: Multiphoton microscopy and adaptive optics

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<th>Location: Heidelberg, Germany</th>
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<td>Staff Category: Staff Member</td>
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<td>Contract Duration: 2 years</td>
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<td>Grading: 5 or 6; depending on individual experiences and qualifications</td>
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<td>Closing Date: 9.11.2020</td>
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<td>Reference Number: HD01851/ HD01846</td>
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The Prevedel group in Heidelberg is seeking a postdoctoral fellow or a research engineer with an applied physics and/or engineering background to work on advanced multi-photon imaging techniques for applications in biology and neuroscience. In particular, the candidate will work on the development of new optical instrumentation with a particular emphasis on adaptive optics, wavefront shaping as well as infrared detector technology. Additionally, the successful candidate will team-up with biologists and mouse neuroscientists to apply the advances to current scientific questions.

This project is part of a recently funded EU FET grant. The successful candidate is expected to take a strong lead on his/her project and start to develop independent ideas. Our multi-disciplinary lab provides an innovative, dynamic and constructive working environment for this purpose. More information about the Prevedel group can be found here: [www.prevedel.embl.de](http://www.prevedel.embl.de)

The role is advertised as:

- **Postdoctoral Fellow** for candidates pursuing academic career path: [HD01846 Postdoctoral Fellow: Multiphoton microscopy and adaptive optics](#)
- **Research Engineer** for candidates pursuing different career path than the academic one: [HD01851 Research Engineer: Multiphoton microscopy and adaptive optics](#)

**Your role**

- Design of mechanical, optical as well as electronic and software components of novel, custom-built multi-photon microscopes to collect 3D data from biological tissues.
- Development of adaptive optics systems and wavefront control strategies as well as the integration of novel detection hardware into bespoke microscopes.
- Demonstration of new intravital imaging technologies in close collaboration with other team members and biologists.
- Maintain documentation and records to support future developments, research or commercial exploitation and dissemination. (relevant only for research engineer role)
- Dissemination of research results in scientific publications and presentations at international conferences. (relevant only for postdoctoral fellow role)

**You have**

- PhD (or equivalent qualification) in optical physics, engineering, or optical neuro-imaging and possessing advanced computer skills (relevant only for postdoctoral fellow candidates)
- Significant (>5 years) experience in optical physics, engineering, or optical neuro-imaging and advanced computer skills. (relevant for research engineer candidates)
- Experience in building complex optical setups, must be comfortable with complex technical equipment (including pulsed lasers) and preferably possess programming (Matlab, Python, LabView, or similar) and/or simulation skills (CAD, ZEMAX, or similar).

You should be able to work independently, be very well organized, reliable and enjoy working in an international team within a highly collaborative atmosphere. Excellent communication and presentation skills, a high level of motivation and fluency in English are required.

**You might also have**

A keen interest in biological applications of new optical technologies as well as experience in supervising students and laboratory organization would be an advantage.
Why join us

EMBL is an inclusive, equal opportunity employer offering attractive conditions and benefits appropriate to an international research organisation with a very collegial and family friendly working environment. The remuneration package comprises from a competitive salary, a comprehensive pension scheme, medical, educational and other social benefits, as well as financial support for relocation and installation, including your family and the availability of an excellent child care facility on campus.

What else you need to know

We are Europe's flagship research laboratory for the life sciences – an intergovernmental organisation performing scientific research in disciplines including molecular biology, physics, chemistry and computer science. We are an international, innovative and interdisciplinary laboratory with more than 1800 employees from many nations, operating across six sites, in Heidelberg (HQ), Barcelona, Hinxton near Cambridge, Hamburg, Grenoble and Rome.

Our other missions are to offer vital services in training scientists, students and visitors at all levels; to develop new instruments and methods in the life sciences and actively engage in technology transfer activities, and to integrate European life science research.

The working language of the institute is English.

In your online application, you will be asked to include a cover letter, your CV, and the names and contact details of 3 referees.

Further information about the position can be obtained from Robert Prevedel (robert.prevedel[at]embl.de), Group Leader, EMBL Heidelberg.

The initial contract is for a period of 2 years with the possibility of a fixed-term extension depending on individual performance and extension of the funding.

Please apply online through: www.embl.org/jobs