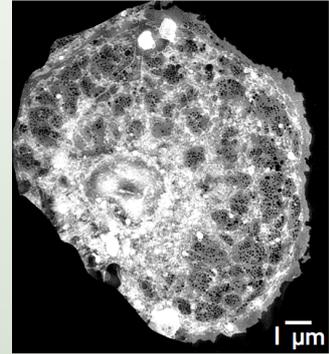


# 2 openings for PhD students

We currently have 2 openings for brilliant early stage researchers (PhD students) to join our group starting in January 2018 for 36 months as part of the EU-MSCA-ITN project DeLIVER (Super-resolution optical microscopy of nanosized pore dynamics in endothelial cells)

DeLIVER is an EU funded project which includes 6 academic and 3 industrial beneficiaries representing 6 European countries and 5 partners (in Europe, USA, China, and Australia). The multidisciplinary DeLIVER research network combines groups active in cutting edge research in optical physics and biomedicine dedicated to developing and utilizing novel super-resolving optical methods to unravel the structure and function of nanosized pores in endothelial cells, the main barrier between blood and vital organs in the human body.



**Position 1:** The PhD candidate will focus her/his research on the development of high-speed structured illumination microscopy methods with instant, GPU-based image reconstruction. The successful applicant will develop novel soft- and hardware for high-speed super-resolution optical microscopy and characterize living endothelial cells and liver tissue in close collaboration with partners from within our network. The ideal candidate has experience in optics, Java programming, parallel computing (GPU/CUDA programming), and an interest in developing instrument control based on microcontrollers or FPGAs. The project involves a series of secondments to academic and industrial partners in the United Kingdom, Sweden, and Norway.

**Position 2:** The PhD candidate will focus her/his research on developing novel methods to improve the axial resolution of high-speed super-resolution optical microscopy techniques. The successful applicant will combine multiphoton fluorescence excitation with super-resolution optical microscopy methods to enable high-speed imaging of perfused tissues below the optical diffraction limit. The ideal candidate has experience in optics, optical engineering, super-resolution microscopy, as well as software development (e.g. Python, Matlab, C++, Java) and a keen interest in instrument control based on advanced electronics instrumentation. The project involves a series of secondments to academic and industrial partners in France, the United Kingdom, and Norway.

Both candidates will benefit from training programs organized by partners of the DeLIVER network, providing PhD students with broad competences, experience, and skills in cutting-edge interdisciplinary research related to cutting edge optical methods and biomedicine.

We offer a state of the art research environment directed towards a challenging biomedical research problem. We offer highly competitive compensation according to the MSCA-ITN rules of the Horizon 2020 program.

#### Eligibility criteria of EU-funded early stage researcher positions:

- Candidates may be of any nationality.
- By the time of recruitment by the host organization, candidates must not have received a doctorate or equivalent.
- By the time of recruitment by the host organization, candidates must be in the first four years (full-time equivalent) of their research career. Full-time research experience is measured from the date when a researcher obtained the degree which formally entitled him or her to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the researcher is recruited or seconded, irrespective of whether or not a doctorate is or was ever envisaged.
- By the time of recruitment by the host organization, researchers must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than twelve months in the last three years. Short stays, such as holidays, are not included.
- Candidates should have a M.Sc. or equivalent in Biophysics, Optics, Optical Engineering, Computer Science, or similar.
- Candidates should have excellent knowledge of the English language, spoken and written.

Applications should be sent by email to [deliver-itn@physik.uni-bielefeld.de](mailto:deliver-itn@physik.uni-bielefeld.de) indicating "DeLIVER ESR applicant" in the subject line.

Applications should contain a CV, motivation letter indicating experience, expertise in relevant methods and registered residences of the last 3 years, and the names and contact details of at least two references.

The deadline for applications is **November 30, 2017**.

learn more at: <http://www.bio-photonics.de> or <http://www.deliver-itn.eu>