

## The MS SPIDOC consortium is looking for: 2 postdocs, an engineer and a scientific project coordinator

To develop a prototype mass spectrometer for single particle imaging at X-ray free electron lasers within the [MS SPIDOC consortium](#) - Mass Spectrometry for Single-Particle Imaging of Dipole Oriented Protein Complexes.



The European XFEL has recently entered user operation. With its unparalleled peak brilliance and repetition rate, European XFEL has the potential to further applications in single particle imaging (SPI), thus far limited to large viral particles at X-ray free-electron lasers (XFEL). SPI will allow imaging protein complexes without the need for crystallization. This eventually renders transient conformational states accessible for high resolution structural studies, yielding molecular movies of biomolecular machines. A major bottleneck is the wealth of data required to reconstruct a single structure leading to long processing times. MS SPIDOC will overcome this data challenge by developing a native mass spectrometry (MS) system for sample delivery called X-MS-I. It will provide mass- and conformation-selected biomolecules that are oriented along their dipole axis upon imaging. This will enable structural reconstruction from much smaller datasets, speeding up the analysis time tremendously. Moreover, the system features low sample consumption and a controlled low background, easing pattern identification.

### 2 POSTDOCS FOR X-MS-I PROTOTYPE DEVELOPMENT AND TESTING (FULL TIME):

One position will be hosted by the [Heinrich Pette Institute](#), Leibniz Institute for Experimental Virology in Hamburg, Germany, and the other by the [University of Greifswald](#), Greifswald, Germany. Both postdocs will have the option to carry out the majority of the work directly on [European XFEL](#) premises, Schenefeld (near Hamburg), Germany.

For more information about the positions, please go to the respective websites:

- [Postdoc Heinrich Pette Institute](#)
- [Postdoc University of Greifswald](#)

### 1 ENGINEER FOR BEAMLINER IMPLEMENTATION OF PROTOTYPE (FULL TIME)

The position will be hosted by the [European XFEL GmbH](#), Schenefeld, Germany. For details please go to [Engineer European XFEL](#).

### 1 SCIENTIFIC PROJECT COORDINATOR IN PART-TIME (50%)

The position will be hosted by the project coordinator at the [Heinrich Pette Institute](#), Leibniz Institute for Experimental Virology in Hamburg, Germany. For details please go to [Project Coordinator Heinrich Pette Institute](#).