

## Ph.D. Position in Image Processing and Computed Tomography

The cryo-electron microscopy group at the Buchmann Institute for Molecular Life Sciences is seeking an enthusiastic, highly motivated Ph.D. student with a background in **mathematics or computer science (Informatik)** to occupy a PhD position.

The scientific goal of the project is to reach atomic resolution in medically relevant biological specimen. To achieve this, we develop algorithms that reconstruct three-dimensional (3D) images out of 2D projections from limited-angle tomography experiments. We use brand-new cutting-edge imaging technology (hardware and software) with which we have unique capabilities to visualize the interior of the cells that allows us to understand the origin and cause of cancer and other disease.

Previous experience in developing source code for image processing and/or computed tomography is an important advantage. C, C++ and MATLAB programming experience is a prerequisite; GPU programming knowledge (CUDA, OpenCL) is advantageous. A general interest in medical imaging is of particular importance.

Do you have a degree in mathematics or computer science, excellent grades and a strong interest in programming and algorithmic development? Do you have interest in **machine learning**, such as representation learning, deep reinforcement learning etc? Would you like to **develop software and tools** for 3D visualization? Interested candidates should send a short application letter outlining their research interests, a detailed CV to Professor Achilleas Frangakis (email: [achilleas.frangakis@biophysik.org](mailto:achilleas.frangakis@biophysik.org))

The positions are available from August 2018 or as soon as possible thereafter. Responsibilities include developing an innovative strategic research agenda together with colleagues and external partners, nurturing and leading excellent research activities, contributing to an inspiring and industrially relevant education at undergraduate and graduate levels and expanding industrial collaboration.

For detailed information about the group please visit our webpages:

[https://www.bmls.de/Electron\\_Microscopy/aboutus.html](https://www.bmls.de/Electron_Microscopy/aboutus.html)  
<http://fcm.uni-frankfurt.de/>  
<http://www.sfb902.de/category/principal-investigators/>

For detailed information about our publications:

[https://www.bmls.de/Electron\\_Microscopy/pubs.php?author=Achilleas+Frangakis](https://www.bmls.de/Electron_Microscopy/pubs.php?author=Achilleas+Frangakis)