iM()L

Our Research Training Group **"Interfacing image analysis and molecular life science" (iMOL)** is committed to training PhD students in the theory and practice of **advanced microscopy** methods and cutting-edge **image processing**. Microscopy is instrumental to our understanding of the basic principles of life at multiple spatio-temporal scales and resolutions. For this novel research program we are seeking outstanding

PhD students
with degrees in Mathematics, Physics, Computer Science

to work synergistically and to join our passionate young scientists in the graduate school on Riedberg Campus in one of Europe's most exciting cities. We invite you to become part of an international team of scientists from all disciplines focusing on basic research in the molecular sciences and interact with students who are as creative as yourself. Our Research Training Group provides hard and soft skills through a structured **PhD program**. Generous funding for your own research as well as for science-related activities will be provided.

The goal of the project is to implement novel algorithms for the analysis of 3D medical objects. We have unique imaging capabilities to visualize the details of the interior of cell that help to elucidate the origin and cause of cancer and other diseases. Previous experience with GPU programming in CUDA is a prerequisite. Knowledge in C, C++ and MATLAB programming experience is a big advantage.

Our offer to you
- An excellent infrastructure to develop and implement algorithms in the field of Biomedical Engineering.
- You will analyze image data, model and train Machine Learning algorithms and support research in the development of software for Electron Microscopy.
- You will contribute to cutting-edge research projects and take care of planning, execution and documentation of development-related tests and experiments.
- You would join a team of passionate individuals with long experience in the field.

What we are looking for
- You have a Master degree in Mathematics, Physics, Computer Science or a comparable course?
- You have scientific experience with image and data analysis and the development of programs in the field of Machine Learning? You may have even worked with image registration algorithms?
- Are you an expert in CUDA and C/C++?
- And familliar with other programming languages (e.g. Python, MATLAB)?
- Are you eager to work independently on challenging tasks in the field of microscopy?

Please refer to our homepage (imol.uni-frankfurt.de) for further information and detailed project descriptions. The application should include: (1) detailed motivation letter, (2) latest grades and degrees, (3) contact details of two colleagues that can provide a letter of recommendation upon demand, (4) choice of up to 3 projects. You can apply to imol@biophysik.org for up to three of the listed projects. Closing date for application is **August 31, 2021**.

Buchmann Institute for Molecular Life Sciences

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