



LUDWIG-
MAXIMILIANS-
UNIVERSITÄT
MÜNCHEN



As one of Europe's leading research universities, Ludwig-Maximilians-Universität (LMU) in Munich is committed to the highest international standards of excellence in research and teaching. Building on its more than 500-year long tradition, it offers a broad spectrum that covers all areas of knowledge within its 18 Faculties, ranging from the humanities, law, economics and social sciences, to medicine and the natural sciences.

The Faculty of Physics of the Ludwig Maximilians University of Munich invites applications for a **Post Doc /Scientific computing expert/ IT (m/f/x)** starting as soon as possible.

Our LMU team & the DAPHNE4NFDI consortium

Our LMU group on "Brilliant X-Rays for Medical Diagnostics and Biomedical Imaging Applications" focusses its research on the development and application of cutting-edge synchrotron radiation imaging setups and methodologies to investigate in a non-invasive and quantitative manner human and animal tissues at various length scales ranging from full organs down to sub-cellular level (multi-scale, hierarchical imaging). We are part of the synchrotron imaging and computed tomography user community that produces several petabytes of data per year. Such a large amount of data needs adapted management and storage solutions.

DAPHNE4NFDI is a project within the National Research Data Infrastructure (NFDI). The aim is to enable open access to research data from photon and neutron experiments, to integrate user-oriented solutions and to utilize an extensive scientific infrastructure. The project is a partnership between 7 research institutions and 11 universities from different scientific disciplines and other international partners – involving e.g. DESY, LMU and ESRF.

Research data management and electronic capture of all relevant parameters during scientific experiments are pivotal challenges for the sustainability of research data at synchrotron facilities, where numerous scientific experiments are conducted annually in collaboration with external research groups in the area of condensed matter research

Job description

The Post Doc /Scientific computing expert/ IT expert N.N. will evaluate and help implement technical solutions for the creation of a high-performance research data management environment for X-ray imaging and computed tomography experiments. He/she will participate in the collection, processing and management of the synchrotron data acquired by the LMU research group. This is a full-time 3-year position that should be filled as soon as possible. The salary is in accordance with the German public service salary scale E13 TVL.

N.N. will interface with selected user groups within the synchrotron X-ray imaging and computed tomography community to identify together relevant parameters and specifications for metadata definition and for high performance data format standards. He/she will evaluate and compare existing solutions for electronic logbooks and contribute in the implementation of a unified proposition adapted for the specific X-ray and computed tomography community and for the various experimental techniques included in the DAPHNE4NFDI framework. N.N. will be seconded to the ESRF in order to

benefit from the expertise available there and to facilitate the workflow and connection with users. N.N. will help test the solutions implemented/suggested in different facilities, suggest and investigate adaptations, train users and report on the project evolution and results. In addition, N.N. will help make available multi-scale tomographic large data already acquired or to be acquired through access to synchrotron facilities via standard proposal submission procedures and contribute to sharing software tools already implemented within the team and/or other X-ray imaging users to favour data and software reuse within the synchrotron community.

Your Profile

- Scientific computing/It expert with experience in image processing and data management (data format, data compression, archiving)
- Experience or at least strong interested in synchrotron imaging and computed tomography experiments
- Experience in programming or high-performance computing is an asset.
- Knowledge and expertise in Python programming and web development are a strong asset

Additional Requirements

- A PhD and a higher education degree (Master/Diploma or equivalent) in IT engineering/physics or a closely related discipline.
- Experience with conducting data image processing is a strong asset.
- Expertise in metadata, and hierarchical data structures is a strong asset.
- Very good command of English.

LMU Munich is an equal opportunity employer. The University continues to be very successful in increasing the number of female faculty members and strongly encourages applications from female candidates. LMU Munich intends to enhance the diversity of its faculty members.

People with disabilities who are equally as qualified as other applicants will receive preferential treatment.

Contact:

Please send your application documents (letter of motivation, curriculum vitae, diplomas, list of publications, other documents if applicable) by e-mail to Professor Dr. Paola Coan (paola.coan@physik.uni-muenchen.de) **by 29 July 2022** at the latest. Only completed applications will be considered. Finalists will be interviewed.

If you have any questions, please contact Professor Paola Coan at the [e-mail](#) address.

In the course of your application for an open position at Ludwig-Maximilians-Universität (LMU) München, you will be required to submit personal information. Please be sure to refer to our [LMU Privacy Policy](#). By submitting your application, you confirm that you have read and understood our data protection guidelines and privacy policy and that you agree to your data being processed in accordance with the selection process.