Image Analyst (PC 11, T1 contract, 12 months)

Department of Pathology &
Institute of Infectious Disease and Molecular Medicine

Faculty of Health Sciences

Position overview
AMI invites applications from self-motivated, suitably qualified candidates for the role of **Image Analyst**. This **12-month, fixed-term contract** position will support research within the Africa Microscopy Initiative Imaging Centre.

The Africa Microscopy Initiative (AMI) is an open science initiative which aims to support microscopy-based research in Africa through various programs to facilitate access to biological imaging equipment, including the operation of the purpose-built, open access AMI Imaging Centre. Moving forward, the AMI Imaging Centre will work collaboratively with researchers to pursue research topics of priority that include tuberculosis infection, drug discovery for infectious disease, and other areas. The AMI team works with researchers from across the continent in facilitating and carrying out biological research using advanced fluorescence microscopy applications.

The main purpose of the Image Analyst position is to assist and support the function of the AMI Imaging Centre by predominately facilitating activities related to data handling pipelines and image analysis for microscopy-based research projects. These include working collaboratively with local and foreign researchers in designing, planning, and undertaking image analysis workflows for biomedical research using data generated at the AMI Imaging Centre. As part of working on specific research projects, the role will be required to interact with researchers, co-develop analysis strategies suitable for experimental goals, and work on all project-related data handling, visualisation, and analysis. When directly working with collaborators, the role is expected to provide technical expertise and hands-on analytical support to best ensure the success of projects. In addition, other related administrative tasks (project management, reports, network management) are expected. Overall, the position entails working closely with collaborative researchers from a large diversity of research backgrounds and developing comprehensive image analysis pipelines to support outstanding biomedical research objectives. While the position will drive the analysis pipeline within AMI, the Image Analyst will work closely with collaborators and other team members in microscopy operations and sample preparation. The supportive mechanisms and processes that engender the research pipeline include maintaining analysis software and computer infrastructure, planning the analytical components of research projects, helping develop standard operating procedures for image analysis workflows, and teaching collaborators about quantitative image analysis applications. This position will support AMI in its key aims to develop microscopy as a key and accessible research technology in Africa and will include being part of organising teams for initiatives such as the Imaging Africa workshop.

The successful appointee will be based in the Institute of Infectious Disease & Molecular Medicine (IDM) in the University of Cape Town's Faculty of Health Sciences. The position encourages independence in building and adapting analysis processes to work with research collaborators, develop various aspects of projects, and conduct impactful research. The position may require intermittent travel within Africa and potentially globally.

Requirements for the job:
- A PhD in life sciences (cell biology, physiology, neuroscience, immunology, microbiology, genetics, botany, biotechnology, bioengineering, biophysics, or related) with demonstratable experience in quantitative fluorescence microscopy research with specific focus on image analysis tools and pipelines; **OR**
- PhD in optical physics, engineering, or related field of study with demonstratable experience in quantitative fluorescence microscopy applications and image analysis; **OR**
- PhD in data science, computer science, or computer vision, or related field of study with demonstratable experience in biological image analysis
- South African citizenship or current South African work visa.

The following will be advantageous:
- Advanced experience with image analysis software tools (Fiji/ImageJ, QuPath, Zen, Python, StrataQuest, Arivis4D, MATLAB).
- Knowledge and understanding of machine learning approaches and implementation for image analysis.
- Experience with AI/ML applications in biological imaging.
- Experience in developing and implementing image data analysis workflows.
- Interest in non-traditional academic career paths that diverge from standard PI trajectories.
- Experience with teaching and/or hosting training workshops.
- Experience in working in a core facility or collaborative research environment.

Responsibilities:
- Working with researchers from across Africa to develop and implement image analysis strategies for microscopy experiments.

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- Conducting image analysis using software such as Fiji, Zen, StrataQuest, Arivis4D, CellPose, QuPath, and other specialized tools.
- Managing standard image analysis workflows including data handling, preprocessing, segmentation, feature extraction, quantification, and analysis.
- Providing support to network infrastructure and computer equipment management within the AMI Imaging Centre.
- Managing and maintaining project management systems and platforms to efficiently support AMI's research objectives and projects.
- Providing expert review of AMI project proposals with focus on analytical feasibility and requirements.
- Working with prospective collaborators in developing analysis pipelines and providing technical consultation on experimental design.
- Creating user manuals and training materials to assist collaborators with image analysis applications.
- Training users on image analysis software and methodologies.
- Identifying and developing new analysis approaches and exploring AI/ML implementations for image analysis projects.
- Involvement in microscopy workshops (through participation in the organising committee and/or teaching faculty).
- Keeping up to date on relevant literature related to quantitative image analysis, AI/ML applications in biological imaging, and emerging analysis methodologies.
- Identifying opportunities for training and career development.

The gross monthly income (before tax and UIF deductions) ranges between R65,402.75 and R76,944.17—dependent on prior experience. Please note: 12-month contracts are not eligible to receive employment benefits.

To apply, please e-mail the below documents in a **single pdf file** to Michael Reiche at mike.reiche@uct.ac.za:

- UCT Application Form (download at http://forms.uct.ac.za/hr201.doc),
- Position-specific cover letter, and
- Full Curriculum Vitae (CV).

Please ensure the position title (Image Analyst) and reference number (AMIIA001) are indicated in the subject line along with your first and last name.

An application which does not comply with the above requirements will be regarded as incomplete and will not be reviewed.

Suitably qualified candidates will be contacted for an informal, remote/online interview. Information will be communicated in advance.

Website: https://idm.uct.ac.za/ and https://microscopy.africa/

Reference number: AMIIA001

Closing date: 14 August 2025
Expected starting date: 1 September 2025 (negotiable)

UCT is a designated employer and is committed to the pursuit of excellence, diversity, and redress in achieving its equity targets in accordance with the Employment Equity Plan of the University and its Employment Equity goals and targets. Preference will be given to candidates from the under-represented designated groups including candidates with disabilities. Our Employment Equity Policy is available at www.hr.uct.ac.za/hr/policies/employ_equity

UCT reserves the right not to appoint.