

Job Description

Head of FabLab

Department: Sainsbury Wellcome Centre
Grade: 9
Salary: £68,284 - £74,166 inclusive of London Allowance
Hours: 36.5
Reports to: SWC Associate Director
Responsible for: Up to 5 direct reports
Available until: 31 October 2030 in the first instance



Context

The [Sainsbury Wellcome Centre](#) (SWC) brings together world-leading scientists to investigate how brain circuits process information to generate perception, form memories and guide behaviour. Developed through the vision and partnership of the Gatsby Charitable Foundation and Wellcome, and with substantial investment from these partners, the mission of the SWC is to generate experimentally testable theories of brain function. The Centre comprises 13 highly interdisciplinary experimental research groups accommodated in a new, purpose-designed building, offering an outstanding and unparalleled research environment.

SWC scientists use a broad spectrum of the latest advances in molecular and cellular biology, imaging, electrophysiology and behavioural techniques and enjoy state-of-the-art research laboratories, cutting-edge scientific equipment, technologically advanced prototyping and fabrication laboratories and custom in-house high-performance computing facilities.

About the SWC FabLab

The primary purpose of the FabLab (Fabrications Laboratory) is to deliver innovative scientific solutions to the stakeholders, supporting research to understand

how the brain processes information relevant to learning and behaviour. Such set-ups currently include, for example, virtual reality environments, continuous automated delivery of food and monitoring of behaviour, advanced microscopy technologies such as miniaturised head-mounted two-photon systems, all of which require bespoke and custom designed solutions.

Future research is likely to rely on novel instrumentation that will be developed in-house, in collaboration between researchers and the FabLab team.

The FabLab mechanical facilities currently comprises the following equipment:

- DMG Mori DMU50 5 Axis Vertical Machining Centre Siemens Celos control
- DMG Mori NEF400 Lathe with driven tools
- XYZ RMX cnc bed mill
- XYZ LR500 4 axis Siemens 828D Control
- XYZ RLX355 Prototrack control
- Wazer waterjet cutter
- Trotec SP500 200W Laser engraver / cutter

- Stratasys 450MC FDM production 3D printer
- Stratasys J55 high precision polyjet 3D printer
- FDM Printers Bambu H2D /Ultimaker S3&5
- Form 4B stereolithography 3D printer
- Formlabs Fuse Fuse 1+ 30W SLS printer - Sift-Blast equipment

Main purpose of the job

The Head of FabLab will provide leadership and overall accountability for the strategic development of the FabLab, with primary responsibility for engaging and managing key stakeholder relationships.

Working in close partnership with Group Leaders, postdoctoral researchers, PhD students and other scientific staff, they will help deliver innovative, world-class solutions to tackle the most challenging questions in neuroscience.

The post-holder will be familiar with the conceptualisation, design and manufacturing of scientific instrumentation with the ability to provide multi-disciplinary expertise in some of the following areas:

- Software development
- Precision machining
- CAD/CAM
- 3D printing and additive manufacturing
- Fluidics
- Electronics

While expertise across every discipline is not essential, they will lead a multidisciplinary engineering team whose collective skills span these areas.

The post-holder will oversee project planning, prioritisation and resource allocation, ensuring projects are delivered efficiently, on time and to a high standard.

They will manage and participate in the research, design and implementation of solutions using a broad range of design and manufacturing technologies.

The post-holder will foster a collaborative culture within the FabLab, promoting clear communication both within the FabLab and between the scientific stakeholders and your team members. Of particular importance are large scale projects that involve multiple team members and repeated iterations in design and manufacturing to deliver efficient and effective solutions.

They will also be responsible for overseeing the training of incoming researchers and students within the MakerSpace, a standalone dedicated area for students and postdoctoral researchers to engage in independent and rapid prototyping and basic manufacturing.

In addition, the post-holder will take a proactive approach to identifying emerging technologies, equipment and manufacturing capabilities, developing investment plans that ensure the FabLab continues to meet the evolving needs of the research community and remains at the forefront of scientific engineering innovation.

Part of the role will include proactively identifying new opportunities to invest in equipment and technology to meet developing needs of SWC's research community.

Duties and responsibilities

- Manage and lead the Fabrication Laboratory to provide a world-class innovation and manufacturing facility that provides enabling technologies and tools for novel scientific research.
- Ensure that project management, design methods and delivery are based on an agreed vision.
- Balance high-end solutions with timely delivery, prioritising scientists' timelines and needs.
- Implement the charge-back of spend on materials and time on relevant projects.
- Contribute to long-term budgetary planning including drafting justifications for high-value equipment purchases.
- Manage multiple simultaneous projects, involving numerous stakeholders, with oversight of timelines, assignment of tasks to team members, and effective delivery, in discussion with the SWC Executive Team as appropriate.
- Advise on outsourcing of relevant solutions to stakeholders.
- Be responsible for the effective delivery of internally designed and manufactured solutions that meet stakeholders' needs.
- Promote effective communication within the FabLab team and between the scientific stakeholders and FabLab team members.
- Identify development needs; train, mentor, or otherwise develop team members to improve their knowledge and skills.
- Ensure the FabLab and MakerSpace are maintained to high standards, such that it is fully functional and operational at all times
- Manage Health and Safety within the FabLab (reporting for matters of health and safety to the SWC Operations Manager).
- Develop and implement standard operating procedures to ensure design, manufacturing and material processes are adhered to. Ensure risk assessments precede all fabrications activity and safe operating procedures are adhered to at all times.
- Lead, and contribute to, effective induction and training of staff and students in the safe and effective use of the FabLab and/or MakerSpace and their equipment, ensuring all persons working within the manufacturing facilities are competent to work autonomously, providing ongoing support as needed.
- Establish long range strategic objectives for the FabLab and actions needed to achieve them.
- Plan and direct the installation, validation, operation, maintenance and strategic upgrading and updating of facility equipment.
- Recognise intellectual property (IP) assets and advise on IP protection and potential translation.
- Oversee equipment tenders, contracts and equipment leases.
- Draft technical reports and write up projects with a level of detail appropriate to the task.
- Maintain awareness of emerging technologies and industry developments, ensuring new knowledge is translated into practical improvements in the FabLab's capabilities and delivery.

General

- Actively follow and promote all UCL policies including those on Equality, Diversity and Inclusion.
- Maintain an awareness and observation of Fire and Health & Safety Regulations.
- There may, on occasion, be a requirement to work extended hours.
- Follow and actively promote the [UCL Ways of Working](#).

- This job description may be reviewed and be subject to amendment in consultation with the post holder.
- All staff are expected to act professionally, co-operatively and flexibly in line with the post.
- UCL's Sustainability policies and objectives, attend management meetings and undertake such training and development as may be required for the post

Person Specification

Essential Criteria	Assessment method (Application/Interview)
Qualifications, experience and knowledge	
NVQ Level 3 or equivalent with preferably a higher qualification in Mechanical or Electrical Engineering, or equivalent professional experience.	A
Engineering, manufacturing and software development (considerable experience at a senior managerial level).	A/I
Demonstrable experience at successfully leading a team including managing, appraising and development of staff.	A/I
Effective management of health and safety in a fabrications-type facility.	A/I
Defining detailed operating procedures and communicating these effectively to facility users.	A/I
Design and manufacturing project consultation.	A/I
Project planning and management.	A/I
Demonstrated capability in supplier engagement, specialist procurement, and the procurement tendering process.	A/I
Skills and abilities	
The ability to read and understand information and comprehend requirements and ideas presented verbally, in writing, through diagrams or simple sketches.	A/I
Excellent communication skills: verbal, written and active listening.	A/I
The ability to present written information for reports, presentations, project documentation.	A/I
The ability to identify complex problems, review related information, develop and evaluate options and implement bespoke solutions.	A/I
Proven ability to build positive working relationships and lead motivated teams to deliver high-quality services.	A/I

Innovative thinking: Proven ability to generate unique, creative solutions during initial project phases, with a track record of successfully implementing ideas to drive positive outcomes.	A/I
Ability to work in a fast-paced environment with multiple competing projects.	A/I
A keen interest in scientific research and an understanding and appreciation of the mission and research environment of the SWC, and a commitment to the establishment of the SWC as a world-leading research centre.	A/I
Able to devise unique and creative ideas or solutions for new projects prior to commencing detailed design activities.	A/I
Foresight to recognise when a different approach is needed and provide an alternative path.	A/I
Successfully manage competing demands and prioritise tasks effectively for self and team.	A/I
Commitment to and knowledge of advancing equality, diversity and inclusion.	A/I
UCL Ways of Working	
<i>Personal Excellence:</i> Taking a flexible approach, seeking effective innovation.	A
<i>Working Together:</i> Proactively working with other people, teams, partners and functions for the benefit of the wider institution.	A
<i>Achieving our Mission:</i> Encouraging innovative processes that benefit the organisation.	A
Desirable Criteria (only be scored if there is a tie break for shortlisting).	
Experience of working in a large research environment with senior and junior level researchers.	A
Established within the neuroscience research community, with an active network of national and international collaborations.	A

Apply

To apply for this position, please visit:
www.ucl.ac.uk/work-at-ucl/search-ucl-jobs and
search for vacancy reference: B02-11112

Please complete the online application form and use the supporting statement section to outline your interest in joining SWC and how you meet the essential criteria for the role.

If you have any queries regarding the application process, please email:
swc.hr@ucl.ac.uk

For informal enquiries about the role, please contact Robb Barrett: robb.barrett@ucl.ac.uk

All candidates will be notified of the outcome of their application.

Annual Leave

Annual leave is 27 working days for a full-time member of staff + 6 UCL closure days in addition to 8 Bank Holidays.

Hours of Work

UCL's full time working week is 36.5 hours per week.

SWC is willing to consider flexible-working arrangements, subject to discussion and agreement with your line manager.

Pre-agreed overtime will be offered as equivalent time off in lieu.

Probation

Appointments are subject a 9-month probationary period.

Pension

Post-holders will be eligible to join the Universities Superannuation Scheme (USS), subject to the Scheme's rules and eligibility conditions.

Other Benefits

UCL is a dynamic, global university based in one of the most exciting capital cities in the world, offering competitive terms, conditions and [benefits](#) to its staff.

In addition to 41 days annual leave (inclusive of public holidays and closure days) and generous pension schemes, UCL provides a number of other [staff benefits](#). UCL benefits and policies apply equally, whatever the sexual orientation and/or gender identity of employees. Benefits and policies relating to employees' partners, includes both different sex and same sex partners.

As part of the UCL community you can access free lunch hour lectures, exhibitions, museums and collections.