

Post Details		Last Updated: 17/02/2017	
<b>Faculty/Administrative/Service Department</b>	Faculty of Engineering and Physical Sciences Advanced Technology Institute		
<b>Job Title</b>	Clean Room and Laboratories Manager		
<b>Job Family</b>	Technical and Experimental	<b>Job Level</b>	5
<b>Responsible to</b>	Director of ATI		
<b>Responsible for (Staff)</b>	Technical Support Staff		
<b>Job Purpose Statement</b>			
<p>To ensure that the ATI is technically capable of delivering on its evolving core mission of developing advanced electronic and photonic device technologies, using a range of materials including silicon, compound semiconductors, organic electronics and nanoscale materials.</p> <p>The post holder will both lead and support the ATI technical staff in the repair, maintenance and calibration of the wide range of fabrication and characterisation equipment, with particular emphasis on the vacuum deposition and etch tools and the photolithography area.</p> <p>The post holder will have experience of using the range of equipment and will lead in the provision of training to new users and will guide process development and qualification.</p> <p>Currently, the post-holder provides a similar technical support to the National Physical Laboratory (NPL).</p>			
<b>Key Responsibilities</b> This document is not designed to be a list of all tasks undertaken but an outline record of the main responsibilities (5 to 8 maximum)			
<ol style="list-style-type: none"> <li>1. Monitor and optimise clean room operability, through practical leadership of planned and unplanned maintenance, with support from technical staff.</li> <li>2. Work with research and technical staff to support and develop the plasma processing capability with emphasis on novel CVD processes for carbon nanotubes, graphene and similar emerging engineered materials.</li> <li>3. Contribute to the development of the Quality System through assisting in the preparation of procedures and operating documents and in encouraging equipment users both to provide high quality documentation for new processes and to re-use existing documented processes where these are suitable for the purpose.</li> <li>4. Manage all administrative and Human Resource functions relating to technical support staff.</li> </ol>			
<b>Strategic Development of Device Fabrication at the ATI</b>			
<ol style="list-style-type: none"> <li>5. Plan for the strategic development of device fabrication capabilities at the ATI, in the context of the overall ATI strategy, taking account of the current and anticipated demands of clean-room users, and addressing resource planning and funding mechanisms.</li> <li>6. Identify and target external industrial and academic partners who are potential collaborators or customers. The post holder will need to develop mechanisms which support service work in device fabrication for these clients, addressing costing, intellectual property, resource requirements and marketing. This includes supporting the aim to obtain ISO 9001 accreditation.</li> </ol>			
<b>Health and Safety</b>			
<ol style="list-style-type: none"> <li>7. Ensure the safe handling, usage, and storage of hazardous materials within the ATI. This will include ensuring that the gas detection and emergency alarm systems are operational and effective, all laboratories conform to the required health and safety standards and documents and records are maintained as appropriate e.g. COSHH and risk assessment.</li> </ol>			
<b>Training</b>			
<ol style="list-style-type: none"> <li>8. Provide, or arrange, appropriate training of users to ensure safe and efficient practice and to broaden the skills base of laboratory users, particularly of laboratory technical support staff, to allow them to perform tasks safely and effectively.</li> </ol>			
<b>N.B. The above list is not exhaustive.</b>			

**All staff are expected to:**

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities Policy.
- Work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students.
- Follow University/departmental policies and working practices in ensuring that no breaches of information security result from their actions.
- Ensure they are aware of and abide by all relevant University Regulations and Policies relevant to the role.
- Undertake such other duties within the scope of the post as may be requested by your Manager.
- Work supportively with colleagues, operating in a collegiate manner at all times.

**Help maintain a safe working environment by:**

- Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand.
- Following local codes of safe working practices and the University of Surrey Health and Safety Policy.

**Elements of the Role**

This section outlines some of the key elements of the role, which allow this role to be evaluated within the University's structure. It provides an overview of what is expected from the post holder in the day-to-day operation of the role.

**Planning and Organising**

- The post holder will liaise with internal and external clients to identify their requirements and ensure that they have appropriate and timely access to the equipment in the laboratory. This will involve the post holder using their judgement and initiative to resolve any conflicts of interest that may arise during the booking process.
- The post holder will be responsible for managing and delivering certain projects to time, quality and budget. This may extend from initiating the contact, through specifying and hands-on fabrication of the deliverables to ensuring overall delivery, quality and timeliness and may involve managing other Surrey staff who contribute specific technical skills to the project.

**Problem Solving and Decision Making**

- The post will include successfully managing any conflicting demands, possessing an awareness of the options available and being able to make effective and appropriate decisions, referring to their line manager where appropriate.
- The post holder will be an 'expert' in equipment engineering and maintenance, appropriate to research-scale and 'one-of-a-kind' equipment that has to sustain flexible and *ad hoc* operation for diverse project goals.
- The post holder will encounter differing situations that will require the application of solutions acquired through extensive experience and knowledge. These may require significant analytical, interpretive and constructive skills.
- The post holder is expected to ensure the optimum utilisation of staff, machinery and equipment.

**Continuous Improvement**

- To keep abreast of new technology and manufacturing processes, promote and deliver innovative solutions to improve the laboratories. They are expected to maintain knowledge of new developments in the field and advise key staff on the needs to update/change the facilities.
- The post holder will also have overall responsibility for the implementation and management of practical skills training for staff and students who are involved in projects that involve the use of the Transmission Electron Microscopes

**Accountability**

- The post involves extensive interpretation of customer needs, including the needs of PhD students who are internal customers. The post holder is required to analyse the needs and assist in the implementation of fabrication technology and processes using, so far as is reasonably possible, the equipment set within the ATI. Consequently, the role is not covered by defined procedures, only the objectives of this role are defined and as such, there is considerable latitude for discretion in determining priorities and taking action.
- The post holder is responsible for the safety and security of the laboratory space and equipment. Implementing, managing and monitoring health and safety matters is a major requirement of the post,

especially in relation to highly-toxic process gases, where there is potential risk not only to users and University members but to the wider community. The post-holder will work with the overall management and support team to maintain the culture of safe working and will assist in the preparation of risk assessments.

- The post holder will train operators on the equipment and is responsible for deciding when an operator is technically competent to use the equipment unsupervised. Errors in judgement or failure to carry out a particular task could result in the damage of the equipment or risking students, staff's and clients' personal safety.

### **Dimensions of the role**

- The post holder is responsible for line managing the Clean-Room technical support staff, to ensure work is allocated in a way that supports the effective and efficient operation of the laboratories and to develop and monitor their performance.
- In order to provide a comprehensive service to all ATI users, the post holder, under the direction of the ATI Director and in conjunction with the Technical and Business Manager, will manage a budget currently £150k per annum.

### **Supplementary Information**

- The post holder will be a member of the appropriate Departmental H&S Forum.

**Person Specification** This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role.

### **Qualifications and Professional Memberships**

**Essential/  
Desirable**

Higher National Diploma (HND), University degree (in electronics, chemistry, physics or material science), possibly with a professional qualification plus broad work experience in a relevant technical/scientific role backed by evidence of significant appropriate knowledge and research contribution.

E

OR

Substantial vocational and relevant management experience in a relevant technical or scientific role.

Extensive experience in an equipment support and maintenance role in a similar environment

E

Operating knowledge of relevant specialised instrumentation and software.

E

Some relevant management experience of people and resources.

E

Higher degree or equivalent in electronics, chemistry, physics or material science

n/a

Qualification or extensive experience in management/leadership inc. Resource Management

n/a

**Technical Competencies (Experience and Knowledge)** This section contains the level of competency required to carry out the role (please refer to the Competency Framework for clarification where needed and the Job Matching Guidance).

**Essential/  
Desirable**

**Level  
1-3**

Substantial experience of fault-finding, repair and maintenance in a research-scale micro-fabrication clean-room

E

3

Experience in supporting operation of a research-scale process gas installation

D

n/a

**Core Competencies** This section contains the level of competency required to carry out this role. (Please refer to the competency framework for clarification where needed). n/a (not applicable) should be placed, where the competency is not a requirement of the grade.

**Level  
1-3**

Communication

3

Adaptability / Flexibility

3

Customer/Client service and support

3

Planning and Organising

3

Continuous Improvement

3

Problem Solving and Decision Making Skills

3

Managing and Developing Performance

2

Creative and Analytical Thinking	2
Influencing, Persuasion and Negotiation Skills	2
Strategic Thinking & Leadership	2

This Job Purpose reflects the core activities of the post. As the Department/Faculty and the post holder develop, there will inevitably be some changes to the duties for which the post is responsible, and possibly to the emphasis of the post itself. The University expects that the post holder will recognise this and will adopt a flexible approach to work. This could include undertaking relevant training where necessary.

Should significant changes to the Job Purpose become necessary, the post holder will be consulted and the changes reflected in a revised Job Purpose.

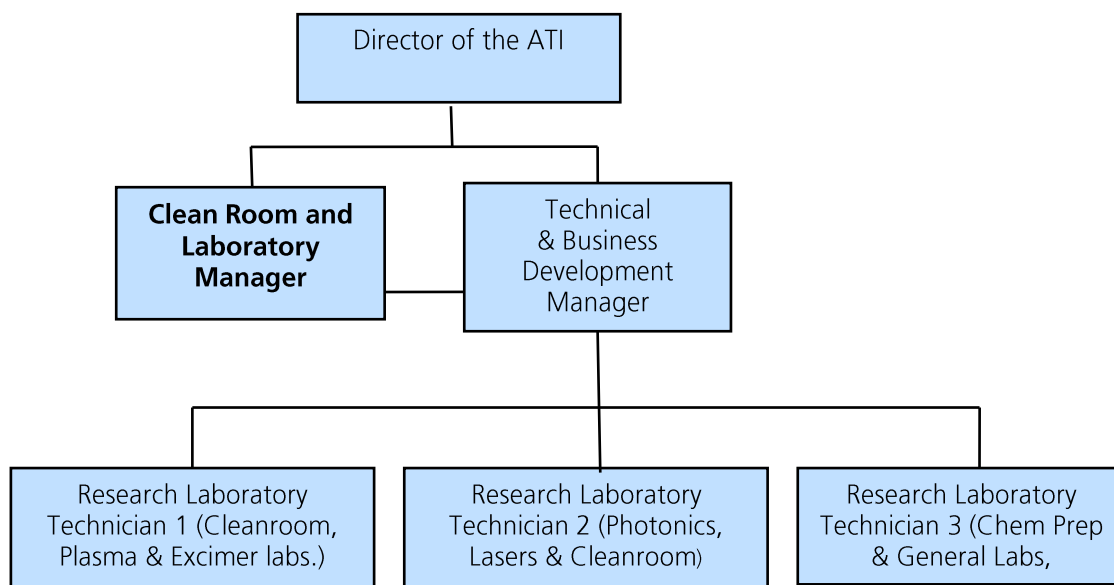
### Organisational/Departmental Information & Key Relationships

#### Background Information

The Faculty of Engineering and Physical Sciences is built on the core engineering disciplines of Chemical Engineering, Aeronautical Engineering, Civil Engineering, Electronic Engineering and Mechanical Engineering, together with the core scientific disciplines of Computing, Mathematics Physics and Chemistry. Within these fields we enjoy a reputation for excellence in research and teaching.

The ATI's micro-fabrication facilities are housed in a 200 square metre class 1000 and class 100 Clean-room, opened in 2002. It has the capability to process photonic, silicon, carbon and glass-based materials using device processing tools such as plasma etchers, sputter coating, ebeam evaporation, and related tools. It also contains facilities for contact photolithography and a variety of wet chemistry techniques, as well as supporting organic optoelectronic device fabrication.

#### Department Structure Chart



#### Relationships

##### Internal

- The post holder will advise the ATI management team on development of device fabrication equipment and processes in the ATI, particularly with reference to industry and other institutions.
- The post holder will also establish an effective two-way communication mechanism with clean-room users (academics, research staff and students) and will train and support new users assisted by the technical support staff member for whom they are line manager.
- The post holder will maintain a close, constructive relationship with Faculty and University Health and Safety staff.

##### External

- There will be demands on these facilities from external clients (commercial customers, instrument manufacturers) who the post holder will be expected to liaise with as appropriate.