## Role profile

<table>
<thead>
<tr>
<th>Job title</th>
<th>Research Associate/Fellow in 3D printing of multifunctional electronic devices</th>
<th>Job family and level</th>
<th>Research Level 4 (Appointment will be Level 4 Career training grade where an appointment is made before PhD has been completed)</th>
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</thead>
<tbody>
<tr>
<td>School/Department</td>
<td>Engineering - Centre for Additive Manufacturing</td>
<td>Location</td>
<td>Jubilee Campus, Advanced Manufacturing Building</td>
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### Purpose of role

This role is part of team working on an EPSRC funded Programme Grant ‘Enabling Next Generation Additive Manufacturing’. The Programme brings together multidisciplinary research team to develop controlled co-deposition of functional and structural materials and to reach an ambitious aim of developing next generation additive manufacturing for the in situ production of multi-functional devices.

What we offer is an inspiring and innovative research environment, with mentorship and guidance from world-renowned experts in Additive Manufacturing and opportunities for professional growth and development.

### Main responsibilities

(Primary accountabilities and responsibilities expected to fulfil the role)

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<th>% time per year</th>
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<tbody>
<tr>
<td><strong>1</strong></td>
<td>To plan and conduct research using established approaches, methodologies and techniques within the research area and support the development of improved methodologies to enhance the projects goals</td>
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<tr>
<td><strong>2</strong></td>
<td>To analyse and illuminate data, interpret reports, evaluate and criticise texts and bring new insights to research area.</td>
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<td><strong>3</strong></td>
<td>To contribute to writing up research findings for publication.</td>
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<tr>
<td><strong>4</strong></td>
<td>To assist with the preparations, proposals and applications to both external and/or internal bodies for funding, contractual or accreditation purposes.</td>
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<td><strong>5</strong></td>
<td>To build internal and/or external contacts to develop knowledge and understanding, forming relationships for future collaborations.</td>
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<td><strong>6</strong></td>
<td>To assist in the operational aspect of research networks, for example, supporting research meetings and updating databases etc and contribute to collaborative decision making with colleagues in area of research.</td>
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<td><strong>7</strong></td>
<td>To provide guidance as required to support staff and students, where appropriate in own area of expertise.</td>
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<tr>
<td><strong>8</strong></td>
<td>To plan and manage own research activity and resolve problems, if required, in meeting own/team research objectives and deadlines in collaboration with others.</td>
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## Person specification

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<tr>
<th>Skills</th>
<th>Essential</th>
<th>Desirable</th>
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| ▪ Excellent oral and written communication skills, including the ability to communicate with clarity on complex information.  
▪ Demonstrable skills in the use and development of Additive Manufacturing systems, particularly piezo-driven inkjet systems  
▪ Analytical ability to facilitate conceptual thinking, innovation and creativity.  
▪ Effective laboratory note-taking and logging of experiments and data.  
▪ Ability for independent research within the context of a team.  
▪ Ability to prioritise and organise resource requirements and deploy effectively.  
▪ Strong analytical ability to analyse and illuminate data, interpret reports, evaluate and criticise texts and bring new insights.  
▪ Strong self-motivation, creativity and have responsibility for writing up their work in order to contribute to and / or lead the publishing of outcomes. | ▪ Ability to foster a research culture and commitment to learn in others.  
▪ Familiar with Labview, Solidworks, Matlab or similar software for part design and analysis.  
▪ Skills in writing bids for research grants  
▪ Designing, building or maintaining equipment. |

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<tr>
<th>Knowledge and experience</th>
<th>Essential</th>
<th>Desirable</th>
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| ▪ Experience of working in a multidisciplinary team.  
▪ Demonstrated creativity and leadership in problem solving.  
▪ Experience in formulation development for 3D printing, particularly inkjet-based technologies.  
▪ Experience in the operation, maintenance and protocol development for 3D printing, ideally including ink jetting.  
▪ Knowledge of heterostructure-based devices and their analysis.  
▪ Experience in formulating inks for additive manufacturing  
▪ Knowledge of AM manufacturing techniques | ▪ Knowledge of functional energy-related materials and their properties.  
▪ Experience of working and analysing large datasets  
▪ Liaising with external partners.  
▪ Experience of formulating new functional materials for inkjet based additive manufacturing. |
| **Qualifications, certification and training (relevant to role)** | **Experience of publication of academic journal papers and reports.** | **PhD (or about to obtain) in Engineering or Physical Sciences** | **Training in health and safety/risk assessment.**
**PhD with background in multimaterial additive manufacturing or ink development** |

As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those whose protected characteristics under the Equality Act 2010, are not well-presented in our current staff body.

The University is a signatory of the Declaration on Research Assessment (DORA). As such we commit to focus on the scientific content of publications (where requested or provided as part of the recruitment and selection process) as a basis for review of quality, and consideration of value and impact of research conducted, rather than any proxy measures such as Journal Impact Factor.
Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University’s strategy, vision and values. The following are essential to the role:

**Valuing people**
Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.

**Taking ownership**
Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.

**Forward thinking**
Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.

**Professional pride**
Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.

**Always inclusive**
Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others

- **Line manager**
  - Professor of Additive Manufacturing

- **Role holder**
  - Research Associate/Fellow

- **Key stakeholder relationships**
  - Funders
  - UoN relevant staff and PhD students
  - Academic & Industrial Partners