

## Job Related Information

This document includes information about the role for which you are applying and the information you will need to provide with your application.

### 1. Role Details

Vacancy reference	14482
Job title:	Research Assistant / Associate for Blockchain Learning Verification
Reports to:	Professor of Computer Science
Salary:	Ranging from £29,799 to £38,833
Terms and conditions:	Full time Research Staff
Grade	AC1 / AC2
Duration of post:	Temporary contract for 18 months
Working hours:	Full time, Monday to Friday
Location:	Milton Keynes
Closing date:	12:00 noon, Thursday 31 May 2018
Type of application form accepted:	Short version (with CV plus covering letter)
Number of referees required:	Three
Unit recruitment contact:	Ortenz Rose

## 2. Summary of duties



The Institute of Coding (IoC) [www.instituteofcoding.org](http://www.instituteofcoding.org) is a new, national initiative, which brings together a range of universities, industry, training providers and professional bodies to address the UK's digital skills gaps.

The Institute's vision is to enhance the education and employability of every IoC learner, and ensure that employers and individuals across the UK can access the skills they need to compete in the global digital economy. This unique and innovative collaboration has been made possible with £20m from the Higher Education Funding Council for England and match funding from universities and industry partners.

The Institute of Coding will develop and deliver innovative, industry-focused higher education across the UK. It will develop accredited degree schemes and short courses aimed at professionals in a wide range of sectors, as well as working to widen the participation of women, returners to work and hard to reach groups.

The Open University leads the IoC's first theme on university learning, which aims to influence computer science teaching in universities nationally. An important part of that theme will be collaboration with a number of IoC partners and industry representing employers and educators to create an IoC Industrial Accreditation standard that will connect students and employers in new ways, using blockchain based accreditation and learner records, with the aim of:

- Increasing learner employability;
- Decreasing the skills gap in key technical and non-technical areas associated with computing in industry;
- Decreasing hiring costs for employers.

This IoC blockchain learning verification work will build on the work of the Knowledge Media Institute at the Open University (KMi) who have built up an active research and development group focusing on blockchain and distributed ledger technologies. Members of KMi are working on the use of blockchains to create a trustable, decentralized repository for educational certification, ePortfolios and datasets with privacy concerns or which could be subject to tampering. We are also working on connecting blockchains with Linked Data. More information on our work can be found at: <http://blockchain.open.ac.uk/>

We are currently looking for a Research Assistant or a Research Associate to work on the above – on how blockchains can be used to store student accreditation and lifelong learning records in order to enhance employability.

The appointment will be made on the Academic Grade AC1 or AC2 salary scales depending on qualifications and experience.

### *JOB DESCRIPTION*

You will be part of a team of developers and researchers working on the co-design a new industry standard for accrediting IoC learners. The standard will incorporate both technical and general industrial skills relevant to solving real-world business problems, continuously adapt to shifts in emerging technologies and skills needs over time, and complement and enhance existing standards, such as those articulated for higher apprenticeships.

This work will build upon a standards framework such as SFIA (<https://www.sfia-online.org/en>). Also we will utilise the Open Badges standard (<https://www.imsglobal.org/tags/open-badges> design as a global mechanism for the sharing of accreditation and existing platforms and work from the organisations involved including IBM's work on open badges.

Your work will involve:

- travel to meetings with IoC partners;
- collaboratively designing blockchain experiments;
- gathering data and developing prototypes;
- developing software for communication with users;
- training and testing (machine learning) models;
- conducting and analysing experimental data;
- moving prototypes into a production environment.

### 3. Person specification

<b>Requirements (E = Essential/ D = Desirable)</b>	
<b><u>Education, qualifications and training</u></b>	
(E) A Master in Computer Science or related field, or equivalent experience.	
(E) Appointment as a Research Associate requires a PhD in Computer Science or related field or 2+ years equivalent in quality of achievement.	
<b><u>Knowledge, work and other relevant experience</u></b>	
<b>Essential:</b>	<ul style="list-style-type: none"> <li>• Strong software and Web development skills;</li> <li>• Experience with building applications on top of blockchain platforms such as Ethereum;</li> <li>• Familiarity with eLearning platforms, Learning Management Systems or MOOC platforms;</li> <li>• Proven ability to fit into the OU's Computer Science REF profile (depending on level and experience: publications, supporting income generation and non-academic impact);</li> <li>• Experience with designing and implementing of web applications, ability to write a prototype of a solution;</li> <li>• Ability to independently and proactively define solvable solutions to problems;</li> <li>• Deploy and maintain the solution in the production environment;</li> <li>• Ability to work in a team, contribute to code review, knowledge of working with a versioning system (e.g. GIT).</li> </ul>
<b>Desirable:</b>	<ul style="list-style-type: none"> <li>• PhD in Computer Science or a related field, or 2+ years of Research &amp; Development experience in IT;</li> <li>• Experience with PHP, Java and JavaScript;</li> </ul>

	<ul style="list-style-type: none"> <li>• Experience in the development of technology-enhanced learning applications and widgets for Learning Management Systems and other educational platforms;</li> <li>• Experience in the use of technology-enhanced learning standards and specifications, such as SCORM and IMS LTI;</li> <li>• Experience working in (higher) education.</li> </ul>
<b><u>Personal abilities and qualities</u></b>	
<b>Essential:</b>	<ul style="list-style-type: none"> <li>• Ability to quickly demonstrate understanding of the project aims and specific tasks as requested;</li> <li>• Self-starter in providing solutions to meet project needs;</li> <li>• Ability to work in complex team relationships;</li> <li>• Excellent written and oral communication skills;</li> <li>• Work to challenging targets and deadlines;</li> <li>• Ability to handle constructive feedback.</li> </ul>
<b>Desirable:</b>	n/a

#### 4. Role specific requirements e.g. Shift working

n/a

#### 5. About the unit/department

##### **Faculty of Science, Technology, Engineering & Mathematics**

The Faculty of Science, Technology, Engineering and Mathematics (STEM) is comprised:

- School of Computing & Communications
- School of Environment, Earth & Ecosystem Sciences
- School of Engineering & Innovation
- School of Life, Health & Chemical Sciences
- School of Mathematics & Statistics
- School of Physical Sciences
- Knowledge Media Institute (distinct research institute)
- Deanery including teams supporting Curriculum, Research and Enterprise, Laboratory Infrastructure and Faculty Administration

**“We aspire to be world leaders in inclusive, innovative and high impact STEM teaching and research, equipping learners, employers and society with the capabilities to meet tomorrow’s challenges”**

The Faculty of STEM consists of 700 staff and 1,800 Associate Lecturers. The Faculty delivers over 185 modules across undergraduate and postgraduate curriculum, supporting nearly 19,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £17M) than any other Faculty in the University, supported by a comprehensive laboratory infrastructure.

We are proud of our distinctive values and capabilities underpinning our aspiration:

*We are inclusive:*

- We transform people's lives, ensuring STEM education is openly accessible to many thousands of students from diverse backgrounds – our students express high satisfaction with their study experience
- We engage the public in exciting citizen science and engineering, including through free open educational resources, multi-platform broadcasting, outreach to inspire the next generation and with programmes to encourage more women into STEM

*We are highly innovative:*

- We are at the forefront of innovative developments in teaching practical science and engineering at a distance, through simulated and remote access laboratories and practical experimentation
- Our high quality teaching and curriculum are informed by world-leading research, strong links with professional bodies and communities of practitioners, as well as by scholarship focused on continuously improving our STEM pedagogy

*We deliver significant social and economic impact:*

- We provide STEM higher education at a scale and reach unsurpassed in the UK, with a sizeable international reach and further growth potential
- We inject transferable STEM skills and knowledge direct into the workplace for immediate employee and employer benefit, as students combine study while working
- The employability value of our courses is underpinned by accreditation from leading STEM Professional Bodies and Learned Societies, as well as partnerships and sponsorship with leading employers
- Our high quality, applied and academically relevant teaching and research addresses real-world issues, delivering impact for industry and society, including addressing pressing STEM skill-shortages across the UK.

The Knowledge Media Institute (KMi) of the UK's Open University is a highly successful interdisciplinary research centre founded at The Open University in 1995, and located in attractive premises at The Open University's main campus in Milton Keynes, UK. We offer a stimulating environment, widely acknowledged to be at the leading edge of research and development, particularly in Semantic Technologies, Human Computer Interaction, New Media and Information Retrieval. The style, impact and content of our work can be seen at <http://kmi.open.ac.uk/>

"Our lab values diversity and is committed to equality of opportunity. We would particularly welcome applications from women, since women are, and have historically been, underrepresented on our academic staff."

## 6. How to obtain more information about the role or application process

If you would like to discuss the particulars of this role before making an application please contact Professor John Domingue on +44 (0)1908 653800 or email: [john.domingue@open.ac.uk](mailto:john.domingue@open.ac.uk)


If you have any questions regarding the application process please contact Ortenz Rose on +44 (0)1908 654774 or email: [kmi-recruitment@open.ac.uk](mailto:kmi-recruitment@open.ac.uk)

## 7. The application process and where to send completed applications

Your application should contain:	<p>a) A completed short application for employment form;  b) An up-to-date CV;  c) Covering letter detailing how your skills and experience make you a suitable candidate for the post.</p> <p>Please ensure you complete all relevant sections of the application form.  <b>Applications received without a covering letter <u>will not</u> be accepted.</b></p>
Please ensure that your application reaches the University by:	12:00 noon, Thursday 31 May 2018
E-mail your application to:	<a href="mailto:kmi-recruitment@open.ac.uk">kmi-recruitment@open.ac.uk</a>
Or post it to Name/Job title:	Ortenz Rose / KMi Senior Co-ordinator – Staffing & Recruitment
Department/Unit:	Knowledge Media Institute (STEM)
Address:	The Open University, Berrill Building, Walton Hall, MILTON KEYNES. Bucks MK7 6AA

## 8. Selection process and date of interview

The interview panel will be chaired by:	Professor John Domingue
The other members of the interview panel will be:	<p>Dr Paul Mulholland - Research Fellow</p> <p>Dr Allan Third - Research Associate</p>
The interviews will take place on:	To be advised
The selection process for this post will include:	<ul style="list-style-type: none"> <li>• A review of applications by the interview panel;</li> <li>• A formal interview.</li> </ul>

	<p>We will let you know as soon as possible after the closing date whether you have been shortlisted for interview. Further details on the selection process will also be sent to shortlisted candidates.</p> <p>Applications received after the closing date will not be accepted.</p>
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