

## Further Particulars

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

### 1. Role details

Vacancy reference:	11203
Job title:	Research Assistant / Associate
Reports to:	Professor of Computer Science
Salary:	Ranging from £28,695 – £37,394
Terms and conditions of service:	Full time Research Staff
Grade:	AC1 / AC2
Duration of post:	Until 30 <sup>th</sup> September 2016
Working hours:	37 hours per week (full time Monday to Friday)
Location:	Knowledge Media Institute of The Open University
Closing date:	22 <sup>nd</sup> June 2015
Type of application form accepted:	Standard / long version (plus covering letter)
Number of referees required:	Three
Unit recruitment contact:	<a href="mailto:kmi-recruitment@open.ac.uk">kmi-recruitment@open.ac.uk</a>

## 2. Summary of duties

Linked Open Data has proven to be a very successful vehicle promoting the sharing and use of data via the Web. The number of major players either directly using Linked Data technology or their own variants is impressive (Google, Yahoo, BBC, US & UK Governments, Microsoft, Facebook). Less clear is how one can build applications on top of this ever-growing data in a well-engineered, maintainable and re-usable fashion. Over the last few years the Open University's Knowledge Media Institute (KMi) has been investigating how to integrate service technologies – including the WSDL based stack and Web APIs or REST services – with Linked Open Data. We use the term Linked Services to cover the general area that we are investigating.

We have a number of EU funded projects where we carry out research on this topic and also how we can apply Linked Services in a number of domains. Within the CARRE project we are applying our work in the context of supporting patients with cardio and renal problems by combining personal monitoring and medical data with personal social media data and generic sources of ground medical knowledge. This data will be used to provide patient treatment management services based on real-time personalised visualisations.

We are currently looking for a Research Assistant or a Research Associate (depending on qualification) to work on this project.

The appointment will be made on the Academic Grade 1 or 2 Salary Scales for Research Staff, ranging from £28,695 – £37,394 pa depending on qualifications and experience. Appointment as a Research Associate requires a PhD or three years equivalent in quality of achievement.

### **Job Description**

The research to be carried out will aim at extending our Linked Services infrastructure and tooling including the results from the EU SOA4All project, including: WSMO-Lite, hRESTS, iServe, SWEET and the SOA4All Studio. The overall objective is to empower users to create advanced applications by combining the wealth of Linked Data existing on the Web and within organisations, together with added-value services and processes that leverage this data.

The overall objective of CARRE is to take a holistic view of the patient combining data and services related to patient physiological status with a full patient context including lifestyle, mood, preferences and aspirations. Once established, through a Linked Services approach, we will provide patient empowerment services so that patients:

- Understand their health condition and its effect on their body;
- Feel able to participate in decision-making with their healthcare professionals;
- Feel able to make informed choices about treatment;
- Understand the need to make necessary changes to their lifestyle for managing their condition;
- Are able to challenge and ask questions of the healthcare professionals providing their care;
- Take responsibility for their health and actively seek care only when necessary;
- Actively seek out, evaluate and make use of information.

You would be contributing to KMi's Linked Services software infrastructure and tooling. You should thus have strong software development skills for the development of Web-based applications and prior experience in developing applications using Semantic Web technologies, Web services, RESTful services and Web APIs. Knowledge of Semantic Web and Semantic Web Services technologies and previous experience on developing applications based on workflow engines or rule engines will also be highly desirable.

We expect successful applicants to fit into our Computer Science REF profile depending on

previous experience. The REF is a UK research assessment exercise whereby research departments are evaluated for their research contributions through their publications, income generation and non-academic impact.

You will be working as part of a team of dynamic researchers in the field of knowledge technologies, Semantic Web and Web services within KMi, and in the context of a European project consortium. There will be the opportunity to develop your research profile, to travel to give demos and presentations, and to write academic papers.

### **Relevant Publications and Further Information**

All the publications below are available from <http://kmi.open.ac.uk/publications/>

1. Ly, A., Pedrinaci, C. and Domingue, J. (2012) Automated Information Extraction from Web APIs Documentation, The 13th International Conference on Web Information System Engineering (WISE 2012), Paphos, Cyprus, Springer
2. Lin, C., He, Y., Pedrinaci, C. and Domingue, J. (2012) Feature LDA: a Supervised Topic Model for Automatic Detection of Web API Documentations from the Web, The 11th International Semantic Web Conference (ISWC), Boston, USA
3. Pedrinaci, C., Liu, D., Lin, C. and Domingue, J. (2012) Harnessing the Crowds for Automating the Identification of Web APIs, Workshop: Intelligent Web Services Meet Social Computing at AAAI Spring Symposium 2012, Stanford, California
4. Kopecky, J., Vitvar, T., Pedrinaci, C. and Maleshkova, M. (2011) RESTful Services with Lightweight Machine-readable Descriptions and Semantic Annotations, in eds. Erik Wilde, Cesare Pautasso, REST: From Research to Practice, Springer
5. Pedrinaci, C. and Domingue, J. (2010) Toward the Next Wave of Services: Linked Services for the Web of Data, Journal of Universal Computer Science
6. Maleshkova, M., Pedrinaci, C., Domingue, J., Alvaro, G. and Martinez, I. (2010) Using Semantics for Automating the Authentication of Web APIs, International Semantic Web Conference (ISWC), Shanghai, China.

### **Useful URLs**

CARRE project website – <http://www.carre-project.eu/>

SOA4All @ KMi – <http://projects.kmi.open.ac.uk/soa4all/>

SOA4All – <http://www.soa4all.eu/>

iServe - <http://iserve.kmi.open.ac.uk/>

VPH Share @ KMi (VPH Share is another project in the eHealth domain based upon our Linked Services approach) – <http://projects.kmi.open.ac.uk/vph-share/>

VPH Share – <http://www.vph-share.eu/>

### 3. Person specification

#### Essential Skills

- Strong software and Web development skills;
- Familiarity with existing Semantic Web standards and technologies, e.g. RDF(S), OWL, SPARQL;
- 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);
- Ability to quickly demonstrate understanding of the project aims and specific tasks as requested;
- Self-starter in providing solutions to meet project needs;
- Ability to work in complex team relationships;
- Excellent written and oral communication skills;
- Work to challenging targets and deadlines;
- Ability to handle constructive feedback.

#### Desirable Skills

- PhD in Computer Science or a related field, or considerable Research & Development experience in IT;
- Experience with Java and javascript;
- Experience in the design and implementation of practical Semantic Web-based or ontology-driven applications;
- Experience in the design and implementation of Web services and/or RESTful services;
- Experience with sensors and personal monitoring devices;
- Experience of research in the eHealth domain;
- Experience with Natural Language Processing techniques and frameworks (e.g., GATE);
- Experience with Machine Learning or Data Mining techniques and frameworks;
- Experience with statistical analysis and related software (e.g., R);
- Experience with Hadoop and analysing large-scale datasets;
- Experience with rule engines;
- Experience with process languages and engines (e.g., BPEL, Taverna);
- Experience in developing mobile applications;
- Experience working in (higher) education.

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

n/a

### 5. About the unit/department

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/>

## 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 Tel: +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 [ortenz.rose@open.ac.uk](mailto:ortenz.rose@open.ac.uk)

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

Please ensure that your application reaches the University by: **22<sup>nd</sup> June 2015**

Email your application to: [kmi-recruitment@open.ac.uk](mailto:kmi-recruitment@open.ac.uk)

or Post it to:

Name/Job title: **Ortenz Rose – Senior Staffing Coordinator**

Department/Unit: **Knowledge Media Institute**

Address: **The Open University  
Walton Hall  
MILTON KEYNES  
Bucks**

Post Code: **MK7 6AA**

## 8. Selection process and date of interview

The interview panel will be chaired by Professor John Domingue. Other members of the interview panel will include members of the project team. The interviews will take place as soon as possible after the closing date.

The selection process for this post will be by review of applications by the Chair and selected members of the interview panel. There may be a telephone interview before a formal interview.

- a) Please ensure you complete all relevant sections of the application form. You are welcome to also include a curriculum vitae, however **CVs will not be accepted on their own.**
- b) You are also asked to provide a covering letter describing how your skills make you a suitable candidate for the post.

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 be sent to shortlisted candidates.

**Applications received after the closing date will not be accepted!**