



Further Particulars

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:	7169
Job title:	Research Assistant / Associate
Reports to:	Professor of Computer Science
Salary:	Ranging from £27,428 – £35,788
Terms and conditions of service:	Full time Research Staff
Grade:	AC1 / AC2
Duration of post:	Initially for 12 months
Working hours:	Full time – 37 hours per week
Location:	Knowledge Media Institute of The Open University
Closing date:	Wednesday 15 June 2011
Type of application form accepted:	Standard form; <u>or</u> CV (<i>with</i> short-version of appform)
Number of referees required:	Three
Unit recruitment contact:	Ortenz Rose

2. Summary of duties

There are nowadays outstanding quantities of data providing information about people and our environment coming from a large variety of sources including notably the Web but also other devices like sensors, mobile phones, etc. In parallel, and impelled by the current wealth of data available, a large number of organisations and individuals are developing and providing added-value services for accessing this information, for filtering it, for combining it, for analysing it, in order to derive new information and knowledge that could be exploited to carry out new activities or to improve the way current tasks are performed. Empowering users with tools to seamlessly devise new solutions that exploit this wealth of data is regarded as an essential activity towards accelerating research in several domains, boosting innovation, or improving productivity in general.

The Open University's Knowledge Media Institute (KMi) needs two Research Assistants or Research Associates (depending on qualifications) to work on the development of generic and reusable solutions that would empower users in these very activities. In particular, the research will be carried out in the context of the EU-funded projects NoTube and VPH Share. In NoTube, the focus will be on exploiting existing data and services on the Web for the personalised creation, distribution and consumption of TV content. In VPH Share the objective is to develop a fully-fledged facility for exposing, sharing, combining, processing, and analysing large quantities of clinical data.

The appointments will be made on the Academic Grade 1 or 2 Salary Scales for Research Staff, ranging from £27,428 – £35,788 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 Semantic Web Services infrastructure and tooling including notably results from SOA4All, e.g., 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 data existing on the Web and within organisations, together with added-value services and processes that leverage this data.

The ultimate goal of NoTube is to develop a flexible/adaptive end-to-end architecture, based on semantic technologies, for personalised creation, distribution and consumption of TV content. In particular, Semantic Web Services technology such as WSMO-Lite, hRESTS iServe and SmartLink will play a major role for the work of KMi, while the integration with existing linked data and multimedia standards will also be an important concern.

Within VPH Share, the objective is to develop a fully-fledged facility for exposing, sharing, combining, processing, and analysing large quantities of clinical data. The project focuses on providing a convenient interface allowing practitioners to access, manipulate and exploit the wealth of data from research infrastructures and clinical processes. Therein, our existing technologies like iServe and SWEET will be exploited to support the annotation and advanced discovery of clinical analysis services. Additionally, we shall focus on supporting the creation and sharing of workflows that combine these services to analyse the wealth of data at hand.

You would be contributing to KMi's Semantic Web 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. A good publication record, 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.

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

Pedrinaci, C. and Domingue, J. (2010) **Toward the Next Wave of Services: Linked Services for the Web of Data**, Journal of Universal Computer Science

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

Vitvar, T., Kopecky, J., Viskova, J., Fensel, D. (2008) **WSMO-Lite Annotations for Web Services**. Proceedings of the 5th European Semantic Web Conference (2008)

Maleshkova, M., Pedrinaci, C. and Domingue, J. (2010) **Semantic Annotation of Web APIs with SWEET**, Workshop: 6th Workshop on Scripting and Development for the Semantic Web at Extended Semantic Web Conference, Heraklion, Greece

Maleshkova, M., Pedrinaci, C. and Domingue, J. (2010) **Investigating Web APIs on the World Wide Web**, European Conference on Web Services (ECOWS), Ayia Napa, Cyprus

Pedrinaci, C., Liu, D., Maleshkova, M., Lambert, D., Kopecky, J. and Domingue, J. (2010) **iServe: a Linked Services Publishing Platform**, Workshop: Ontology Repositories and Editors for the Semantic Web at 7th Extended Semantic Web Conference

Yu, H.Q., Benn, N., Dietze, S., Siebes, R., Pedrinaci, C., Liu, D. and Domingue, J. (2010) **Two-staged approach for semantically annotating and brokering TV-related services**, The IEEE International Conference on Web Services (ICWS), Miami, Florida

Pedrinaci, C., Domingue, J. and Sheth, A. (2010) **Semantic Web Services**, in eds. John Domingue, Dieter Fensel and James Hendler, Handbook of Semantic Web Technologies, 2, Springer.

<http://www.soa4all.eu/>

<http://notube.tv/>

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

<http://sweet.kmi.open.ac.uk/>

<http://notube.open.ac.uk/sugartube/index.html>

3. Person specification

Essential

- Strong software and Web development skills
- Experience in the design and implementation of practical Semantic Web-based or ontology-driven applications
- Familiarity with existing Semantic Web standards and technologies, e.g. RDF(S), OWL, SPARQL
- Ability to handle constructive feedback
- Ability to work in a team
- Ability to work to deadlines
- Strong verbal and written communication skills

Desirable

- Good publication record
- Experience with Java and javascript
- Experience in the design and implementation of Web services and/or RESTful services
- Experience with Natural Language Processing techniques and frameworks (e.g., GATE)
- Experience with rule engines
- Experience with process languages and engines (e.g., BPEL, Taverna)
- Experience in developing mobile applications
- Familiarity with the IP-TV and multimedia domain and its metadata standards (e.g. MPEG-7, TV-Anytime)

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 Web technologies, multimedia and information systems, knowledge modelling and management, new media for learning and sensemaking. KMi is part of the OU's Centre for Research in Computing, ranked as one of the top 20 research centres in the UK RAE 2008. 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 either Professor John Domingue via Tel: +44 (0)1908 653800 or by email j.b.domingue@open.ac.uk; or Dr Carlos Pedrinaci Tel: +44 (0)1908 654773 or by email c.pedrinaci@open.ac.uk

If you have any questions regarding the application process please contact Ortez Rose on +44 (0)1908 654774 or email o.rose@open.ac.uk

7. The application process and where to send completed applications

Please ensure that your application reaches the University by: **15 June 2011**

Post it to:

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

Department/Unit: **Knowledge Media Institute**

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

Post Code: **MK7 6AA**

Or e-mail your application to: kmi-recruitment@open.ac.uk

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. Interviews will be arranged as soon after the close date as is possible.

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.

Applications received after the closing date will not be accepted.