New ERDF funded project kicks off in KMi

KMi is leading the OU in local SME support for the digital economy. Building on the success of MK:Smart, KMi has secured European Regional Development Funding to engage SMEs in research and application of data driven technologies in the digital economy.

CityLabs is an ERDF grant, managed in the UK by the Department for Communities and Local Government. Led by KMi, the consortium includes Fronesys and ZTE as delivery partners, with additional external support from Milton Keynes Council, Nat West and SEMLEP.

CityLabs is a place for SME’s to work with academic and industry leaders to develop concepts into prototypes for new products and services in the digital economy, with a particular focus on data driven IoT development.

SMEs will be supported through the CityLABS PATHWAYS with a focus on innovation in the digital economy:

**Urban Business Lab:** a practical, hands on and interactive programme for entrepreneurs who are seeking to innovate using design thinking and lean techniques.

**Technical Evaluation and Prototype:** SME’s can access expertise and resources to help realise the potential of their digital innovation with access to developers & technical engineers.

**Concept Development Grant Programme:** SME’s can receive grants up to £5,000 towards resources required to develop their digital innovation. [To find out more: citylabs.org.uk](http://citylabs.org.uk)
MK:SMART News Roundup

MK:Smart Summary Video

As MK:Smart project came to an end, the project leaders reflected on their achievements to date in a short video thanking the project partners and summarising some of the main areas of MK:Smart research.

Although the project finished at the end of June 2017, a number of new exciting initiatives related to project’s main research areas (i.e. transport, energy, water as well as citizen and business engagement) are already in place, aimed at scaling up and consolidating the solutions pioneered by the MK:Smart project. Watch this space!

MK:Smart in China

KMi’s Alan Fletcher recently attended TM Forum’s 3rd Smart City in Focus Forum in Yinchuan, China as part of the Milton Keynes delegation which included Geoff Snelson, director of strategy and futures of Milton Keynes (MK) Council and Leader of the Council, Peter Marland. During the event, the delegation were invited to showcase the work of MK to a global audience. They also participated in an invited workshop that considered the current state and goals of the global smart city movement, to bring the experience of MK to the group. As Alan told us, “KMi is a signatory to the TM Forum Smart City Manifesto and we were pleased to have been part of the team whose work in smart city modelling was showcased at the event.”
MK:Smart in Thailand

Alan Fletcher also joined the UK Foreign Office and British Embassy delegation to the 2017 Digital Thailand Big Bang Conference. Alan was invited there to showcase the smart city transformation of Milton Keynes and the focus of data at the heart of the city that was delivered by MK:Smart.

In a series of meetings in the days after the conference, Alan and the Embassy team met with some key players in Thailand’s digital initiatives, including the Thai Eastern Economic Corridor, the smart city and university development covering over 13,000 km2 and expected to see over $43bn of global investment. KMi is set to continue these discussions on a number of focal points that will seek to engage the KMi team in the EEC project.

Finally, in talks with the director of the Thailand National Innovation Agency the team compared SME support activity between the KMi CityLabs project and the work of the NIA, with a view to identifying opportunities for collaboration.

KMi wins prestigious Dissertation Award for the 2nd year running

Dr Ilaria Tiddi won the 2017 SWSA Distinguished Dissertation Award for her Dissertation ‘Explaining the Data Patterns with Knowledge from the Web of Data’. This is the second year in a row that a KMi PhD student has won this prestigious award with Dr Hassan Saif picking up the award last year.

In her thesis, Ilaria used data mining techniques to investigate the hypothesis that the interpretation of data behaving in a similar way (“patterns”) could be facilitated and automated using the Web of (Linked) Data thanks to the shared and cross-domain knowledge in it. To demonstrate this, Ilaria developed Dedalo, a framework that automatically provides explanations to patterns of data using the background knowledge extracted from the Web of Data. She studied the elements required for a piece of information to be considered an explanation, identified the best strategies to automatically find the right piece of information in the Web of Data, and designed a process exploiting Machine Learning techniques (such as Inductive Logic Programming, Neural networks and Genetic Programming) able to produce explanations to a given pattern using the background knowledge autonomously collected from the Web of Data. The final evaluation of Dedalo involved users within an empirical study based on a real-world scenario, the interpretation of trends of Google searches. She demonstrated that the explanation process is complex when not being familiar with the domain of usage, but also that this can be considerably simplified when using the Web of Data as a source of background knowledge.

Congratulations Ilaria! KMi is so proud of your achievement.
And in other news…

COMRADES sails through its mid-term review!

The COMRADES consortium came back triumphant from Brussels where the project’s mid-term review was held at the European Commission on July 5th. Project officers and reviewers were highly impressed by the exceptional quality of the work and achievements of the project partners over the first half of the project.

During these 18 months, the consortium developed several advanced methods for crisis information processing, including a semantic deep-learning approach that beats the state of the art in automatically grouping social media posts with respect to the type of crisis-related information they contain, and a novel entity extraction tool that identifies and disambiguates unknown place names from social media content. They also praised the extensive community engagement activities carried out by the project, which involved hundreds of stakeholders from several countries around the world, including Nepal and China.

Reviewers also had the chance to use the first prototype of the COMRADES platform, which offers the functionalities of the Ushahidi crisis-mapping tool, with added A.I. services for powerful processing of disaster information.

COMRADES is a €2 million European H2020 project, co-ordinated by Prof Harith Alani from KMi, and involves the University of Sheffield (UK), Delft University of Technology (The Netherlands), iHub (Kenya), and Gov2U (Belgium).
Augmented Reality App for OU Students Studying Module E117

Paul Hogan in KMi has finalised the Augmented Reality (AR) application that he has developed in collaboration with partners in Faculty of Wellbeing, Education and Language Studies (WELs) The app will be made available to students studying E117 Introduction to Sport and Fitness starting in Autumn 2017.

Although initially developed to provide a more immersive study experience via the use of AR, the application has evolved to provide both AR and non-AR for the mobile platforms Android and iOS as well as a non-AR version for both Windows and Mac OSX.

KMi's Allan Third and Chris Sanders have expanded upon technology used in the CARRE project that allows students to use the activity fitness tracker supplied in their module material to record and share their activity data with other students studying E117.

WELs partners, Caroline Heaney, Jessica Pinchbeck and Ben Langdown worked alongside Paul providing the educational content and direction to create an app which provides a multi-platform immersive study experience that should appeal to the E117 students. The mobile versions are available on the Google Play and Apple App stores while the desktop versions have been released via the student's module web page.

Congratulations to Dr Paul Warren

Paul Warren successfully defended his thesis on 13th July 2017. The title of Paul's thesis was "Human Reasoning and Description Logics: Applying Psychological Theory to Understand and Improve the Usability of Description Logics". The examiners were Dr. Gem Stapleton (University of Brighton) and Prof. Marian Petre (Computing and Communications). A key contribution of the thesis was the way in which psychological theories were applied, over a series of empirical studies, in order to identify the difficulties people have with Description Logics and propose ways of alleviating them. Paul undertook his PhD studies on a part time basis in KMi and published findings from the thesis in the EKAW, SEMANTICS and ESWC conferences.

Congratulations!
Special Issue: Awareness and Reflection in Technology Enhanced Learning

The latest issue of the International Journal of Technology-Enhanced Learning (IJTEL) is a special issue on Awareness and Reflection in Technology Enhanced Learning. This special issue, has been edited by KMi’s Alexander Mikroyannidis together with external collaborators Milos Kravcik (DFKI Germany), Viktoria Pammer (Graz University of Technology, Austria), Michael Prilla (Clausthal University of Technology, Germany) and Thomas Daniel Ullmann (The Open University, UK). The issue is related to the ARTEL (Awareness and Reflection in Technology-Enhanced Learning) workshop series, which started in 2011. This series of workshops has mostly taken place at the European Conference on Technology Enhanced Learning (EC-TEL), which is one of the most prominent venues in its field. This special issue features a set of high quality papers, addressing different aspects of awareness and reflection. In particular, 21 submissions were thoroughly reviewed and 8 of them were accepted for publishing. The accepted papers can be divided into several categories. The first three papers present a theoretical overview of the field. The next two articles introduce methodological approaches, namely annotations in online course and digital storytelling. The last three contributions describe implementations of different systems - personalised dashboards, ambient visualisations and remote labs.

Workshop On mining Scientific Publications 2017 – Touchdown Toronto

Since 2012, members of KMi’s CORE team, headed by Petr Knoth, have orchestrated the WOSP (Workshop On mining Scientific Publications) held each year as a part of JCDL (Joint Conference on Digital Libraries).

This year the 6th annual international WOSP workshop took place at the University of Toronto. Over 100 academics joined us to hear presentations from 14 authors on a wide range of topics, from using machine learning to detect academic plagiarism, to using text and data-mining to interrogate a bilingual scientific repository. KMi’s Petr Knoth presented new research on Recommender Systems. We also had several demonstrations; Victor Botev gave us a really nice overview of their ‘Iris.ai – the Science Assistant’ project whilst Ron Daniel from Elsevier presented the ‘Content Analytics Toolbench (CAT)’

We had fantastic keynote speeches, from Jevin West, Assistant Professor at the Information School at the University of Washington and co-director of the Data Lab, who introduced us to VizioMetrix, a platform that extracts visual information from the scientific literature. Our second keynote was Waleed Ammar, research team lead at Semantic Scholar, who spoke about their latest work around citation extraction and recommender systems. Many thanks to all our speakers, authors and attendees, hopefully we’ll see many of you next year for WOSP 2018!

http://kmi.open.ac.uk/
KMi supports Fight Against Hate Campaign in Milton Keynes

On July 19th, the Open University Library welcomed students from five local schools to celebrate their participation in a poster competition about fighting hate crime and hate incidents in Milton Keynes. The competition was launched by the Citizens: MK Fight Against Hate Campaign, to raise awareness and encourage young people to participate in building a more equitable society. The entries were scored by an independent panel of judges, awarding three lucky pupils the top prizes.

KMi had the honour of sharing our commitment to diversity and tolerance by sponsoring the 3rd place prize. The award was presented by Dr. Miriam Fernandez, who spoke briefly to about the contribution of computer science to fighting hate, especially online. Milton Keynes is a diverse area with a growing population and a younger age profile than other areas in the country. More than 25% of the population belong to minority ethnic groups. KMi is also a diverse research lab, with more than 15 countries represented among our staff, and several of our research efforts intersect with issues related to intolerance, extremism and access to information. We congratulate all of the participants and their teachers.

KMi’s World Stage and Closer to Home

Pinelopi Troullinou attended a summer school in Cagliari (23-29 July).

Nancy Pontika travelled to Edinburgh for a CORE-Open Minted conference (3-4 August).

John Domingue travelled to Barcelona to attend a HUB4NGI forum on next generation internet (12-14 September).

Andrea Mannocci and Hassan Saif attended a Deep Learning Summer School (16-22 July)

John Domingue, chaired the STI International Summit in Crete, this was attended by senior researchers in the semantic web/Linked Data area (4-5 September).

Alessandro Adamou attended the Semantic 2017 Conference in Amsterdam (10-13 Sept).

Allan Third, attended the Slidewiki Project review in Luxembourg (6-8 Sept).

John Domingue was an invited speaker at the ‘Distributed Ledger’ Conference in London (12 Sept) and also Blockchain Live (20 Sept).

Trevor Collins is attending the Geological Society of America Conference in Seattle, USA (18-25 October)

http://kmi.open.ac.uk/
KMi Future

Events Coming Soon…

• John Domingue will be attending the HUB4NGI Plenary and GA in Zurich (11-13 December).

• Enrico Daga and Francesco Osbourne will be attending K CAP Conference in Austin, Texas (4-6 December).

• De Liddo is travelling to Hawaii, USA to attend HICSS-51 conference.