In this issue we’re featuring Open University’s MK:Smart project, which is developing innovative solutions to support economic growth in Milton Keynes. The project is supported by a large team in KMi including researchers, developers, IT and admin support staff who work in conjunction with colleagues in Computing.

MK:Smart and the MK Data Hub

A Smart City is a place where people, companies and local authorities have access to a shared technological infrastructure to support efficient services, optimise the use of resources and improve quality of life. The MK:Smart project has the objective to create such an infrastructure, both as a way to support economic growth in Milton Keynes and to demonstrate the value of intelligent data management and the Web of Things for innovation in a Smart City.

The project, which involves many different partners (including Milton Keynes Council and BT) is centred around the development of the MK Data Hub, a data platform for sharing, curating and analysing data from a large variety of sources within the city. The need for such
a platform comes from the observation that, more and more, different stakeholders in a town such as Milton Keynes have a need to manipulate information of very diverse natures and origins: from statistics about the different areas of the town, to real time sensor data or social media data.

The research and development activities in KMi therefore focus mostly on one key question: How to create a data infrastructure which puts in common all the complex aspects of data management and make data jointly exploitable for innovation? This involves looking at the technological and methodological aspects of dealing with highly diverse data [1,2], including the need for new approaches to data integration [3], cataloguing and policy management [4,5] and data quality [6].

One of the very interesting points of the MK Data Hub however is that it is more than a research platform for us to explore the type of technologies needed to deal with city data and innovation: It is a live, running system used to create innovative applications. Indeed, even if the MK Data Hub has only been made publicly accessible very recently, it already counts more than 300 registered users and many applications are being developed that directly rely on it.

The MK:Smart project is developing several of these applications in three focus areas: Transport (with the mobility map), Energy (with several initiatives around electric vehicles and demand shifting) and Water (including the Water Monitor and Garden Monitor applications). In KMi, we are also working with a number of local SMEs to create innovative, data-intensive processes ranging from analysing data from educational sessions, to semantic search in radio broadcasts and predicting the need for maintenance on key infrastructure equipment (i.e. water pumps). In addition, we are engaged in a specific collaboration with Milton Keynes Council to enhance availability of their own data, through re-designing the MK Intelligence Observatory portal (under the name MK Insight) so that it benefits directly from the innovative features of the MK Data Hub that are coming out of KMi's research.

http://kmi.open.ac.uk/
Through some of these initiatives, we can also start seeing how people, and especially the citizens of Milton Keynes, can find different ways to relate to their city through data. For example, as part of the Milton Keynes International Festival (IFMK 2016), we commissioned (with the Stables and funding from the National Lottery through Arts Council England) a temporary art installation: **Ground Resistance**. In this project, artists Wesley Goatley and Georgina Voss created an immersive visual and sonic experience where audiences can watch city data, with sounds responding live to the data. This provides a unique way for people in Milton Keynes to look at their own town, reflect on what it means to be a Smart City and see how Milton Keynes appears through the data that it generates. This installation was made possible through putting together data from a number of partners and providers, including Western Power Distribution, Samsung (for smart energy meters) and Anglian Water, and managing these data within the MK Data Hub.

Many other initiatives should appear in the next few months that are made possible because of the availability of the MK Data Hub. Beyond Milton Keynes, the next step is to broaden the applicability of our Data Hub technologies. We are already reusing several of the components of the MK Data Hub as part of the [AFEL project](http://afelproject.com) and the [Data Science Group](http://kmi.open.ac.uk/data-science). Our objective here is to offer those components to town councils and other organisations as solutions to the management and innovative exploitation of highly diverse data.
References


[3] Adamou, Alessandro, and Mathieu d'Aquin. “On requirements for federated data integration as a compilation process.” Proceedings of the 5th International Workshop on Using the Web in the Age of Data (USEWOD '15) and the 2nd International Workshop on Dataset PROFIlling and fEderated Search for Linked Data (PROFILES '15)


Enrico Daga
Project Officer: Linked Data

Enrico works as part of the MK:Smart project on data cataloguing and data governance. In addition he is in charge of the maintenance and evolution of the Linked Open Data platform of The Open University. Enrico is also completing his PhD on Polices and the Life-Cycle of Data on the Web; his other research interests include: data governance, management of the meta-properties of datasets, focusing in particular on policies and licenses and linked data publishing and reuse.
And in other news…

KMi Projects Showcased at LAF2016 as part of OU Charter Day celebrations.

KMi joined the celebrations of the OU's Charter Day by being one of the chosen stands at the Learn About Fair (LAF) on 26 April. In line with the fair’s theme 'Innovation in Teaching and Learning: Putting Students First' we showcased a selection of projects as part of our stand KMi:Future Technologies for Learning. These included:

OU Analyse - identifying students that are at risk of failure;

Blockchain - early experiments in placing Open Learn badges onto a blockchain.

Stadium Live - embedding interactivity within live webcasts in modules; also check out our previous KMi Review Newsletter (Issue 6) which features this work.

and GreenData - capturing and sharing renewable energy generation data to allow OU students and courses to query data in a wide variety of ways.

In addition, Paul Hogan demoed a mobile virtual reality application that was developed especially for the event using the LAF2016 logo to give a taster of the sort of developments we do here in the lab. Many people at the fair including our Vice Chancellor, Peter Horrocks experienced and explored the virtual reality world.
Congratulations Harith, Professor of Web Science

On Thursday 28 April the KMi team assembled to celebrate with a specially designed cake, the award to Harith Alani of the title Professor of Web Science.

Professor Alani has been with KMi since 2009, moving here after beginning his research career at Southampton University. Harith’s work centres on Social Semantics and Web Science, he has authored around 120 scientific articles, including publications in the highest quality conferences and journals in his area of research. Harith has won over €3M in funding including some of his current projects Decarbonet (which he coordinates) and most recently COMRADES; This project will build an intelligent collective resilience platform to help communities to reconnect, respond, and recover from crisis situations.

Professor John Domingue, Director, KMi said “I am delighted that Harith has had this recognition for his work and long known leadership skills. KMi is a vibrant, busy environment with multiple threads of research. Professor Alani’s work has relevance across many threads and he and his team are a real asset to our continued success in securing research grants for work that will have real impact in the OU.”

Open Data in Education: Now also a book

The use of Open and Linked Data associated with education has been growing steadily, in part thanks to efforts involving KMi, such as data.open.ac.uk, LinkedUniversities, the LinkedUp project and now the AFEL project. The book “Open Data for Education: Linked, Shared and Reusable Data for Teaching and Learning” is therefore a timely publication. Edited by Dmitry Mouromstsev and Mathieu d’Aquin, it provides an overview of the state of Open Data in education from the perspectives of various authors, several of them KMi members or former KMi members: John Domingue, Stefan Dietze, Olga Parkhimovich, Dong Liu, Fouad Zablith, Alexander Mikroyannidis and Maria Maleshkova. The book specifically focuses on the practical aspects of Open and Linked Data in education, providing perspectives on the current use of Linked Data to publish educational information and on the initiatives that are promoting and supporting the practice of Open Data for teaching and learning. More importantly, it also provides concrete examples of applications in a variety of contexts illustrating the way Open Data can support education-related activities.
FORGE: Closing the gap between learner & researchers

The Forging Online Education through FIRE (FORGE) project has developed a new video introducing the main concepts behind the project to the general public. The video explains in simple terms what remote labs and online experimentation can bring to education and how FORGE is building on top of world-class experimentation facilities in order to close the gap between learners and researchers. FORGE promotes online learning using Future Internet Research and Experimentation (FIRE) facilities and is a step towards turning FIRE into a pan-European educational platform for the Future Internet. This benefits learners and educators by giving them both access to world-class facilities in order to carry out experiments on e.g. new internet protocols. In turn, this supports constructivist and self-regulated learning approaches, through the use of interactive learning resources, such as eBooks.

Stadium Live supports Digital Innovation Workshop

KMi’s Stadium Live technology was used to support remote attendees to a STEM workshop on digital innovation, held in the Hub Theatre and hosted by Patrick Mcandrew (Director, IET), Doug Clow (IET), Hazel Rymer (acting PVC, (Learning and Teaching) and Andrew Law (Director, Open Media Unit) in May.

Initial ideas were prompted in response to a set of cue cards; then a set of learning scenarios were discussed which brought forth more ideas. Each group then had to decide which of their ideas was the best and one person from each table, including Lara Piccolo as representative of the remote group, had to present their idea - in just one minute - to the rest of the room.

The best ideas were then voted on. Running alongside the website, built by Damian Dadswell, Stadium’s streamed video allowed the remote audience to listen to proposals put forward by the physical audience while widgets were used to vote on the proposals that other tables had promoted.

http://kmi.open.ac.uk/
KMi at ESWC 2016

As with past editions of the Extended Semantic Web Conference, the Thirteenth edition (ESWC2016), once again held in Anissaras, Crete, featured a significant KMi delegation and a host of former KMi-ers. Five researchers - Prof. John Domingue, Alessandro Adamou, Carlo Allocca, Mathieu d’Aquin and Hassan Saif - attended as KMi delegates, and even more contributed from afar to the success of the conference.

Three items were presented by the KMi at the main conference:

- **Semantic Topic Compass** – Classification based on Unsupervised Feature Ambiguity Gradation, by Amparo Elisabeth Cano, Hassan Saif, Harith Alani and Enrico Motta
- **SPARQL Query Recommendations by Example**, by Carlo Allocca, Alessandro Adamou, Mathieu d’Aquin and Enrico Motta (demo)
- **SentiCircles: A Platform for Contextual and Conceptual Sentiment Analysis**, by Hassan Saif, Maxim Bashevoy, Steve Taylor, Miriam Fernandez and Harith Alani (demo)

This edition of ESWC featured strong involvement of the KMi team in its organisation. STI International president and KMi director John Domingue chaired the STI International Board meeting and General Assembly and also the ESWC Organisational, Track Chairs and Steering Committee meeting. Mathieu d’Aquin served as one of the program chairs for this edition. Also worthy of note are the organisational roles of KMi alumni Stefan Dietze and Vanessa Lopez, who respectively co-chaired the ESWC Challenges and the Smart Cities, Urban and Geospatial Data research track.

KMi and its legacy were also very active in ensuring the success of pre-conference events. John Domingue gave a keynote talk titled *Blockchains: A New Platform for Semantically Enabled Transactions* at this year’s edition of the SALAD Workshop on Services and Applications over Linked APIs and Data (co-organised by KMi alumna Maria Maleshkova). Hassan Saif gave a keynote talk titled *Sentiment Analysis in Social Streams, the Role of Context and Semantics* at the Semantic Sentiment Analysis Workshop. This year was also the breakthrough of a dedicated Digital Humanities event at ESWC, in the form of the WHiSe workshop. The workshop was organised by KMi-ers Alessandro Adamou and Enrico Daga with University of Lancaster lecturer Leif Isaksen, and featured a multi-disciplinary program committee that included Open University researchers Carlo Allocca, Paul Mulholland, Ilaria Tiddi, Elton Barker, Francesca Benatti and Angeliki Lymberopoulou. It was very well-received thanks to its dual format, accommodating both presentations of peer-reviewed papers and round table open discussions, and was the second ESWC workshop in number of submissions and accepted papers. Also, Mathieu d’Aquin was among the mentors at the PhD symposium which took place before the main conference.

Finally, the PROFILES Workshop on dataset profiling and federated search, once again co-organised by Stefan Dietze, had its third edition at ESWC.
OU Analyse @ LAK2016

As part of this year Learning Analytics and Knowledge (LAK16) conference in Edinburgh, the OU Analyse team from KMi organised The Data Literacy for Learning Analytics Workshop.

The organisation of this workshop was motivated by the success of the Machine Analytics workshop at LAK14 in Indianapolis. The workshop ran the whole day on 26 April 2016 and attracted around 30 participants from Higher Education institutions from countries in Europe, America and Asia. The workshop was divided into two parts. After the introduction by Annika Wolff, 4 accepted papers were presented, one of them by prof. Zdenek Zdrahal. After the lunch break, the participants were divided by their interests into two groups -

1) Analyzing and visualizing learner data using The Open University Learning Analytics Dataset
2) Communicating from aggregated data, discussing the issues related to communicating the results from Learning Analytics to different types of user, including expert and non experts, and faculty, tutors, and students.

Based on the feedback from all the participants, new connections and ideas based of these connections were made during the run of the workshop and we believe we will organise another event of the following LAK in Vancouver 2017.

OUSA Conference 2016 Gets Augmented Reality Presentation

On 18 June, Mobile Applications Developer from KMi, Paul Hogan gave a 45 minute presentation on KMi’s work with Augmented Reality (AR) and Virtual Reality (VR) to students attending the 2016 Open University Students Association Conference. Paul’s presentation was well received and gave a detailed insight into the applications he has developed allowing students to see how the University will be using this technology in the future. Of particular interest to the students was the application currently being developed to complement an upcoming module on the human circulatory system. This application presents the user with an anatomically correct 3D heart complete with beat animations, label identifications, blood flow and audio.
FORGE at EDUCON 2016

The 7th IEEE Global Engineering Education Conference (EDUCON 2016) took place in April in Abu Dhabi, UAE. Alexander Mikroyannidis presented a methodology for the design, delivery and evaluation of learning resources for remote experimentation. This methodology has been developed in the context of the European project FORGE, which promotes online learning using Future Internet Research and Experimentation (FIRE) facilities.

The IEEE Global Engineering Education Conference (EDUCON) 2016 was the seventh in a series of conferences that rotate among central locations in the IEEE Region 8 (Europe, Middle East and North Africa). This is a major event for educators and researchers featuring a wide range of topics, such as Educational Methods and Learning Mechanisms in Engineering Education, Infrastructure and Technologies for Engineering Education, use of ICT in Engineering Education, and more. The conference proceedings will be published by IEEE Education Society Publications.

SlideWiki meets in KMi

The second plenary meeting of the SlideWiki project took place on 9-10th June in the Knowledge Media Institute of the Open University. More than 30 representatives from 17 organisations across Europe travelled to Milton Keynes, in order to touch base on the latest project developments and plan subsequent collaborative actions. The meeting focused on the preparations for the release of the next version of the SlideWiki platform, which will take place before the end of the year.

SlideWiki is a new Horizon 2020 project, aiming at increasing the efficiency, effectiveness and quality of education in Europe via widely available, accessible, multilingual, timely, engaging and high-quality vocational and professional training, higher education, as well as community-driven open-education.
#WWW2016: COME IN WE’RE OUVERT

Every year the World Wide Web Conference provides an opportunity for many researchers from both academy and industry to discuss about topics that are centred around the World Wide Web.

In its 25th edition, which took place in Montreal (CA) from 11th to 15th of April 2016, more than a thousand people from 55 countries joined together to present progress in research, standards and applications, and envision future directions.

The conference had a special motto "COME IN WE’RE OUVERT" (which means of course "open" in French and in this particular case it stands for Open, Ubiquitous, Versatile, Education, government and health) and included many tutorials, workshops, poster session and research sessions with a wide coverage of topics such as social network and graph analysis, web science, security and privacy, economics and market, and many others.

Another key point of this conference were the keynotes, these included Sir Tim Berners-Lee (the inventor of the World Wide Web), Martha Lane Fox (Chancellor of The Open University), Mary Ellen Zurko (Principal Engineer at Cisco) and Peter Norvig (Director of Research at Google).

Researchers from the KMi contributed in a variety of ways, in organising workshops, presenting papers and posters.

The workshops organised by our researchers included:

- Francesco Osborne organised the SAVESD2016 workshop about the enhancement of scholarly data with semantics, analytic and visualization.
- Elizabeth Cano with Aba-Sah Dadzie organised #Micropost2016 workshop about making sense of microposts.
- Mathieu d’Aquin organised #Lile2016 workshop about learning and education with the Web of data.

At the SAVESD workshop Angelo Salatino presented the paper co-authored with Enrico Motta on “Detection of Embryonic Research Topics by Analysing Semantic Topic Networks" which also allowed them to win the Best Paper Award of the workshop.

At the Q4APS16 workshop Grégoire Burel with Paul Mulholland and Harith Alani presented the paper “Structural Normalisation Methods for Improving Best Answer Identification in Question Answering Communities.”

During the poster session, Francesco Osborne presented “It ROCS! The RASH Online Conversion Service”, while Helene De Ribaupierre presented a poster co-authored with Francesco Osborne and Enrico Motta about “Combining NLP and semantics for mining software technologies from research publications.”
Digital Skills Gap in ICT Technologies

The 2nd annual NET FUTURES conference, which wishes to maximize the competitiveness of the European technology industry, took place in April in Brussels, Belgium. The aim of the conference is to bridge the gaps between research and innovation labs, businesses, marketing, entrepreneurship and policy-making communities, with the idea that innovations will more easily and effectively find their way to market. The conference gathered over 1,000 attendees forming an interconnected community of people from industry, research institutions and startup companies.

The Forging Online Education through FIRE (FORGE) project was well represented at this event. In the Digital Skills Gap in ICT Technologies session, Alexander Mikroyannidis of KMi, an invited session speaker, presented the current state of the art in resources for remote experimentation and learning based on research carried out by the FORGE project. This session sought to address some of the foreseen future gaps and challenges for skills development in specialised IT jobs. Other invited speakers in this session were representatives from Cisco, Amazon, Empirica and IDC. The session was chaired by Sally Reynolds, Managing Director of AtiT.

Additionally, the FORGE team, represented by Johann M. Marquez Barja and Diarmuid Collins from Trinity College Dublin (TCD), Daan Pareit from iMinds, Ghent University and Ciro Scognamiglio from University Pierre et Marie Curie (UPMC), demonstrated five courses in networking and telecommunication at the FORGE booth. FORGE is making FIRE experimentation facilities available to learners and educator via open interactive courseware. To date, FORGE has produced over 10 courses covering a wide range of networking and communication domains that are freely available to download and utilise. These courses have resulted in over 20,000 experiments undertaken by more than 600 students at 7 universities across four continents.
CORE wins Best Poster Award at the Open Repositories Conference #OR2016

In the week commencing 13 June, the CORE team attended the 11th Annual Conference on Open Repositories, an international conference addressed mainly to subject and institutional repository managers, focusing on open access, open data and open science tools, projects and services.

At the conference the team had a number of submissions:

1. A workshop presentation on “How can repositories support the text-mining of their content and why?” where Nancy Pontika explained the how repository managers should be supportive of text-mining practices and Petr Knoth described the technical requirements that can enable the text mining of repositories. In addition, the CORE team was a workshop organiser, as part of its involvement with the OpenMinTeD project, an EU-funded project on text and data mining.

2. A full presentation on “Exploring Semantometrics: full text-based research evaluation for open repositories” by Petr Knoth. The presentation explored semantometrics, a new class of research evaluation metrics, which builds on the premise that full text is needed to assess the value of a publication.

3. A 24x7 presentation on the “Implementation of the RIOXX metadata guidelines in the UK’s repositories through a harvesting service”, where Matteo Cancellieri and Nancy Pontika described how the RIOXX metadata guidelines are now a new embedded feature in the CORE Repositories Dashboard, this is a advising tool designed for repository managers.

4. Two demo presentations during the Developer Track sessions. The first one was on “Mining Open Access Publications in CORE”, where Matteo Cancellieri demonstrated the new CORE API and the second was entitled “Oxford vs Cambridge Contest: Collecting Open Research Evaluation Metrics for University Ranking” where Petr Knoth used the traditional Oxford University vs Cambridge University contest to show how to freely gather and compare the research performance of universities.

5. A poster on the “Integration of the IRUS-UK Statistics in the CORE Repositories Dashboard”, by Samuel Pearce and Nancy Pontika, which showed the process of embedding the existing IRUS-UK statistics service to the CORE Repositories Dashboard. We were delighted also that our poster won the best poster award.

Based on the fact that this conference has a clear focus on repository services and that the CORE service uses or is being used by these services, we were also extensively mentioned in other presentations as well.
Book on Intelligent Semantic Web Systems published

A new book written by KMiers Mathieu d’Aquin and Enrico Motta has just been published by Morgan and Claypool publishers, in the series “The Semantic Web: Theory and Technology”. This book entitled “The Epistemology of Intelligent Semantic Web Systems” is a reflection of the evolution of the Semantic Web, a young discipline in comparison to other areas of computer science. It highlights and discusses key questions that have animated the research community and introduces a simple conceptual framework which characterises Intelligent Semantic Web Systems, as well as many examples of such systems. “The Epistemology of Intelligent Semantic Web Systems” is the result of more than a decade working as researchers and application developers in the Semantic Web area and of the many discussions, exchanges and collaboration within KMi on the way the Semantic Web has been evolving. It is therefore a reflection of this evolution, with the aim to take a snapshot of where we are at this specific point in time, and also to show what the future will be like, or at least should be like!
Webscience Summer School 2016

The WSTNet Web Science Summer School 2016 was held from Thursday, 30 June to Wednesday, 6 July 2016. The Summer School is the first edition of the oncoming WSTNet Summer School series on Web Science. It is organised by the Institute for Web Science and Technologies (WeST) at the University of Koblenz-Landau, Germany. The school focused on Keynotes, tutorials and project work in the following areas of Web Science: Introduction to Web Science, Computational Social Science, Social Machines, Politics, Entrepreneurship, and Law. The summer school also featured keynote lectures such as Leveraging Web/Internet/Network Sciences (WINS) to address Grand Societal Challenges by Prof. Noshir Contractor and Social Machines 2.0: The Coming Collision of Artificial Intelligence, Social Networking, and Humanity by Prof. James Alexander Hendler.

Apart from the lectures and tutorials each participant presented their research in a poster session where Taha Tobali shared his PhD research topic that he is currently working on in KMi under the supervision of Dr. Miriam Fernandez and Prof. Harith Alani. Taha’s research is in Natural Language Processing (NLP); and is focusing on extracting sentiment from dialectal social data specifically for Arabic. He has done some studies on the language usage on Twitter within Arab regions and the identification of Romanized Arabic from multilingual data streams. Next, Taha intends to investigate dialect identification and sentiment analysis.

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KMi Researchers Win the Best Poster Award at JCDL 2016

Drahomira Herrmannova and Petr Knoth have won the Best Poster Award at JCDL 2016 in Newark, USA with their contribution "Semantometrics: Towards fulltext-based research evaluation." This award coincided nicely with the experimental report on semantometrics commissioned by Jisc which was published in the week prior the conference. The CORE team at KMi have also organised a successful 5th International Workshop on Mining Scientific Publications (WOSP 2016). The workshop was attended by key people in the area of text and data mining research with papers from both Europe and the USA. The workshop featured this year two keynotes. Yuxiao Dong of Notre Dame University gave a talk titled "AMiner: Towards Understanding Big Scholarly Data" and Michael J. Kurtz of Harvard-Smithsonian Centre for Astrophysics presented the “Astrophysics Data System: The Joy of Text". At the workshop, Drahomira Herrmannova also presented a joint long paper with Petr Knoth titled: "An Analysis of the Microsoft Academic Graph." The WOSP workshop was this year sponsored by the OpenMinTeD project in which KMi participates and we invited two speakers on this. Stelios Piperidis of Athena Research Centre gave a talk on "Making sense of scientific textual content" and Peter Mutschke of GESIS gave a presented a discussed in his talk on the "Challenges and potential of text mining in scholarly information retrieval."
The 2016 European Data Forum (EDF) which took place in the last week of June was a great success. This event which was setup by the European Commission supported by STI International and a number of prominent European researchers in 2012 has grown from under 200 participants to over 1000 registrations at this year’s event. EDF brings together key policy makers, industrial players and researchers to discuss issues around the area of Big Data. The event was opened by the CEO of Philips, Frans van Houten and included a video message from Gunther Oettinger the European Commissioner for Digital Economy and Society. The CEO and co-founder of TomTom, Harold Goddijn, explained his vision for self-driving cars. By 2020 the first commercial semi-autonomous cars will be available. Within 50 years self-driving taxis will transport city dwellers arriving within two minutes of a button press. He speculated that this mode of transport will include specific personal services such as built-in hair salons. Anders Arpteg, the Head of Analytics at Spotify, articulated how his data-first company uses data analytics to provide music recommendations, target advertising and help patients with Alzheimer’s. Other presentations included Stef Oud from Deloitte Consulting who outlined how they are using Big Data to support arriving refugees in finding jobs and Peter Scheer from the Amsterdam Arena (home to the Ajax football team) who showed how soil sensors and data analytics are used to support grass maintenance by monitoring ambient moisture and tracking the individual paths taken by players. Wesley Goatley, a sound artist currently working on an MK:Smart art installation for the forthcoming Milton Keynes International Festival, expounded the relationship between art and Big Data and explained the concepts underlying some of his creations. KMi was heavily involved in the organisation of EDF. John Domingue was a Conference Chair, Enrico Motta articulated the MK:Smart vision for smart urban environments, Zdenek Zdrahal talked about his team’s work on OU Analyse, the European Data Science Academy a KMi-coordinated project involving John Domingue, Alex Mikroyonnidis, Aba-Sah Dadzie and Aneta Tumilowicz was presented, and Damian Dadswell, Harriett Cornish, Paul Hogan and Jamie Daniels designed and developed the conference website and accompanying smart phone App. EDF 2016 was an extremely stimulating event showcasing the very best in European Big Data research and innovation demonstrating the tremendous value that European collaboration can bring. Long may it continue!!
PhD Student Highlights

Congratulations to Doctor Ilaria Tiddi!

Ilaria Tiddi successfully defended her PhD on 16th June 2016. During the viva and in her thesis (“Explaining Data Patterns with Knowledge from the Web of Data”), she described her work at the intersection of knowledge discovery and semantic web research, using the Web of Data to generate explanations for patterns found in data through data mining techniques.

Ilaria investigated the hypothesis that the interpretation of data behaving in a similarly way (“patterns”) could be facilitated and automatized using the Web of (Linked) Data thanks to the shared and cross-domain knowledge in it. To demonstrate this, she developed Dedalo, a framework that automatically provides explanations to patterns of data using as the background knowledge extracted from the Web of Data. From studying 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. Ilaria 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.

The examiners, Frank van Harmelen (VU Amsterdam) and Harith Alani (KMi) were impressed by Ilaria’s research, using a range of techniques from machine learning, data modelling and knowledge engineering to tackle an original and very complex problem.
KMi’s World Stage and Closer to Home

John Domingue and other KMi’ers travelled to Dubrovnik, Croatia for the EDSA plenary meeting (22-25 Jun).

Allan Third was invited to present KMi Blockchain work at the W3C Blockchains and Web workshop in Boston (28 Jun-01 Jul).

Alan Fletcher was invited to be part of Liveworx 2016 panel in Boston (07-09 Jun).

Giuseppe Scavo attended the Augmented World Expo conference in San Francisco, California (01-02 Jun).

Alexandra Okada travelled to Dublin, Ireland to attend the LKL Summer School conference (20-21 Jun).

Allan Third travelled to Greece to attend the CARRE Technical meeting (22-28 May).

Hassan Saif travelled to Stockholm, Sweden to attend the Sense4us GA meeting (22-26 May).

KMi Future

Events Coming Soon...

• Taha Tobaili is travelling to Germany to attend the ACL conference (07-13 August).

• John Domingue and other KMi’ers are attending ESWC Summer School, being held in Dubrovnik, Croatia (03-10 September).

• Mathieu d’Aquín, Enrico Daga and Ilaria Tiddi will be travelling to Bertino, Italy for the 12th Semantic Web Summer School (17-23 July)

In the NEXT Issue - CORE.ac.uk