SICSA Research Theme Activity Report

Please complete all sections of this reporting template and submit within 3 months of your event or activity taking place. This report will allow the SICSA Directors to provide detailed information about the progress of the SICSA Research Themes to the Pool funders, SFC, and your cooperation is appreciated.

Name of event organiser: Jane Hillston (and Des Higham)

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Institution: School of Informatics, University of Edinburgh

Title of event: City Analytics

Location of the event: Royal Society of Edinburgh

Date of event: 30th May 2018

From which SICSA Research Theme was this event funded?

Total funds claimed for event: £30/student for approximately 5 students.

Please outline in brief what took place at the event, providing details of speakers and titles of talks:

Through advances in digital technology there exists a large variety of sensors providing a range of data streams around urban life. Invited speakers from academia and beyond emphasised the importance of data in understanding and facing challenges in urban planning and presented possible ways in which available rich data sources could be utilised to improve quality of life in cities. In particular, they presented current research into mathematical and computational models to support better planning of transportation and energy management and investigating socio-economic aspects of urban life and human wellbeing. The speakers from outside academia provided a local government and business perspective and emphasised the importance of establishing standards which allow development of a market for urban analytics solutions and clear communication between local city governments and standards committees.

Overview

The first talk of the day was given by Burkhard Schafer, Professor of Computational Legal Theory at University of Edinburgh. Professor Schafer suggested ways in which emerging smart city technologies, such as autonomous or semi-autonomous vehicles, are expected to change organisation of traffic policing and the legal framework that controls it.

Piyushimita Thakuriah, Professor of Urban Studies at University of Glasgow, focussed on key social, economic and behavioural issues that arise from digitalisation of our everyday lives and automation of jobs. One of the presented case-studies relied on data collected from lifelogging devices enriched with contextual data from the City of Glasgow to identify areas where better traffic planning could improve the quality of travel experience.

Suzy Moat, Professor of Behavioural Studies in Warwick Business School, presented work on how large datasets available on the Internet through services like Flickr and Twitter can be used to estimate crowd sizes and international travel flows, and to gain insight into theimpact of environment on wellbeing.

Jarmo Eskelinen, Chief Innovation and Technology Officer of the Future Cities Catapult, talked about their mission to help UK firms develop products and services that meet the changing needs of cities. Based on examples of ongoing projects as part of the Future Cities Catapult, Mr Eskelinen made the case for an open approach to data, architecture and source code to encourage collaboration between city systems and adoption of new technologies.

Ritchie Somerville, Innovation and Futures Manager at the City of Edinburgh Council, provided a personal perspective on challenges faced when embedding urban analytics into practice. In particular, Mr Somerville stressed that successful implementations rely on clear communication between stakeholders and technology providers to bridge the gap between visions and viable solutions.

In the afternoon session, Siobhán Clarke, Professor in the School of Computer Science and Statistics at Trinity College Dublin, showed through case-studies how advances in sensor technology and wireless communication coupled with computational modelling can allow us to better deal with serious social problems like traffic congestion and energy wastage.

The presentation by Professor Clarke was followed by a panel discussion. The panel was composed of the conference speakers and Peter Grindrod, Professor in the Mathematics Institute at University of Oxford. The discussion addressed, for example, concerns about collective data that accurately represents the population through devices that are not available for everyone as well as common misconceptions panelists have had to deal with when promoting analytics and technology solutions for smart city problems.

The conference was concluded by Sir Alan Wilson, Professor of Urban and Regional Systems in the Centre for Advanced Spatial Analysis at University College London and Chief Executive of the Alan Turing Institute, who gave an overview of the state of the art analytics' capabilities and the needed extensions.

Please provide details of how many attended and if possible, information about which institutions were represented:

Due to GDPR we will not provide the names of attendees but I know that there were participants from University of Glasgow, University of Strathclyde, University of St Andrews and University of Edinburgh.

Outcomes:

Please give details of any research papers that have come or are pending as a result of this activity:

It is too early to identify such outcomes.

Please provide details of any grant applications that have come or are pending as a result of this activity:

It is unlikely that there will be grant applications as an outcome of this activity.

Please provide details of any further outcomes that have come as a result of this activity:

N/A

Do you have any plans to bid for further SICSA Theme Funding in the future?

No