



University of
Salford
MANCHESTER

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So BE it

School of the Built Environment Newsletter

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£1.2 million EPSRC funded project

SoBE won £1.2 million from the EPSRC Global Challenges Research Fund to develop digital technology to help multi-agencies to reduce the impact of natural disasters.



The scientific aspect of this project will explore real-time satellite data for constructing 3D environments of a disaster; system dynamics to support cascading effects of disasters; digital platform to assess vulnerability of communities; social media platform for collecting intelligence during disasters; and, multi-agency collaboration models.

This project will develop and test the technologies with partners on the ground, Universities of Colombo and Moratuwa (Sri Lanka), Universiti Tun Hussein Onn Malaysia and University of Peshawar (Pakistan) and government agencies who are involved in disaster management.

International Research Week

SoBE is hosting an International Research Week, 11-15 September. The event comprises an Academic Conference, Industry Days, Workshops, and a PGR Conference where practitioners, leading researchers and postgraduates from



around the world will be showcasing state of the art research, innovation and industry practice at all levels and in all processes in the Built Environment.

For further information about this event, please visit:
<http://conference.org.uk/international-research-week/>

Great Cities Week, Wuhan-China, 20-24 March 2017

As part of a drive to increase awareness of UK expertise in urban planning, architecture and smart city design amongst key stakeholders in Wuhan, the British Consulate General (with the support of the British Council invited Professor Hisham Elkadi, Dean of



SoBE, to give a keynote speech in the GREAT Cities Week: a series of thematic seminars and activities, with a focus on smart cities, sustainable transport, city planning, urban design, and the linkage between culture and city development. Professor Elkadi gave a speech titled *Neo Ekistics: Smart Cities in Context*.

Environmental Innovation Hub

Professor Hisham Elkadi and Drs Nick Davies and Luke Blazejewski are working with researchers from ELS and SHUSU to create an Environmental Innovation Hub; with a workshop organised at the University in April. Attendees include Salford City Council, the



Environment Agency, AGMA, Salix Homes, the Broughton Trust, and a range of other organisations involved in Natural Capital projects. The workshop and long-term project is to draw from considerable expertise within the University in providing future alternative and natural solutions to flooding and other climate-change related issues, using ecological principles.

Recent trends in urban heat island studies

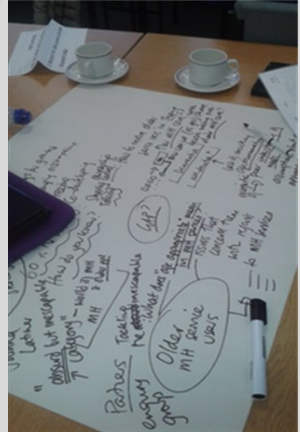
As a research fellow, Mohammad Taleghani, presented parts of his research during the BEST research members meeting on 3 March. He described the term urban heat island (UHI), and its effect on energy consumption in



cities. Furthermore, he focused on different methods to quantify UHI. These methods are based on 1) observation (by satellites, airplanes and drones); 2) computer modelling (like CFD simulations); and 3) measurements (by fixed and mobile data loggers). Mohammad is currently using computer simulations and measurements to study the impact of UHI on pedestrians' thermal comfort in Manchester.

Enabling Ideas

Jess Symons and Catherine Barlow (SoBE) and Gabi Hesk (NMSW&SS) have secured £28,900 of HEIF funding to enable integration in research between the University and local community, building on the recent AHRC Connected Communities project which included the development of the Ordsall Method ([click here for link](#)). The funds support 8 projects, including work with children affected by the Irwell's Boxing Day flood in 2015, and a study of local walking. Work is ongoing and we plan to host a final celebration in July.



For more information, please contact Catherine Barlow c.barlow1@salford.ac.uk

Rwanda

Being led by Professor Hisham Elkadi, Dean of SOBE, the University is exploring opportunities for collaborations with Rwandan institutions for programme development and transnational education. Whilst in Rwanda Hisham was invited to meet with the Rwanda Minister of Youth and ICT, Republic of Rwanda, where he held discussions around our ICZ initiative and also SoBE's strengths in Smarts Cities.



Smart Cities Event

In partnership with Salford Professional Development (SPD), THINKlab hosted the 2017 Smart Cities Conference on the 4th April at AJ Bell Stadium.

Chaired by THINKlab Director, Professor Terrence Fernando, Smart Cities Conference 2017 included

speakers from Cisco, The Carbon Trust, Smart Nodes, Spacehive, Bristol UWE, Ordnance Survey, Skanska, Bristol is Open, MKTG and Arup. Highly praised by both delegates and sponsors, the conference brought together experts from government and industry, and provided a platform for sharing experiences in building smart cities around the world, exploring the growth and potential of creating connected urban areas, using technological investment and forward thinking.



Siemens Workshop

THINKlab hosted a workshop for Siemens to explore the application and benefits of virtual reality within their business. Multi-disciplinary staff from Siemens UK & Germany experienced first-hand demonstrations of Siemens



project work co-created with THINKlab through the use of visualisation technologies such as HTC VIVE, Oculus Rift, Microsoft Surface Touch Table etc.

Nigel Platt, System Engineering Manager, Siemens: "Salford's demonstrations enabled us to see possibilities well beyond the models we have built so far – this was the perfect introduction to our review of how Siemens can further use these new visualisation techniques to add value to its business."

Learning Through Games

The Centre for Disaster Resilience piloted a number of innovative ways for disaster risk reduction at the community level in the eastern province of Sri Lanka. Workshops focused on using 'serious games', based on floods, droughts and tsunami, to aid in



increasing knowledge about disaster risk reduction. Due to the success of the project, the Chief Secretary of the Eastern Provincial Council and local authority partners agreed to take forward the project and introduce this approach to disaster risk reduction to local school children. The project was funded by the University's Impact Fund as a means of promoting ICZs.

Research Awards

- Dr Zeeshan Aziz has secured two grants from the Department for Business, Energy and Industrial Strategy: an £11,144 grant for a project titled, *Enhancing Road Safety via Improved Traffic Management*; and, a £23,050 grant to assist with *Developing a research agenda to ensure Vietnam's Secure, Sustainable and Resilient Energy Supply (VS2RES Workshop)*
- The Energy House has won a £100,000 project to research the performance of novel energy savings heaters.
- The THINKLab, along with 19 partners, has had an H2020 EU project proposal selected. This project will develop a systematic approach to retrofitting that will include innovative components, processes and decision making methodologies to guide all value-chain actors. This is an €8.7M collaborative project and the THINKLab will receive €425k to develop a key technology component.

PGR Successes

- Laura Ager, PhD – ‘Universities and Festivals: Cultural production in context’ Supervisor: Prof Carl Abbott
- Abdulaziz Alkandari, PhD - ‘An Evaluation of the Impact of Gaming Technology on Learning’ Supervisor: Prof Terrence Fernando
- Yahya Balgheeth, PhD - ‘Enhancing Existing Health and Safety Processes in Public Sector Construction Projects within Saudi Arabia using Building Information Modelling Approaches’ Supervisor: Dr Zeeshan Aziz
- Julie Cross, PhD - ‘A Framework for the Delivery of Built Environment Student Satisfaction in England’ Supervisor: Prof Les Ruddock
- Sultan Hijazi, PhD - ‘Developing a Framework to Enhance Building Handover Practices in Public Sector Construction Projects in the Kingdom of Saudi Arabia’ Supervisor: Dr Zeeshan Aziz
- Moshe Kinn, PhD - ‘An Analysis of the Sociotechnical Transition Process from the Existing Centralised Alternating Current Voltage Electrical System in the UK to one where Distributed Direct Current Voltage is used to meet the Energy Needs of the Built Environment’ Supervisor: Prof Will Swan
- Sujeeva Wijewickreme, PhD - ‘A Framework for Providing a Lifelong Social Security System for the Operational Workforce in the Construction Industry in Sri Lanka’ Supervisor: Dr Chaminda Pathirage
- Gaia Zamburlini, PhD - ‘Modernist Heritage Conservation: An Evaluation of Theories and Current Practice’ Supervisor: Dr Julian Holder
- Faisal Bin Shauiah, PhD - ‘Risk Management Strategies for Dealing with Unpredictable Risks In Saudi Arabian Organisations’ Supervisor: Dr Anthony Higham
- Peter Irving, DBEnv - ‘Explicating Excessive Financial Resource Allocation by Building Control in Achieving Regulatory Conformity in Domestic Extensions’ Supervisor: Dr Brodie McAdam
- Yaser Labib, PhD - ‘Lean Framework for Assessing Construction Logistics in Jordan’ Supervisor: Prof Mohammed Arif
- Victor Munoz Berrios, MPhil - ‘Developing an IFC Interoperability Specification for Integrated and Energy Efficient Building Design’ Supervisor: Dr Yusuf Arayici
- John Cooney, MPhil - ‘Health and Safety in the Construction Industry: A Review of Procurement, Monitoring, Cost Effectiveness and Strategy’ Supervisor: Prof Mohammed Arif

European Smart Cities Consortium

On Monday 20 March, the THINKLab and Energy House hosted 60 people as part of a Manchester Study Tour and Field Trip, arranged by Tjibbe Veenstra, Co Chairman at BECON / Blockchain Ecosystem Network (Ireland).

Publications

Thermal responses of single zone offices on existing near-extreme summer weather data

Yingchun Ji, Ivan Korolija & Yi Zhang (Dr Korolija is from UCL and Dr Zhang is the director of Energy Simulation Solutions Ltd), International journal of Building Simulation

<http://www.springer.com/engineering/civil+engineering/journal/12273>

Congratulations!

Congratulations to Diane Lloyd, SoBE SOM, for winning the AUA North Wales / NW Network Team Award! Very well deserved!

New Starters

Academics

- Dr Mark Shelbourn, Reader in BIM & Advance Digital Technologies
- Professor Peter Walker, Professor in Construction Science & Management; ICZ Lead Engineering & Environment

Professional Support Services

- Catherine Lee, PGT Administrator
- Laura Miller, Admin Assistant

PhD Students

- Sami Abuezhayeh, Supervisor: Professor Les Ruddock
- Siraj Alyami, Supervisor: Anthony Higham
- Ahmad Shabat, Supervisor: Dr Chika Udeaja

Got a story to share?

Please email details (100 words max) and a photo / image to Charlotte Houghton, c.a.m.houghton1@salford.ac.uk