Conference Report

The International Congress of Architectural Conference (ICAT 2014)
Aberdeen, Scotland, UK
November 6-8, 2014

Tahar Kouider*
Scott Sutherland School of Architecture, Robert Gordon University, Scotland, UK

The International Congress of Architectural Technology conference (ICAT 2014) was held at Robert Gordon University (School of Architecture and Built Environment), Aberdeen (UK) between 6th and 8th November 2014. The conference was chaired by Tahar Kouider (programme leader) with the support of academic and research staff of the Architectural Technology (AT) course team, in particular Dr Jonathan Scott (course leader) and Prof Richard Laing (research coordinator). The programme of the conference consisted of three events.

The first day (Nov 6th) event was dedicated to an AT students workshop. The latter included an exhibition of an environmental design and technology competition followed by presentations of the entrants and ended by an open discussion on the issues raised. The aim of the workshop was for students from various AT courses to get together to exchange ideas, experiences, attend the conference and engage in a meaningful activities and discussions related to their courses and profession. A social outing lead by students concluded the day.

The second day (Nov 7th) was dedicated to the conference. Twenty scientific papers were presented during the four parallel sessions as well as 2 key note presentations by prominent speakers. The conference was followed by a social dinner in the heart of the Granite City. A total of 70 delegates attended/contributed to the conference from 5 countries: Canada, Denmark, Ireland, Spain and UK.

*Tahar Kouider, Senior Lecturer, Scott Sutherland School of Architecture, Robert Gordon University, Email: t.kouider@rgu.ac.uk
The third day (Nov 8th) consisted of a visit to a local building and national heritage site namely Haddo House, followed by a tour of Aberdeen City architecturally significant sites.

Figure 1 Student Workshop prestenations.

Figure 2 Visit to Haddo House.

ICAT and Conference
The International Congress of Architectural Technology (ICAT) was born out of the initiative of independent academics representing Universities in the UK, the Netherland, Ireland, Spain, and Denmark. The overall aim of the congress is to support development, research and innovation based practise within the architectural technology discipline. The biennial conference represents a forum for exchange of ideas and to create an AT forward looking community.

Building on the achievements of the last 4 conferences, the 5th International Congress of Architectural Technology Conference continues to strengthen the quality of academic and research output. In this second printed edition of the proceedings all research papers underwent a rigorous blind peer review process. The latter relied upon the expertise of researchers and academics drawn from a wider European constituency.

The theme of ICAT2014 conference, Architectural Technology, Toward Innovative Professional Practice aimed to provide opportunities for the exchange of ideas and application experiences that help to explore and define the role of the architectural technology professional in response to the challenges of changing industry needs. The theme reflects the reality of the architectural technologists as they enter a volatile professional job market in which the transferable skills learned are increasingly becoming key attributes. The long standing topic areas of the conference include:

• *Professional Practice*
  Role(s) of the architectural technologist, industry challenges, CPD, professional practice diversity and skills (new)
• *Sustainable and Environmental Design*
Life-cycle analysis, selection of materials, components and assembly, sustainable design and development, technical performance, innovation

- **Building systems and techniques**
  Advanced CAD, BIM, Collaborative working, buildability and innovation, design management, designing for performance and production

- **Theory, Practice and Research**
  Integrated health and safety, integration of fabric, structures and services, alternative procurement and project control strategies, development of new concepts, techniques and strategies

- **Teaching and Education**
  Design pedagogy, innovative models, learning environments and studios, learning theory, history and philosophy

**Conference sessions and topics**

Research paper presentations were grouped in 2 morning sessions followed by 2 afternoon sessions and split under four broad topics: Building information management including BIM, Sustainable design and technology applications, Architectural technology professional practice, and Architectural technology pedagogy and theory.

Building Information Modelling (BIM) emerged as a dominant topic, in 3 out of the 4 above sessions, explored from a variety of angles. True to the focus of the conference theme, a number of research papers focused on the application of BIM in professional practice highlighting, amongst others, areas of best practice and challenges still to overcome. The exploration of the currently hot topic was timely within the context of the UK government 2016 mandating the utilisation of BIM in medium and large projects. Despite the successes achieved in practice, the issues BIM implementation by built environment SMEs. Also explored in great depth were pedagogies of collaborative BIM and interdisciplinary teaching. The proceedings of the conference may be accessed at the conference website: www.rgu.ac.uk/icat2014

The conference proceedings started and concluded with a keynote presentation both dealt with the topical issues BIM and digital data. In his keynote presentations Prof David Philp, Head of BIM Implementation @ the Cabinet Office, focused on virtual asset lifecycle modelling within the context of level 3 BIM and beyond relating all to the government vision of Digital Britain. Prof Richard Laing, however, focused his keynote presentation on level 2 BIM and the value of digital data throughout the life cycle of an asset.
Student workshop

The brief of the student competition focused on the utilisation of innovative technological solutions in the design of buildings that are responsive to their environment and meet the highest standards of sustainable design. The performance criterion of competition was the quality of the outcome, namely the design ideas and the Innovative technical solutions used to detail that idea. Ten students entered the competition, 4 from Robert Gordon University, 3 from Nottingham Trent University and 3 from Coventry University. Each student was given 5 minutes to present their poster to an audience of students and staff followed by a discussion on issues raised as related to topics, courses and the profession as a whole. An independent panel of international AT tutors judged the poster and the three winners were awarded prizes.

Figure 3 Guest speaker Prof David Philip.

Figure 4 Guest speaker Prof Richard Laing.

BIM Clinic

In parallel to ICAT 2014 conference, the School of Architecture and Built Environment @ RGU invited local BE professionals to attend a BIM Clinic, a two hour session dedicated to a discussion on the implementation of Building Information Modelling amongst in light of related government legislation. The aim of the clinic was: to open / continue the dialogue with local practice on BE issues, to exchange practice and research experiences on the
implementation of level 2 BIM, and to identify possible areas of future collaboration between the school and local practices. The clinic was attended by 24 professionals representing a range of BE companies of varying sizes and expertise, including engineering, architecture, construction, and local authorities. It was led by Prof Richard Laing and Senior Lecturer Tahar Kouider both from RGU and Graham Paterson from Urbahnstudio.

All participants felt that the discussion had been useful, and that the event offered the chance to discuss and reflect on issues which affect all participants’ organisations, of whatever size and sector. Some informal feedback after the event suggested that there might be a couple of key issues, though, which are worth exploring further.

The first of these is that of interdisciplinary working and collaboration. This emerged as a recurring topic during the discussion, and has been noted as a key aspect of 'BIM culture' within most government and professional body events. Therefore, it was suggested that RGU will aim to organise a 'multidisciplinary BIM' event early in 2015, as a first follow-up to the BIM Clinic.

The second point which was raised during the discussion was that of training and support for local practice. Was also discussed how BIM (software) threads through the undergraduate taught syllabus at RGU, and the important point of support at postgraduate level was raised. It was also suggested that another session be organised to discuss training needs and desires, and that this should again involve all disciplines.

Next ICAT conference

Following a regular meeting of the ICAT board, it was agreed that the next ICAT conference will be hosted by Alicante University, Spain under the Chairmanship of Dr Antonio Galiano. A call for papers and further details on the forthcoming conference will be published in May 2015.