

Experiences at the Young Researchers Training School for fire engineers (COST TU0904)

It is with great pleasure that we (John Gales, University of Edinburgh and RuiRui Sun, University of Sheffield) report to you on our experiences at the Young Researchers Training School for integrated fire engineering (COST TU0904) which occurred in April 2012 in Malta. This training school had been intended to broaden the research background of the participants and provide them a chance to network outside their normal studies through the exchange of information and opinion. The training school was a valuable five day experience for the careers of the students in fire engineering selected from across Europe. This conference involved two parts: lecture and brainstorming sessions.



Some of the participants at the Young Researchers Conference training school for fire engineering research in Malta, April 2012. Photo is courtesy of Prof Ian Burgess.

The lecture session was led by various practitioners and academics in fire engineering focusing on topics of fire behaviour, integrity design, life and structural safety. Presentations by Prof Jean Marc Franssen and Prof Paulo Vila Real summarized the development of research and design methods of structural fire engineering; structural robustness in fire was summarized by Prof Ian Burgess; Dr Florian Block presented the application of performance-based design in practice from the view of an engineer; Dr Guillermo Rein gave an introduction of fire dynamics to structural engineers emphasizing the importance of research on travelling fires; Dr Luke Bisby reviewed the past, current and future status of structural testing in fire; Dr Yong Wang presented the properties of protection material with special reference to intumescent coatings research; and Jim Marsden shared the fire service's view on fire engineering. See group photo above. All lecture presentation slides can be viewed here;

http://fire.fsv.cvut.cz/ifer/2012-Training_school/Lectures/Lectures.htm

For us students in attendance these presentations gave a unique opportunity to hear from various academics and those in the industry about their research and consulting experiences. The topics covered a wide range of themes but in particular closely related to our PhDs; such as modelling progressive collapses in structural fires (Ruirui) and experimentation of structural systems in fire (John). Some of the ideas presented had controversy and were thought provoking but all had some use for our projects; one example is the 'simple' or 'not simple' modelling perspectives, which were elaborated on by Prof. Jean Mark Franseen with respect to further research and endeavours we plan. What we found particularly helpful was that lectures provided a window into professional thought; such as when new research results are presented, what it takes for them to accept or reject. The practitioners and academics provided expertise on what our duties as young researchers are. These presentations widened, inspired and comprehensively pushed our knowledge establishing a more thorough and solid research background for integrated fire engineering.

The brainstorming session followed with nearly 30 student presentations of research projects being conducted throughout Europe (mostly PhD projects but also MSc were included) covering diverse topics from passive fire resistance, fire development, risk assessment etc. The presentations all allowed for some flexible but yet intense and interesting discussion, where ideas, knowledge and opinion were exchanged by the young researchers, practitioners and academics. The experience for us students was not only to directly give us ideas on where to go next or how to sort out the problem we are confronted with, but also, more valuably, make us think about our problems rationally and to develop a professional thought process on research and problem solving. The abstracts and slides for these presentations can be viewed here;

http://fire.fsv.cvut.cz/ifer/2012-Training_school/Students_Abstracts/index.htm

and

http://fire.fsv.cvut.cz/ifer/2012-Training_school/Student-presentations/index.htm

Rarely do conferences give an opportunity to speak of projects in the level of rigorous detail that we were allowed here, and to the level of depth of helpful discussion generated afterwards. This is one of the merits that this training school (rather than a normal conference experience) stood out. At times though, it was a challenge to understand others work and suggest solutions or different ideas, but that is mostly due to different presentation styles and branches of study we may not fully be familiar with (typical of multidisciplinary events). Standing as presenters, it was a wonderful and valuable experience to exchange work to our peers and experts, gathering advice and feedback. We both come from known fire-research groups which regularly challenge and communicate with one another in much the same spirit of this training school however, presenting within your own group sometimes it is easy to miss key things that you can or could consider. This training school was all the much more valuable to participate in, as fresh eyes could look at our problems. Students from so many backgrounds (with incredibly diverse expertise) were present ready to share ideas and push each other further. Moreover, it is very exciting to find common-ground with other researchers on their work and

seek research collaboration with them. Two imminent examples of this continuing collaboration are the visiting of two students, one from Thessaly and the other from Naples, each to Sheffield and Edinburgh respectively for several weeks to research on structural and fire.

The conference was not only about work though; the attendants participated in a number of visits in Malta after the conference (see photos below). The sites to see, food to taste and overall Maltase atmosphere make us wish more fire research events could be held like this training school. The people (Maltese, organisers, students) were amazing and incredibly helpful.



Some of the many spectacular views of Malta

We were incredibly thankful to be selected as student representatives of the United Kingdom to attend the training school, we thank those who organised the conference, in particular Ruben Paul Borg of the department of Civil and Structural Engineering, University of Malta (host of the training school), the attendees, and all for the feedback they had provided us. We hope that this training school, or something along the lines of it, will continuously be held to engage and motivate more young researchers in integrated fire engineering

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