

Programme

Training School for Young Researchers

“Fire Engineering Research - Key Issues for the Future II”

Naples, Italy

6 - 9 June 2013

The Training School is intended to broaden the research background of the participants, firstly by introducing them to the views of some leading researchers and practitioners, and then by challenging them to understand and assist with the research projects of their fellow researchers. Through this interchange of information and opinion, as well as the opportunity to network outside the programme, the COST TU0904 Action will play a major part in the formation of the next generation of leaders in fire engineering research and practice across Europe.

The School will run for 3½ intensive days.

Presentations: 6/7 June:

The School will start with 1½ days of presentations by experts/scholars on current and future issues in performance-based fire engineering. A tentative schedule is:

Thur 6 June:

15.00: Session 1: Current issues in fire science research

Guillermo Rein (Imperial College, UK)

Tea

17.00: Session 2: Fire testing

Luke Bisby (University of Edinburgh, UK)

18.00: Session 3: Current research of University of Naples

Beatrice Faggiano, Emidio Nigro (University of Naples, Italy)

20.00: Gala Dinner

Fri 7 June:

09.00: Session 4: Codes of practice: prescriptive, codified or performance-based?

Paulo Vila Real (University of Aveiro, Portugal)

Coffee

10.30: Session 5: Fire protection

Yong Wang (University of Manchester, UK)

11.30: Session 6: Robustness

Ian Burgess (University of Sheffield, UK)

Lunch

14.00: Session 7: The US view post 9/11

Venkatesh Kodur (Michigan State University, USA)

15.30: Session 8: The fire-fighters' view of current issues

Jim Marsden (Ignis Associates, UK)

Tea

17.00: Session 9: Fire engineering in practice – the state of the art in performance-based design

Florian Block (Buro Happold, Germany)

18.00: Session 10:

Fire Engineering in research and practice

Jean-Marc Franssen (Université de Liège, Belgium)

The presentations are intended to stimulate discussions with and between the researchers, and the timings are deliberately rather loose to allow them to happen.

Brainstorm sessions: 8/9 June

These two days of the course will consist of brainstorming sessions on the young researchers' own projects.

Presentations should each take 15-20 minutes (maximum 20 slides), with 10-15 minutes' discussion. Researchers should be candid about the progress made and problems encountered in presentations. The discussion involving the whole group is intended to contribute ideas and advice.

Sat 8 June:

09.00: Session 11

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| 11.1 | Abdulaziz Alarifi | Measurements & Modelling of Fire Smoke & Toxicity |
| 11.2 | Piotr Smarzd | Practical problems of model validation, selecting input data and material properties for engineering applications of CFD fire modelling |
| 11.3 | Kalliopi Zografopoulou | The fire–after–earthquake event in a library building - Simulation of Natural Fire |

Coffee

11.00: Session 12

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| 12.1 | Cristián Maluk | A novel system for the study of Structures in FIRE. Moving Away from the Status Quo |
| 12.2 | Mikko Partanen | Car fires with sprinklers: A study on the Eurocode for sprinklers |
| 12.3 | Bartłomiej Sawicki | Finite Element Modelling of Beams in Elevated Temperature – Benchmark Problems |
| 12.4 | Flávio Arrais | Behaviour of cold-formed steel beam-columns in case of fire |

Lunch

14.30: Session 13

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| 13.1 | Ross Johnston | Cold-formed steel portal frame structures in fire- Preliminary full scale testing and numerical modelling |
| 13.2 | André da Silva Reis | Shear Buckling in Steel Members Subjected to Fire |
| 13.3 | David Rush | Fire resistant design of concrete filled steel hollow structural sections |
| 13.4 | Katarzyna Ostapska | FEM simulation of composite column during fire exposure based on DIN EN 1991-1-2/NA:2010-03 |

Tea

17.00: Session 14

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| 14.1 | Timo Jokinen | Embedded composite columns in fire |
| 14.2 | Milica Jovanoska | Influence of cross-section shape on fire resistance of composite concrete-steel columns |

14.3	Ioan Both	Numerical analysis of a composite steel-concrete column subjected to fire, using ABAQUS
14.4	Elena Trimcheska	Fire resistance of reinforced concrete continuous beams

Sun 9 June:09.00: Session 15

15.1	Dušan Ružic	Fire analysis of partly delaminated curved reinforced concrete beam structures
15.2	Urška Bajc	Buckling resistance of a reinforced concrete frames in fire conditions
15.3	Guan Quan	Shear Panel Components in the Vicinity of Beam-column Connections in Fire

Coffee11.00: Session 16

16.1	Tai Ikumi Montserrat	Numerical approach to the effect of fire extinction processes on the spalling risk and residual properties of high strength concretes
16.2	Antonio Bilotta	Fire resistance of concrete slabs reinforced with FRP bars. Experimental investigations and numerical simulation on the thermal field and the mechanical behaviour
16.3	Eva Caldová	Timbre-fibre concrete structures in fire
16.4	Magdaléna Dufková	The Behaviour of Protected and Unprotected Wooden Members under Fire

Lunch14.30: Session 17

17.1	Josip Radeljic	Fire performance of secondary tunnels lining with different fibre combinations
17.2	Francisco Nieto Uriz	Fire safety tools. MAC IOS APPS development
17.3	María Pérez	Fire engineering learning at the school of architecture
17.4	Iolanda Del Prete	Application of Fire Safety Engineering in a tall building

Tea17.00: Session 18

18.1	Naveed Iqbal	Restrained beam behaviour in fire. Comparison of FEM to hand calculation model
18.2	Daphne Pantousa	

18.00: Session 19: Wrap-up presentation and discussion

František Wald (CTU in Prague, Czech Republic, Action Chair)

The Proceedings of the Training School will be available printed and on the Action's website shortly afterwards as a collection of PDF documents:

- Scholars' presentations
- Researchers' project abstracts
- Researchers' presentations

[Please ensure that you leave your MS PowerPoint presentation with Kamila at the event, so that it can be published.]