

Benchmarking workshop report

The workshop was opened by Mike Spearpoint and then started off with Dieter Brien (chair of ISO 16730) explaining the work of the ISO group who are developing verification and validation guidelines for fire models. This was followed by presentations by Kevin McGrattan (NIST) and Sergey Dorofeev (FM Global) who explained the experimental data they use to benchmark their FDS and FireFOAM CFD models. These presentations highlighted the fact that the current experiments used for benchmarking fire models were not typically devised for that specific purpose and that the experiments are 'scenario driven'.

Following the three presentations there was a discussion about how best to openly share the data from experiments in a comprehensive manner. The participants also discussed whether there is a need to do more experiments to benchmark fire models and if so, should the experiments be examining aspects of the fundamental physics of the model rather than specific scenarios. At this point Assaad Masri presented the work he has been involved in as part of the TNF workshops. The presentation illustrated how a specific area of interest can be tackled in detail where the experimenters and model developers are able to work together to understand each other's needs and challenges.

Following Assaad's presentation there was considerable debate by the participants about the practicality of applying the methodology to fire models. Issues such as where the money would come from, what specific aspects should be investigated and who might do the experiments were discussed. The key message in Assaad's presentation was the focus on specific research issues to enable the advancement of fire modelling. The discussion pointed to possible areas where there may already be good experiments and sufficient data to initiate such efforts. Pool fires could form such a starting point although it is suggested that a thorough survey of existing data sets could be conducted to identify experiments that could address other issues.

The establishment of a Founding Committee that could guide such processes and set the directions for future workshops was also recommended.

Overall the workshop generated a lot of interesting debate and discussion.