Call for Participation in the First Workshop Organized by the IAFSS Working Group on Measurement and Computation of Fire Phenomena

Dear Colleagues,

We would like to remind you of the new initiative, endorsed and supported by the IAFSS, called "*the IAFSS Working Group on Measurement and Computation of Fire Phenomena*" (or the MaCFP Working Group). The MaCFP Working Group will hold its first workshop on Saturday/Sunday-morning (1.5 day) on June 10 (am/pm) and June 11 (am) at Lund University, immediately before the start of the IAFSS Symposium (http://www.iafss.org/save-the-date-12th-iafss-symposium/). You can find information on the MaCFP Working Group on its website at http://www.iafss.org/macfp/.

Note that the MaCFP effort which was initially focused on gas phase flow and combustion phenomena has been recently enhanced by the creation of a new subgroup focused on pyrolysis (see http://www.iafss.org/macfp-condensed-phase-phenomena/). This subgroup is led by Morgan Bruns, Thomas Rogaume and Stanislav Stoliarov.

The workshop will focus on the general topic of the experimental validation of CFD-based fire models and will have two parts: a first part focused on gas phase phenomena (June 10) and a second part focused on condensed phase phenomena (June 11). The June 10 program will focus on experimental-computational comparisons for the five categories of target experiments that were previously identified: turbulent buoyant plumes; turbulent pool fires with gaseous fuel; turbulent pool fires with liquid fuel; turbulent wall fires; and flame extinction (see http://www.iafss.org/macfp/ for details). The June 10 program will also include a discussion of the overall MaCFP effort and a discussion of plans (gas phase subgroup) for the second MaCFP workshop. The June 11 program will present a review of the main issues associated with pyrolysis measurements and modeling for fire applications and will include a discussion of priorities for the condensed phase subgroup and planning of the second MaCFP workshop

The MaCFP Working Group is inviting the members of the entire fire research community to participate in the first workshop. While the workshop focus is of direct interest to experimental and computational fire researchers, the workshop should also be of broad interest to the community at large. Registration to the June 10-11 2017 workshop will be available as an option through the normal registration to the IAFSS Symposium, will include a modest fee to cover catering costs and will be otherwise fully open. Onsite registration will also be available.

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Organizing committee of the Condensed Phase Phenomena subgroup of MaCFP

Draft program (details may still be subject to change but dates are firm)

Saturday June 10 (Gas Phase Subgroup)	
8:00 – 8:30	*Onsite registration*
8:30 – 9:00	Welcome remarks and general presentation of MaCFP (B. Merci, J. Torero, A. Trouvé)
9:00 – 9:25	Review of current standards for CFD verification and validation (R. McDermott, A. Trouvé)
9:25 – 9:50	Open discussion
9:50 – 10:10	*Coffee break*
10:10 – 10:35	Case 1: Turbulent buoyant plumes (A. Brown, M. Gollner) • Sandia Helium plume experiment
10:35 – 11:00	Case 1: Open discussion
11:00 – 11:25	Case 2: Turbulent pool fires with gaseous fuel (J. Hewson, B. Merci) • Sandia methane-air flame experiment • NIST McCaffrey natural-gas-air flame experiment
11:25 – 11:50	Case 2: Open discussion
11:50 – 13:10	*Lunch* (provided)
13:10 – 13:35	Case 3: Turbulent pool fires with liquid fuel (B. Weckman, A. Trouvé) • Waterloo methanol-air flame experiment
13:35 – 14:00	Case 3: Open discussion
14:00 – 14:25	Case 4: Turbulent wall fires (Y. Wang, J. Torero) • FM Global vertical wall flame experiment (with gaseous fuel – methane, ethane, ethylene, propylene)
14:25 – 14:50	Case 4: Open discussion
14:50 – 15:10	*Coffee break*
15:10 – 15:35	Case 5: Flame extinction (A. Marshall, R. McDermott) • Maryland methane-air-nitrogen and propane-air-nitrogen flame experiment
15:35 – 16:00	Case 5: Open discussion
16:00 – 17:00	Next steps and plan for the Second Workshop of the MaCFP Working Group (2019): Open discussion

Sunday June 11 (Condensed Phase Subgroup)

7:30 – 8:00	*Onsite registration*
8:00 – 8:15	Welcome and overview of the "Condensed Phase Phenomena Subgroup" (M. Bruns, T. Rogaume, S. Stoliarov)
8:15 – 8:35	Kinetics and thermodynamics of condensed phase decomposition (I. Leventon)
8:35 – 8:55	Properties and composition of gaseous pyrolyzates (E. Guillaume)
8:55 – 9:15	Physics and chemistry of the gas-condensed phase interface (F. Richard)
9:15 – 9:45	Open discussion
9:45 – 10:05	*Coffee break*
10:05 – 10:25	Heat and mass transfer in the condensed phase (S. Hostikka)
10:25 – 10:45	Coupling of condensed and gas phase models (Y. Wang)
10:45 – 11:05	Inverse modeling and model complexity in computational pyrolysis: applications to PMMA and wood in fire conditions (G. Rein)
11:05 – 11:25	Applications of generalized pyrolysis models (C. Lautenberger)
11:25 – 11:55	Open Discussion
11:55 – 12:25	Next steps and plan for next workshop
12:25 – 13:25	*Lunch* (provided)