

Main outcomes of the Planning Meeting – May 8, 2015

“The IAFSS International Workshop on Measurement and Computation of Fire Phenomena” (abbreviated as the MaCFP workshop)

Task Leaders

Case 1: Turbulent buoyant plumes

(Task leaders: Alexander Brown; Michael Gollner)

- **Main target:** Sandia Helium free plume experiment; also review alternative configurations (Shabbir & George, salt water experiments)

POC for Sandia data: Alexander Brown, John Hewson

Sub-group 1: Alexander Brown, John Hewson, Bjarne Husted, Randy McDermott, Bart Merci, Venkatraman Raman, Arnaud Trouvé, Beth Weckman

- Possible additional targets: review literature on basic experiments for wall plumes and/or impinging ceiling plumes (Faeth, Motevalli, Alpert, Cooper and recent experiment at FM Global – Xiangyang Zhou)

Sub-group 1b: Andre Marshall, Jose Torero

Case 2: Turbulent pool fires with gaseous fuel

(Task leaders: John Hewson; Bart Merci)

- **Main target:** Sandia pool-like methane-air flame experiment; also review alternative configurations (Cetegen)

POC for Sandia data: Alexander Brown, John Hewson

Sub-group 2: Alexander Brown, John Hewson, Bjarne Husted, Randy McDermott, Bart Merci, Venkatraman Raman, Arnaud Trouvé, Beth Weckman

Case 3: Turbulent pool fires with liquid fuel

(Task leaders: Beth Weckman; Arnaud Trouvé)

- **Main target:** review literature on basic experiments for 30 cm liquid-fueled pool fires (Gore – heptane, Weckman – acetone, methanol, Hamins, Vantelon – toluene)

POC for pool fire data: Jay Gore, Beth Weckman

Sub-group 3: Alexander Brown, Jay Gore, John Hewson, Bjarne Husted, Andre Marshall, Randy McDermott, Bart Merci, Venkatraman Raman, Arnaud Trouvé, Beth Weckman

Case 4: Turbulent wall fires

(Task leaders: Yi Wang; Jose Torero)

- **Main target:** FM Global vertical porous burner experiment; also review alternative configurations (Most & Coutin, Consalvi & Porterie)

POC for FM Global data: Sergey Dorofeev, Yi Wang

Sub-group 4: Alexander Brown, John Hewson, Bjarne Husted, Randy McDermott, Michael Gollner, Bart Merci, Venkatraman Raman, Arnaud Trouvé, Yi Wang, Beth Weckman

Case 5: Flame extinction

(Task leaders: Andre Marshall; Randy McDermott)

- **Main target:** UMD line burner experiment; also review alternative configuration at NRL (featuring water mist and backward facing step)

POC for UMD data: Andre Marshall

Sub-group 5: Alexander Brown, John Hewson, Bjarne Husted, Andre Marshall, Randy McDermott, Bart Merci, Venkatraman Raman, Arnaud Trouvé

Additional tasks:

- Explore the definition, methodologies and procedures adopted in related research communities for CFD validation and reporting of experimental/computational uncertainties (review ASME, AIAA guidelines)

Sub-group: Alexander Brown, Arnaud Trouvé

- Develop a dedicated website for MaCFP (part of the IAFSS website) with relevant information populated during the next 2 years

Sub-group: Michael Gollner

- Develop a data archival account for MaCFP on GitHub hosting Cases 1-5 experimental data

Sub-group: Randy McDermott

- Announce the 2017 1st MaCFP Workshop and send an open invitation to participate to the entire fire research community (announcement on IAFSS website, letter to the Editor in *Fire Safety Journal*)

Sub-group: Bart Merci, Jose Torero, Arnaud Trouvé

- Define the protocols for data reporting and collective presentation of results in preparation of the 1st MaCFP workshop. The results from each sub-group activity (Cases 1-5) will be collected by the corresponding task leaders who will be ultimately responsible for presentation at the MaCFP workshop. The format of the MaCFP workshop will avoid presentations by individual investigators and will favor instead presentations by task leaders and open discussions.

Sub-group: Bart Merci, Jose Torero, Arnaud Trouvé

- Identify areas of future focus for the 2nd MaCFP workshop (ignition, pyrolysis, flame spread, spray, toxicity, pool fire in ISO room)