



ENERGY AND ENVIRONMENT DEPT. «DIPARTIMENTO
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UNIVERSITA' DI PISA
56100 PISA - ITALY

[4] OECD/NEA/CSNI – MADRID 2020 SM
Towards the plan of the Specialists Meeting

F. D'Auria

OECD/NEA/CSNI
SPECIALISTS MEETING ON TRANSIENT THERMAL-HYDRAULICS IN
WATER COOLED NUCLEAR REACTORS (SM-TH)

1st TPC Meeting, CIEMAT, Madrid (Spain), Jan.30, 2020

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SELECTED CONDITIONS & PROPOSALS



- 1) THE SM CONSTITUTES AN EVENT MADE BY EXPERTS 'TALKING' TO OTHER EXPERTS
- 2) AIX-EN-PROVENCE-1992 AND ANNAPOLIS-1996 CONSTITUTE VALUABLE EXAMPLES FOR ORGANIZATION AND MEETING STRUCTURE
- 3) ONLY (OR PRIMARILY) INVITED SPEAKERS
- 4) TYPE OF PAPERS: SYNTHESIS-REVIEW OR INNOVATIVE-IDEA-PROPOSAL
- 5) TOPIC OF PAPERS (PREFERABLY, NOT MANDATORILY) CONNECTED WITH CSNI ACTIVITIES
- 6) REQUESTED EXPERTS MAY NOT BE ABLE TO PREPARE A MEANINGFULL (FULL) PAPER WITHIN AVAIBALE TIME: SO, 1000 WORDS (MINIMUM) REQUESTED

.... LET'S START FROM THE (POSSIBLE, DRAFT) OUTCOME OF [1]

ROUGH PLANNING THE MADRID 2020 SM



CONSEQUENCE OF THE DOCUMENT [1] + DETAILS

	1° DAY	2° DAY	3° DAY	4° DAY
MORNING	TH1	TH3	TH5	CFD; UNC; BEPU; 3DNK-TH COUPLING SFP,SA-TH,NSC,FUEL,PSA
AFTERNOON	TH2	TH4	ROUND TABLE:TH-FUTURE CFD; UNC; BEPU; 3DNK-TH COUPLING SFP, SA-TH, NSC, FUEL,PSA	FINAL SUMMARY SESSION - INVITED SPEAKERS/CHAIRS
	SUMMARY SESSION	SUMMARY SESSION	SUMMARY SESSION	

SESSION TITLES AND CONDUCT



SESSION (TH-1) INSIGHTS INTO CURRENT STATE OF THE ART - 3.5 hrs, 8 slots available
SESSION (TH-2) FUNDAMENTAL ISSUES (E.G. TURBULENCE) - 3 hrs, 6 slots available
SESSION (TH-3) PHENOMENA, MODELING AND EXPERIMENTATION - 3.5 hrs, 8 slots available
SESSION (TH-4) EQUATIONS AND NUMERICAL SOLUTIONS – 3 hrs, 6 slots available
SESSION (TH-5) INSIGHTS FROM NEA/CSNI PROJECTS AND ACTIVITIES 3.5 hrs, 8 slots available

ROUND TABLE (TH-FUTURE) – 1 hr

SUMMARY SESSION – (each) 1 hr

FINAL SUMMARY SESSION – 3 hrs – 1 hr open to all

SESSION (SPA) SPECIAL AND PROSPECTIVE AREAS 4.5 hrs, 10 slots available

‘ADDITIONAL’ PROPOSED IDEAS

- 1) TO HAVE «AN INCREASED» NUMBER OF SPEAKERS PRESENTING SHORT-DEEP INSIGHTS (e.g. experts talking to experts)**
- 2) SESSION CHAIRS TO WORK BEFORE THE SM BASED ON AVAILABLE PAPERS; FINALIZE THEIR REPORT AT THE DAILY ‘SUMMARY SESSION’ AND DELIVER AT THE FINAL SUMMARY SESSION**
- 3) EACH AUTHOR PRESENTATION 15’ (including 5’ Q&A), AND EXCEPTIONALLY 30’ (including 10’ Q&A)**
- 4) DAILY SUMMARY SESSIONS (1 hr) OPEN TO ALL: open working-discussions by session chairs and TPC; 15’ given to participants**

SESSION TOPICS/PAPERS 1 OF 3



MAI = Multiple Author Invited

SESSION (TH-1) INSIGHTS INTO CURRENT STATE OF THE ART

Aix-en-Provence-1992 and Annapolis-1996

NURETH-2013-2015-2017-2019

TH needs at EC

TH needs at IAEA

TH status and needs in China

TH status and needs in India

TH status and needs in Russia

The Special Issue in nuclear TH of J NED 2019 devoted to the memory of Sehgal, Yadigaroglu and Hewitt

SESSION (TH-2) FUNDAMENTAL ISSUES (E.G. TURBULENCE)

POTENTIAL SPEAKERS (LIST BELOW) SHOULD SELECT A MEANINGFUL THEME

SESSION TOPICS/PAPERS 2 OF 3



SESSION (TH-3) PHENOMENA, MODELING AND EXPERIMENTATION

List of 116 Phenomena

POTENTIAL SPEAKERS (LIST BELOW) SHOULD SELECT A MEANINGFUL THEME

SESSION (TH-4) EQUATIONS AND NUMERICAL SOLUTIONS

3D modeling-CSNI
Industry needs

POTENTIAL SPEAKERS (LIST BELOW) SHOULD SELECT A MEANINGFUL THEME

SESSION (TH-5) INSIGHTS FROM NEA/CSNI PROJECTS AND ACTIVITIES

THICKET, BEMUSE, PREMIUM & SAPIUM (MAI) 30'
Scaling SOAR and Passive Systems
ISP-50 & ATLAS project
PKL PROJECT
ROSA/LSTF PROJECT,
PANDA PROJECT.
SESAR TH perspectives

SESSION TOPICS/PAPERS 3 OF 3



ROUND TABLE SESSION (TH FUTURE)

To be finalized at the next meeting of the TPC

Possible Panelists: Bestion, Hassan

SESSION (SPA) SPECIAL AND PROSPECTIVES AREAS

CFD
VALIDATION
UNC
BEPU
3DNK-TH COUPLING
SFP,
SA-TH
NSC (including DB)
NUCLEAR FUEL
PSA needs

POTENTIAL (INVITED) SPEAKERS (A-F)



Adorni M.							SPA SFP
Aksan N.	TH1-Aix						
Anglart H.			TH3				
Baccou J.						TH5 MAI SAPIUM	
Bajorek S							
Banerjee S.		TH2					
Barrè F.						TH5 SESAR	
Benamadouce S.							
Bestion D.		TH2	TH3	TH4			
Bolshov L.	TH1-Russia						
Buongiorno J.							
Bousbia-Salah A.	TH1 MAI-NURETH						TH5 MAI passive
Chabod A.				TH4 industry			
Cheng Xu	TH1-China						
Choi K-Y.						TH5 ISP50	
Corradini M.		TH2					
D'Auria F.			TH3-list				SPA BEPU
Duffey R. B.				TH4			
Fillion P.		TH2					
Futterer M.	TH1-EC						

POTENTIAL (INVITED) SPEAKERS (G-M)



	TH1 MAI-NURETH	TH2	TH3	TH4	TH5 MAI BEMUSE	SPA	UNC
Glaeser H.							
Giot M.							
Groeneveld D.			TH3				
Gupta S.			TH3				
Hampel U.			TH3				
Hassan Y.		TH2				SPA	CFD
Herer C.				TH4-CSNI			
Herranz L.						SPA	SA-TH
Hyvarinen J.				TH4			
Ivanov K.						SPA	3DNK TH COUPLING
Ivanova T.						SPA	NSC
Jeong J. J.		TH2		TH4			
Kim K. D.			TH3	TH4			
Lakehal J.		TH2					
Lien P.						SPA	Validation
Lillington J.			TH3				
Luxat J.							
Mahaffy J				TH4			
Monti S.	TH1-IAEA						
Mull T.				TH4			

POTENTIAL (INVITED) SPEAKERS (N-Z)



Nakamura H.				TH5-ROSA	
Nam Dinh		TH2			
Nayak A.	TH1-India				
Ninokata H.		TH2			
Nitheanandam T.				TH5 MAI THICKET	
Paladino D.				TH5 PANDA	
Podowski M.		TH2			
Prasser H-M.			TH3		
Reyes J.				TH4	
Reventos F.					TH5 MAI scaling
Riznic J.	TH1-Special				
Rohatgi U.S.			TH3		
Rossi L.			TH3		
Sanchez Perea				TH4	
Skorek T.					TH5 MAI PREMIUM
Todreas N.					
Tuomisto H.					
Umminger K.					TH5 PKL
Vacher J-L.					
Vitanza C.					SPA FUEL (Kaeri)?
Wielenberg A.					SPA PSA needs
Wulff W.				TH4	

POTENTIAL SESSION CHAIRS



SESSION CHAIRS OTHER THAN CHAIRING THE SESSION, SHALL BE EXPECTED TO WRITE SESSION SUMMARY REPORT AND ATTEND THE SUMMARY MEETINGS ON DAYS 1, 2, 3 & 4.

**Aksan N.
Bajorek S
Barrè F.
Bestion D.
D'Auria F.
Glaeser H.
Herranz L.
Jacquemain D.
Nakamura H.
Sanchez Perea**

**AN ORGANIZING COMMITTEE COULD BE FORMED IN MADRID TO
MANAGE THE LOCAL ORGANIZATION OF THE SM**

**THE COMMITTEE SHOULD BE CHAIRED BY LUIS AND HAVE (AS
EXTERNAL MEMBER) THE NEA SECRETARY**

SPECIFIC DUTIES COULD BE

- A) TO CONTACT EC AND IAEA FOR FUNDING RETIRED SCIENTISTS**
- B) TO CONTACT INDUSTRY (FRAMATOME, CEA, EDF, WESTINGHOUSE ...) FOR
FUNDING RETIRED SCIENTISTS**

LETTER TO (INVITED) SPEAKERS



Dear All

Attached you can find four ([1] to [4]) documents describing the background and the organization of the OECD/NEA/CSNI Specialists Meeting on Transient Thermal-hydraulics of Water Cooled Nuclear Reactors (SM-TH) to be held in Madrid at the end of 2020. As you may see, this is the follow-up of prestigious past CSNI Conferences (the last one on this theme was in Annapolis, 1996).

An ambitious endeavour has been planned: in this connection thanks for any comment to the documents [1] to [4]. On the behalf of the TPC, it is my pleasure to inform that you are in a list of potential invited speakers, pages 9-11 of document [4]. Three situations are possible:

- a) Your name is associated to a topic and a session;
- b) Your name is associated to a session;
- c) Your name is not associated to any session.

Whatever is the situation a), b) or c), I kindly ask you to confirm or to propose one or more papers. An answer with the title(s) of your proposed paper(s) is expected by February 28, 2020. In order to minimize the burden and considering the strategic (innovation) character of the Madrid-2020 SM TH, a short paper (at least 1000 words) will be requested (to be ready by June 30, 2020)..Thanks for any consideration you may give (whether this is appropriate) to the last NURETH (Portland, Aug. 2019) and to the Special Issue J NED vol 354 (doc. [3]).

Thanks also for providing (if possible) any idea for the Round-Table Session including your availability to make a presentation.

Following your reply you might be invited to prepare a Multiple Author Invited (MAI) paper..If your name appears in red characters, an attempt will be made to pay trip and accomodation expenses for your participation