



International Flame Research Foundation

IX Liekkipäivä, 23rd of October 2018, Espoo

Organized by the Finnish Flame Research Committee

IX LIEKKIPÄIVÄ The 9th Finnish Flame Day Dipoli, Espoo, 23.10.2018

General program,

08:30	Registration & Coffee	Common Area
09:15 - 10:40	Opening of IX Liekkipäivä	Palaver Hall
10:40 - 11:00	Morning Coffee Break	Common Area
11:00 - 12:20	Morning Parallel Sessions (A & B)	Palaver & Takka Halls
12:30 - 13:30	Lunch	Metso Hall
13:30 - 14:20	Poltto ja Palaminen Session	Palaver Hall
14:25 - 15:25	Early Afternoon Parallel Sessions (C, D & E)	Palaver, Takka & Poli Halls
15:25 - 15:45	Afternoon Coffee break	Common Area
15:45 - 16:45	Late Afternoon Parallel Sessions (F, G & H)	Palaver, Takka & Poli Halls
16:50 - 17:05	Closing Ceremony	Palaver Hall
18:30	Dinner	Metso Hall

Parallel sessions' topic:

A, D: Reaction Kinetics & Combustion Chemistry.

B: Solid Fuel Combustion.

C, G & H: Novel Concepts, Technologies & Systems

E: Heterogeneous and Spray Combustion.

F: Diagnostics



International Flame Research Foundation

IX Liekkipäivä, 23rd of October 2018, Espoo

Organized by the Finnish Flame Research Committee

Detailed program,

08:30	Registration & Coffee		Common Area
09:15-10:40	Opening of IX Liekkipäivä		Palaver Hall
09:15	<i>Opening of IX Liekkipäivä</i> Vesna Barisic - Chairperson of FFRC		
09:30	<i>IFRF Presentation</i> Philip Sharman - Chairperson of the IFRF.		
10:00	<i>Negative CO2 emissions by bioenergy with carbon capture and storage - why and how?</i> Toni Pikkarainen - VTT Technical Research Centre of Finland Ltd.		
10:40-11:00	Morning Coffee Break		Common Area
Morning Parallel Sessions			
11:00-12:20	Session A: Reaction Kinetics & Combustion Chemistry Chair: Anders Brink, Åbo Akademi University. Palaver Hall	Session B: Solid Fuel Combustion Chair: Philip Sharman, IFRF. Takka Hall	
11:00	A1: Accurate determinations of rate coefficients under combustion-relevant conditions: Photoionization mass spectrometry & master equation simulations. <i>Timo Pekkanen, University of Helsinki.</i>	B1: Influence of particle size distribution on the behavior of alkali & alkaline earth metals in solid recovered fuel combustion in a circulating fluidized bed. <i>Jonatan Skagersten, Aalto University.</i>	
11:20	A2: Study of high-temperature oxidation of wood combustion particles using tandem differential mobility analysis. <i>Heikki Lamberg, University of Eastern Finland.</i>	B2: Dynamic testing of co-combusting lignite with straw & refuse derived fuels in a 1MWth pilot plant. <i>Mikko Salo, Sumitomo SHI FW.</i>	
11:40	A3: Use of chemical equilibrium modeling in boiler design. <i>Aino Vettenranta, Valmet Technologies Oy.</i>	B3: Using freshly cut wood chips as a fuel in heat plants, efficient Finnish bioenergy production. (FI) <i>Raimo Timonen, University of Helsinki.</i>	
12:00	A4: Three-dimensional modeling of a Chinese circulating fluidized bed incinerator firing municipal solid waste. <i>Markku Nikku, Lappeenranta University of Technology.</i>	B4: Asphaltene fluidised bed combustion. <i>Toni Pikkarainen, VTT Technical Research Centre of Finland Ltd.</i>	
12:30-13:30	Lunch		Metso Hall



International Flame Research Foundation

IX Liekkipäivä, 23rd of October 2018, Espoo

Organized by the Finnish Flame Research Committee

13:30-14:20	Poltto ja Palaminen Session			Palaver Hall
13:30	<i>Rewarding the "Poltto ja palaminen" 2017 thesis award</i> Sonja Enestam – Vice Chair of FFRC			
13:40	<i>The importance and sustainability of bioenergy in Finland and globally</i> Jukka Konttinen - Tampere University of Technology.			
Early Afternoon Parallel Sessions				
14:25-15:25	Session C: Novel Concepts, Technologies & Systems Chair: Jukka Röppänen, Andritz Oy. Palaver Hall	Session D: Reaction Kinetics & Combustion Chemistry Chair: Aino Vettenranta, Valmet Technologies Oy. Takka Hall	Session E: Heterogeneous and Spray Combustion. Chair: TBA Poli Hall	
14:25	C1: 2017 Poltto ja Palaminen Award winner: Measuring fuel particle velocities in a pilot-scale circulating fluidized bed riser. <i>Felix Wikholm, Aalto University.</i>	D1: Applying non-linear embedding & clustering algorithms for high-dimensional combustion problem. <i>Heikki Kahila, Aalto University.</i>	E1: Towards understanding autoignition chemistry of fuel–Air (Oxygen) mixtures important for new IC-engine technologies using a novel high-pressure reactor interfaced with a synchrotron photoionization time-of-flight mass-spectrometer. <i>Arkke Eskola, University of Helsinki.</i>	
14:45	C2: Next generation ultra-low NO _x burner by Oilon. <i>Lassi Karvonen, Oilon Technology Oy.</i>	D2: Gradient based emission optimization of a BFBB. <i>Georgios Kanellis, Tampere University of Technology.</i>	E2: Influence of temperature on diesel spray ignition in methane-air mixtures. <i>Bulut Tekgul, Aalto University.</i>	
15:05	C3: Achieving lower cost negative CO ₂ emissions with new bio-CLC technology. <i>Tomi J Lindroos, VTT Technical Research Centre of Finland Ltd.</i>	D3: Characterization & kinetic study of the combustion of coffee-pine-based wood briquettes. <i>Ekaterina Sermyagina, Lappeenranta University of Technology.</i>	E3: A visualization of diesel-methane dual fuel combustion in an optical engine. <i>Zeeshan Ahmad, Aalto University.</i>	
15:25-15:45	Afternoon Coffee break			Common Area



International Flame Research Foundation

IX Liekkipäivä, 23rd of October 2018, Espoo

Organized by the Finnish Flame Research Committee

Late Afternoon Parallel Sessions			
15:45-16:45	Session F: Diagnostics Chair: Mika Järvinen, Aalto University. <p style="text-align: right;">Palaver Hall</p>	Session G: Novel Concepts, Technologies & Systems Chair: Toni Pikkarainen, VTT Technical Research Centre of Finland Ltd. <p style="text-align: right;">Takka Hall</p>	Session H: Novel Concepts, Technologies & Systems Chair: Mari Laakso, Oilon Technology Oy. <p style="text-align: right;">Poli Hall</p>
15:45	F1: Online laser monitoring of metal chloride & oxygen concentration using collinear photo-fragmentation & atomic absorption spectroscopy. <i>Jan Viljanen, Tampere University of Technology.</i>	G1: Chemical Looping Combustion of biomass – fate of ash forming elements. <i>Anders Brink, Åbo Akademi University.</i>	H1: Circulating Fluidized Bed Scrubber (CFBS) pilot tests in 1 MWth scale. <i>Mariana Carvalho, Sumitomo SHI FW.</i>
16:05	F2: Wood Combustion Simulator (SIMO): A novel concept for studying small-scale combustion appliances. <i>Sampsä Väättäinen, University of Eastern Finland.</i>	G2: Protective coatings for high temperature chlorine induced corrosion & erosion. <i>Davide Fantozzi, Valmet Technologies Oy.</i>	H2: Steam-blown dual fluidized-bed gasification of biomass residues for intermediate-scale production of transportation fuels & heat. <i>Sanna Tuomi, VTT Technical Research Centre of Finland Ltd.</i>
16:25	F3: Characteristics of a pressure-swirl atomizer while injecting high-viscosity liquids. <i>Santeri Koivisto, Aalto University.</i>	G3: A novel method for long-term measurements to investigate the effect of a temperature gradient on recovery boiler deposit chemistry & morphology. <i>Roland Balint, Åbo Akademi University.</i>	H3: Electrically enhanced particle matter reduction of flue gas scrubbers & cyclones in small biomass-fired boilers. <i>Heikki Suhonen, University of Eastern Finland.</i>
16:50-17:05	Closing Ceremony		
16:50	Palaver Hall		
16:50	<i>Introducing the Nordic Flame Days 2019</i> Anders Brink – 2019 Organizing Committee		
17:00	<i>Concluding the 9th Liekkipäivä</i> Mohamed Magdeldin – FFRC Secretary		
18:30	Dinner		
	Metso Hall		