



European Collaborative Dissemination of Aeronautical research and applications
An FP7 AERONAUTICS and AIR TRANSPORT (AAT) Coordination and Support Action (CSA)



4th Aerospace Thematic Workshop: Fundamentals of Aerodynamic Flow and Combustion Control by Plasmas



Aussois, France
April 7-12, 2013
eucass.eu/atw2013

	Monday, April 8	Tuesday, April 9	Wednesday, April 10	Thursday, April 11	Friday, April 12
Topic	Aerodynamic flow control	Plasma-assisted combustion	Kinetics modeling	Diagnostics	Advanced simulations
8:40-9:00	Opening				ECCOMAS/EUCASS Joint session
9:00-10:00	1. Richard Miles (Princeton). Flow control and steering using on-surface and off-surface plasmas	6. Tim Ombrello Plasma-assisted combustion: from benchtop experiments to high-speed propulsion applications	11. Charles K. Westbrook (Sandia National Laboratory) Low temperature kinetic mechanisms in combustion: opportunities for combustion modification	16. Uwe Czarnetski (Bochum). Laser electric field measurement and ultra-fast imaging spectroscopy in atmospheric pressure plasmas	19. Bénédicte Cuénot (CERFACS). Advanced simulations of combustion phenomena: from spark discharges to stable combustion
10-10:30	Coffee break				
10:30-11:30	2. Subrata Roy (University of Florida). Advances in DBD plasma actuators	7. Suk Ho Chung (KAUST). Electric field effect on flame stabilization	12. Nickolay Aleksandrov (MIPT) Kinetics of plasma-assisted ignition: mechanisms and computer simulations	17. Walter Lempert (Ohio State). Raman, CARS, and TALIF measurements of a diffuse single filament nsec pulsed discharge	20. Laxminarayan Raja (UT Austin). Modeling of plasma-assisted combustion
11:30-12:30	3. David Van Wie (Johns Hopkins). Recent advances in sparkjet actuators	8. Guillaume Vanhove (Lille). Plasma assisted combustion in a Rapid Compression Machine	13. Rich Yetter (Penn State). Kinetics of plasma-assisted hydrocarbon oxidation in flow reactors	18. Sean O'Byrne (University of New South Wales). Laser diagnostics for hypersonic flows and plasma-assisted combustion	21. François-Xavier Roux (ONERA). Parallel processing for advanced data reduction and numerical simulations.
12:30	Lunch				
					22. Conclusions
					Lunch
Topic	Aerodynamic flow control	Plasma-assisted combustion	Diagnostics	Free time	
17:00-18:00	4. Doyle Knight (Rutgers) Laser spike and Sparkjet	9. Jonas Moeck (TU Berlin) Control of combustion dynamics using plasma discharges	14. Armelle Cessou (CORIA). Diagnostics for combustion.		
18:00-19:00	5. Ivan Moralev (IVTAN). Control of shear layer instabilities by plasma actuators. Noise reduction and flow control applications	10. Elena Kustova. Supersonic flow control by microwave discharge and nonequilibrium processes in viscous gas flows	15. Guillaume Pilla (IFP). Optical diagnostics for automotive engine research		
19.30	Dinner	Dinner	Dinner	Banquet dinner	
20.30-22.30	Poster Session 1	Poster Session 2	Poster Session 3		

Visit to ONERA facilities in Modane on Wednesday afternoon 2-5 PM (for those participants who signed up for it, and contingent upon issuance of clearance)