

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



Les Houches – Mont-Blanc
France
October 11-16, 2009
<http://eucass.eu/atw2009>

	Monday, October 12	Tuesday, October 13	Wednesday, October 14	Thursday, October 15	Friday, October 16
Topic	Plasma assisted combustion	Diagnostics	Kinetics modeling	Aeroflow control	Advanced modeling
9.00-10.00	1. Richard Miles (Princeton) Current needs and challenges in plasma-assisted combustion and aerodynamic flow control	6. Katharina Kohse-Hoeinghaus (U. Bielefeld) Diagnostics and combustion chemistry	11. Nikolai Aleksandrov (MIPT) Simulation of active species production in nonequilibrium discharge plasmas	14. Mo Samimy (OSU) Control of High Speed and High Reynolds Number Flows Using Plasma Actuators	19. Gianpiero Colonna (Bari) Free electron and internal state kinetics for modeling discharges and flows
10:00-10:30	Coffee break				
10.30-11.30	2. Yiguang Ju (Princeton) Kinetic and Transport Enhancement on Ignition and Flame Stabilization by Using Non-Equilibrium Plasma Discharge	7. Santolo de Benedictis (University of Bari) Detection of N ₂ (A) metastable by OODR-LIF in high pressure DBDs and related issues	12. Hai Wang (USC) Recent progress in fundamental, neutral chemical kinetics of real-fuel combustion	15. Tom Corke (Notre Dame) Modeling and Applications of Dielectric Barrier Discharge Plasma Actuators	20. Mark Ainsworth Advanced mathematical modeling
11.30-12.30	3. Sergey Leonov (IVTAN) Ignition and Flameholding of Gaseous Fuels by Electrical Discharge in M>1 Airflow	8. Ajmal Mohamed (ONERA) IR Absorption & CRDS of hypersonic flows	13. Nikolay Popov (MSU) The effect of nonequilibrium excitation on H ₂ : O ₂ : N ₂ mixtures ignition	16. Ali Gülhan (DLR) Experiments on electrodynamic heat shield effects in high enthalpy flows	21. Sergey Macheret (tbc). Round table discussions and conclusions
12.30-14	Lunch				
14.00-17.00	Free time				
17.00-18.00	4. Anatoly Napartovich (TRINITI) Problems of modelling of non-thermal discharge evolution in chemically unstable gas mixtures	9. Gabi Stancu (Ecole Centrale Paris) Advanced optical diagnostics for the characterization of kinetic processes in plasma assisted combustion	Free time	17. Victor Soloviev (MIPT) Features of surface barrier discharge simulation for aerodynamic applications	
18.00-19.00	5. Mark Cappelli (Stanford) Nonequilibrium Plasma Flame Holding in Subsonic and Supersonic Flows	10. Nader Sadeghi Kinetics of atoms, molecules and charged particles in nitrogen afterglow (CRDS, ICLAS, OES femtosecond laser absorption,)		18. Datta Gaitonde Simulation-Based Analysis of Separation, Transition and Mixing Control	
Dinner				Banquet Dinner	
20.30-22.30	Poster Session 1	Poster Session 2	Poster Session 3		