



5th EUCASS Aerospace Thematic Workshop: Fundamentals of Aerodynamic Flow and Combustion Control by Plasmas



Les Houches,
France
April 12-17, 2015

	Monday, April 13	Tuesday, April 14	Wednesday, April 15	Thursday, April 16	Friday, April 17
Topic	Aerodynamic flow control	Plasma-assisted combustion	Diagnostics	Kinetics modeling	Advanced simulations
8:40-9:00	Opening				
9:00-10:00	1. Sergey Macheret. (Purdue, USA) Physics and applications of microplasmas for flow control	6. Igor Adamovich (Ohio State, USA). Mechanisms of energy conversion and chemical reactions in air and fuel-air plasmas	11. Robert Lucht (Purdue, USA) Applications of nanosecond and femtosecond CARS in flames and plasmas	14. Henry Curran (NUI Galway) Developing detailed chemical kinetic mechanisms for fuel combustion	19. Natalia Babaeva (JIHT, Russia). Modeling of plasma actuators with ns pulsed discharges
10-10:30	Coffee break				
10:30-11:30	2. Victor Kopiev (TsAGI, Russia) Suppression of aerodynamic noise with plasma actuators	7. Martin Gundersen (USC, USA) Nonequilibrium, transient plasmas generated by unipolar nanosecond pulses for combustion applications	12. Giorgio Dilecce (Bari, Italy) LIF on simple molecular radicals from combustion to gas discharges	15. Yiguang Ju (Princeton, USA). Plasma-activated low temperature combustion: opportunities and challenges	20. Juliette Ryan (ONERA, France). Parallel multi-domain numerical methods
11:30-12:30	3. Jesse little (U. of Arizona) Nanosecond Pulse Surface Discharges for Control of Turbulent Shear Flows	8. Andrei Starikovskiy (Princeton) Non-Boltzmann chemically-active systems under strong pulsed excitation	13. Volker Schulz-von der Gathen (Ruhr-Universität Bochum, Germany) Dynamics of the discharge evolution of micro discharge arrays	16. Nikolay Popov (MSU, Russia) Kinetics of electronically and vibrationally excited particles for PAC	22. Round table and Conclusions
12:30	Lunch				Lunch
Topic	Aerodynamic flow control	Plasma-assisted combustion	Free time	Kinetics	
17:00-18:00	4. Paul-Quentin Elias (ONERA, France) Pulsed Surface Discharges: towards flow control applications	9. Sergey Leonov (Ohio State, USA). Plasma based enhancement of air/fuel mixing in compressible flow		17. Gianpiero Colonna (Bari, Italy). State-to-state kinetics in CH ₄ /air	
18.00-19.00	5. Sven Grundmann (TU Darmstadt) DBD Plasma Actuators for Transition Control	10. Benoit Fiorina (Ecole Centrale Paris, France). Toward plasma-assisted combustion modeling: LES simulations of turbulent flames with detailed chemistry		18. Maksim Deminsky (Kurchatov Institute, Russia) Theoretical limits of plasma application for gas turbine turndown and premixed supersonic combustion	
19.30	Dinner	Dinner	Dinner	Banquet dinner	
20.30-22.30	Poster Session 1	Poster Session 2	Poster Session 3		