



Basic Research Innovation and Collaboration Center (BRICC)  
4075 Wilson Blvd., Suite 350 | Liberty Room  
Arlington, VA 22203

### Agenda Day 1 | Tuesday, June 7

Time	Title	Speaker
0730 - 0800	Registration	
0800 - 0810	Opening Remarks	Ralph Anthenien, ARO, Song-Charn Kong, NSF and Chiping Li, AFOSR
Combustion Chemistry (Chair: Ralph Anthenien)		
0810 - 0830	Summary of the 2 <sup>nd</sup> Second International Workshop on Combustion Chemistry Models of Real HC Fuels (June 6, 2016)	Fokion Egolfopoulos, USC
0830 - 0900	Progress in Real Jet Fuel Combustion Chemistry	Tom Bowman, Stanford
0900 - 0930	Progress in C1-C4 Foundational Combustion Chemistry	Greg Smith, SRI
0930 - 1000	Automated Discovery of Important Chemical Reactions	William Green, MIT
1000 - 1015	BREAK	
1015 - 1045	Temperature and Species Uniformity Required for a Jet Stirred Reactor: Based on CFD Results	Paul Ronney, USC
High-Pressure and Multiphase Fuel Behavior (Chair; Ralph Anthenien)		
1045 - 1115	Fluid Behavior at the High-Pressure Conditions	Mallisa Lightfoot, AFRL/RQR
1115 - 1145	Molecular Dynamics Simulation of Hydrocarbon Fuels Vaporizing into a High Temperature and Pressure	Qiao Li, Purdue
1145 - 1245	LUNCH	
Multiphase Fuel Behavior (Chair; Chiping Li)		
1245 - 1315	Spatial and Temporal Characteristics of Primary Atomization and Clustering in Sprays	Yannis Hardalupas, Imperial College
1315 - 1345	Aerated-Liquid Injection Environment	Steven Lin and Campbell Carter, AFRL/RQH

<b>Detonation (Chair: Chipping Li)</b>		
<b>1345 - 1415</b>	Rotational Rocket Detonation Engine Demonstration Experiments	Steve Heister, Purdue
<b>1415 - 1445</b>	Supersonic Combustion and Detonation	Ken Yu, Maryland
<b>1445 - 1500</b>	<b>BREAK</b>	
<b>1500 - 1530</b>	RDE Research at AFRL	Fred Schauer, AFRL/RQ
<b>Combustion in High-Speed Flows (Chair, Chipping Li)</b>		
<b>1530 - 1600</b>	Ignition in High-Speed Reacting Flows	Tim Ombrello/Ez Hasson, AFRL/RQH
<b>1600 - 1630</b>	Energy Transformation, Transfer and Release Dynamics in High-Speed Turbulent Flows	Paul Dimotakis, Caltech and Graham V. Candler, Minnesota
<b>1630 - 1700</b>	Scramjet Combustion Research	Michael Smart, Vince Wheatley and Anand Veeraragavan, University of Queensland
<b>1700</b>	<b>MEETING ADJOURNED FOR THE DAY</b>	

<b>Agenda Day 2   Wednesday, June 8</b>		
<b>Time</b>	<b>Title</b>	<b>Speaker</b>
<b>0730 - 0755</b>	<b>Registration</b>	
<b>0755 - 0800</b>	Daily Announcements	Ralph Anthenien, ARO, Song-Charn Kong, NSF and Chipping Li, AFOSR
<b>Plasma-Assisted Combustion (Chair, Dick Miles)</b>		
<b>0800 - 0830</b>	Predictive Science & Plasma-Coupled Combustion, a DOE-PSAAP2 Effort	Jonathan Freund, UIUC
<b>Combustion Diagnostics - Turbulent Flame Structure and Flow Field (Chair, Dick Miles)</b>		
<b>0830 - 0900</b>	Laser Combustion Diagnostics for Jet Engine and Scramjet	Tonghun Lee, UIUC,
<b>0900 - 0930</b>	High-Speed Diagnostics for Scramjet Combustion	Campbell Carter, AFRL/RQH

0930 - 1000	Particle-Free Spatially-Resolved Two-Component Velocimetry	Mirko Gamba, Michigan
1000 - 1015	BREAK	
Combustion Diagnostics - Species and Temperature for Combustion Chemistry (Chair: Ron Hanson)		
1015 - 1045	Ultra-Fast Optical Approaches for Fundamental Exploration of Combustion Chemistry Pathways	James Gord, AFRL/RQT and Suresh Roy, Spectral Energy
1045 - 1115	Applications of Frequency Comb in Combustion Diagnostics	Greg Rieker, University of Colorado, Boulder
1145 - 1300	LUNCH	
Combustion Diagnostics - Species and Temperature for Combustion Chemistry (Chair: Cam Carter)		
1300 - 1330	Composition-Pressure Measurements Using Line-Shape Information	Venkateswaran Narayanaswamy, NC State
1330 - 1400	Laser Diagnostics for Solid-Fuel Combustion	Clare Dennis, NAWC
Burner Stabilized Flame (Chair, Fokion Egolfopoulos)		
1430 - 1500	"Experimental Studies of Hydrocarbon Flame Phenomena: Enabling Combustion Control"	Kevin Lyons, NCSU
1500 - 1530	Real-Flame Effects in Laboratory Turbulent Flames: The Counter-flow Paradigm	Alessandro Gomez, Yale
1530 - 1545	BREAK	
1545 - 1700	ARO/AFOSR Combustion Portfolio Business Meeting	
1700	MEETING ADJOURNED FOR THE DAY	

<b>Agenda Day 3   Thursday, June 9</b>		
<b>Time</b>	<b>Title</b>	<b>Speaker</b>
<b>0730 - 0755</b>	<b>Registration</b>	
<b>0755 - 0800</b>	Daily Announcements	Ralph Anthenien/ARO, Song-Charn Kong, NSF and Chiping Li, AFOSR

Interaction between Turbulent Flame and Combustion Chemistry; (Chair: Hai Wang)		
0800 - 0830	Rate-Controlling Effects from High-Intensity Turbulence-Flame Interactions Using 4D Measurements	Adam Steinberg, U Toronto
0830 - 0900	Turbulent JP-8 Flames: Concentration and Temperature Profiles	James Driscoll, Michigan
0900 - 0930	Spatio-Temporal Behavior of Turbulent Non-Premixed Jet Flames and Auto-Igniting Fuel Jets	Jeff Sutton, OSU
0930 - 1000	BREAK	
1000 - 1030	Turbulent Flame Structure	Alexei Poludnenko, NRL, Maryland
1030 - 1100	Interdependence of Flame Structure and Combustion Chemistry	Tianfeng Lu, U Conn
1100 - 1130	Multi-Scale Interaction in High-Speed Turbulent Reacting	Peter Hamlington, UC Boulder
Lunch Time Special Session: How to Put Combustion Chemistry and Turbulent Flame Together, (Discussion Leaders: Jim Driscoll and Hai Wang)		
1130 - 1145	DISTRIBUTING LUNCH	
1145 - 1215	Lead Presentation: Turbulent Combustion: Modeling Requirements and Proper Validation	Venke Sankaran, AFRL
1215 - 1315	Discussion	
1315 - 1330	BREAK	
More on Turbulent Combustion (Chair: Jim Driscoll)		
1330 - 1400	Energy and Momentum Exchanges in Turbulent Combustion	Carlos Pantano, UIUC
1400 - 1430	Energy Backscatter and Small/Large-Scale Interactions in Turbulent Reacting Flows	Javier Urzay and Matthias Ihme, Stanford
1430 - 1500	Premixed Flame Structure and Propagation Characteristics in Intense Turbulence and in Compressible Flows	Suresh Menon, Georgia Tech and Robert Pitz, Vanderbilt
1500 - 1515	BREAK	
1515 - 1545	An Investigation on Structures of Premixed Flames in High Intensity Turbulent Flow	Ahsan Choudhuri, Univ. of Texas, El Paso
1545 - 1615	Structure and Dynamics of Highly Turbulent, Interacting Flames	Jacqueline O'Connor, Penn State
1615 - 1645	Emerging Interactions between Turbulent Combustion Experiments and Computations in Relevant Regimes	Brent Rankin, AFRL/RQT
1700	MEETING ADJOURNED FOR THE DAY	

Agenda Day 4   Friday, June 10		
Time	Title	Speaker
0730 - 0755	Registration	
0755 - 0800	Daily Announcements	Ralph Anthenien/ARO, Song-Charn Kong, NSF and Chiping Li, AFOSR
Reacting Flow Simulation (Chairs: Song-Charn Kong)		
0800 - 0830	Radiative Heat Transfer and Turbulence-Radiation Interactions under Engine-Relevant Conditions	Dan Haworth, Penn State
0830 - 0900	Detailed Simulations of Soot Formation in Non-Premixed Jet Flames	David Lignell, BYU
AFOSR/NSF Joint Turbulent Combustion Initiative (Chairs: Song-Charn Kong, and Chiping Li)		
0900 - 1000	Spectral Energy Transfer in Turbulent Flames	Guillaume Blanquart, Caltech and Fokion Egolfopoulos, USC
1000 - 1015	BREAK	
1015 - 1115	Experiments and Theory of Non-Equilibrium Processes in Turbulent Combustion	Venkat Raman, Michigan and Noel Clemens, UT Austin
1115 - 1230	Turbulent Flame Structure of Cavity Stabilized Reacting Shear Layers	Hasha Chelliah UVA, Chris Goyne, UVA, Andrew Cuttler, GWU, and Jack Edward, NCSU
1230 - 1300	Discussion and Concluding Remarks	
1300	MEETING ADJOURNED FOR THE DAY	