

FRIDAY–30 JULY 2004

50TH ANNIVERSARY LECTURE – 8:30
Computational Combustion, C.K. Westbrook, Y. Mizobuchi, T. Poinso, P.J. Smith, J. Warnatz
Charles K. Westbrook, Lecturer
Chairs: Ronald K. Hanson and R. Peter Lindstedt

9:30

BREAK

Room	Lecture Center F4	BSB 250	II Rm A&B	Lecture Center F1	Lecture Center F6	Lecture Center AI	Lecture Center F3
	Pollutants <i>Chairs: J.H. Miller J. Vandooren</i>	Plasma Supported Flames <i>Chairs: A.A. Konnov M.J. Pilling</i>	Chemistry Effects in Turbulent Flames <i>Chairs: L.P. DeGoey J.Y. Chen</i>	Micro Combustors: <i>Chairs: M. Kobayashi D. Dunn-Rankin</i>	Fire Research <i>Chairs: G.T. Linteris A. Trouvé</i>	Ignition & Stabilization of Laminar Flames <i>Chairs: M.A. Delichatsis T.L. Jackson</i>	Stationary Power Systems <i>Chairs: G.J. Nathan R. Weber</i>
10:00	5A01: The Effects of Pressure on the Yields of Polycyclic Aromatic Hydrocarbons Produced During the Supercritical Pyrolysis of Toluene <i>E.B. Ledesma, M.J. Wornat, P.G. Felton, J.A. Sivo</i>	5B01/02 Plasma Supported Combustion	5C01: A Priori Investigation of the Constructed PDF Model <i>G.M. Goldin</i>	5D01: Theoretical and Experimental Studies on Mesoscale Flame Propagation and Extinction <i>Y. Ju, B. Xu</i>	5E01: Effects of Fuel Lewis Number on Flame Spread over Solids <i>K. Tolejko, I.I. Feier, J.S. T'ien</i>	5F01: Non-Premixed Ignition of H ₂ /Air in a Mixing Layer with a Vortex <i>X.L. Zheng, J. Yuan, C.K. Law</i>	5G01: Deposition Behavior of Molten Alkali-Rich Fly Ashes–Development of a Submodel for CFD Applications <i>C. Mueller, M. Selenius, M. Theis, B.-J. Skrifvars, R. Backman, M. Hupa, H. Tran</i>
10:25	5A02: Time and Temperature Dependence of Carbon Particle Growth in Various Shock Wave Pyrolysis Processes <i>A. Emelianov, A. Eremin, E. Gurentsov, A. Makeich, H. Jander, H.Gg. Wagner, P. Roth, R. Starke</i>	<i>A. Starikovskii</i>	5C02: Transported Probability Density Function Modeling of a Bluff Body Stabilized Turbulent Flame <i>T.S. Kuan, R.P. Lindstedt</i>	5D02: Concept and Characteristics of Ultra-Micro Combustors with Premixed Flame <i>S. Yuasa, K. Oshimi, H. Nose, Y. Tennichi</i>	5E02: Scaling and Instability Analyses on Flame Spread over Liquids <i>K. Takahashi, A. Ito, Y. Kudo, T. Konishi, K. Saito</i>	5F02: Ignition of Hydrogen in Unsteady Non-Premixed Flows <i>R. Seiser, J.H. Frank, S. Liu, J.H. Chen, F.J. Sigurdsson, K. Seshadri</i>	5G02: The Effect of Combustion Condition on Mineral Matter Transformation and Ash Deposition in a Utility Boiler Fired with a Sub-Bituminous Coal <i>H.L. Wee, H. Wu, D.-K. Zhang, D. French</i>

10:50	5A03: Study of Soot Growth in a Plug Flow Reactor Using a Moving Sectional Model <i>Z. Wen, M.J. Thomson, S.H. Park, S.N. Rogak, M.F. Lightstone</i>	5B03: An Experimental Study of Kerosene Combustion in a Supersonic Model Combustor Using Effervescent Atomization <i>G. Yu, J.G. Li, J.R. Zhao, L.J. Yue, X.Y. Chang, C.-J. Sung</i>	5C03: Finite Rate Chemistry Effects in Turbulent Opposed Jet Flows: Comparison of Raman/Rayleigh Measurements and Monte Carlo PDF Simulation <i>D. Geyer, A. Dreizler, J. Janicka, A.D. Permana, J.Y. Chen</i>	5D03: Gas-Phase and Catalytic Combustion in Heat-Recirculating Burners <i>J. Ahn, C. Eastwood, L. Sitzki, P.D. Ronney</i>	5E03: Opposed-flow Flame Spread in Microgravity—Theoretical Prediction of Spread Rate and Flammability Map <i>S. Bhattacharjee, R. Ayala, K. Wakai, S. Takahashi</i>	5F03: Further Studies of the Reaction Kernel Structure and Stabilization of Jet Diffusion Flames <i>F. Takahashi, V.R. Katta</i>	5G03: In-Furnace Capture of Cadmium and Other Semi-Volatile Metals by Sorbents <i>T.K. Gale, J.O.L. Wendt</i>
11:15	5A04: Influence of C ₂ and C ₃ Compounds of Natural Gas on NO Formation: an Experimental Study Based on LIF/CRDS Coupling <i>L. Pillier, A. El Bakali, X. Mercier, A. Rida, J.-F. Pauwels, P. Desgroux</i>	5B04: A Novel Design of a Plasma Jet Torch Igniter in a Scramjet Combustor <i>K. Takita, K. Murakami, H. Nakane, G. Masuya</i>	5C04: Conditional Moment Closure Modeling of Extinction and Re-Ignition in Turbulent Non-Premixed Flames <i>A. Kronenburg, A.E. Papoutsakis</i>	5D04: Hydrogen Assisted Self-Ignition of Propane/Air Mixtures in Catalytic Microburners <i>D.G. Norton, D.G. Vlachos</i>	5E04: Transient Behavior and Stability of Whirling Flames in Enclosure <i>A.Yu. Snegirev, J.A. Marsden, G.M. Makhviladze</i>	5F04: Attachment Structure of a Non-Premixed Laminar Methane Flame <i>Y. Ikeda, J.L. Beduneau</i>	5G04: Control of Trace Metal Emissions by Sorbents During Sewage Sludge Combustion <i>H. Yao, I. Naruse</i>
11:40	5A05: PCDD/F Formation in Flaming Combustion, Smoldering and Oxidative Pyrolysis of 'Eco-Friendly' Treated Wood <i>N.W. Tame, B.Z. Dlugogorski, E.M. Kennedy</i>	5B05: Minimum Ignition Energy for Laser Spark Ignition <i>D.H. McNeill</i>	5C05: Prediction of Local Extinction and Re-Ignition Effects in Non-Premixed Turbulent Combustion Using a Flamelet/Progress Variable Approach <i>M. Ihme, C.M. Cha, H. Pitsch</i>	5D05: Catalyzed Combustion of Hydrogen-Oxygen in Platinum Tubes for Micro-Propulsion Applications <i>G.A. Boyarko, C.-J. Sung, S.J. Schneider</i>	5E05: Experimental Measurements and Numerical Modeling of Marginal Burning in Live Chaparral Fuel Beds <i>X. Zhou, D. Weise, S. Mahalingam</i>	5F05: Flame Stabilization with a Tubular Flame <i>D. Shimokuri, S. Ishizuka</i>	5G05: Attrition Phenomena During Fluidized Bed Combustion of Granulated and Mechanically Dewatered Sewage Sludges <i>A. Cammarota, R. Chirone, P. Salatino, F. Scala, M. Urciuolo</i>
LUNCH							
12:05	Pollutants <i>Chairs: W.P. Linak H. Wang</i>	Kinetics <i>Chairs: K. Takita J.A. Miller</i>	Premixed Turbulent Flames <i>Chairs: J.H. Chen D.C. Kyritsis</i>	New Technological Concepts <i>Chairs: J.O. Keller J. Sato</i>	Reduction of Chemical Mechanisms <i>Chairs: D.F. Davidson C.S. McEnally</i>	Laminar Flames <i>Chairs: Ö.L. Gülder J.S. T'ien</i>	Stationary Power Systems <i>Chairs: M. Hupa D.-K. Zheng</i>
2:00	5A06: Formation of Polychlorinated Naphthalenes from Chlorophenols <i>D.H. Kim, J.A. Mulholland, J.-Y. Ryu</i>	5B06: The Effect of Temperature on Collision Induced Intersystem Crossing in the Reaction of ¹ CH ₂ with H ₂ <i>M.A. Blitz, N. Choi, T. Kovác, P.W. Seakins, M.J. Pilling</i>	5C06: Reaction Zone Structures and Mixing Characteristics of Partially Premixed Swirling CH ₄ /Air Flames in a Gas Turbine Model Combustor <i>W. Meier, X.R. Duan, P. Weigand</i>	5D06: Experimental Observations on the Thermal Degradation of a Porous Bed of Tires <i>J.-P. Vantelon, B. Lodeho, S. Pignoux, J.L. Ellzey, J.L. Torero</i>	5E06: A New Algorithm for the Direct Simulation of Combustion Systems and its Application to Reaction Elimination <i>S. Mosbac, H. Su, M. Kraft</i>	5F06: An Experimental and Numerical Study on the Adequacy of CH as a Flame Marker in Premixed Methane Flames <i>C.M. Vageloplulos, J.H. Frank</i>	5G06: Pressure-Heat Release Measurements During Start-Up Conditions in a Pulse Combustor <i>J.R. Dawson, V.M. Rodriguez-Martinez, A.J. Beale, T. O'Doherty</i>

2:25	5A07: Reaction of 2-Chlorophenol with CuO: XANES and SEM Analysis <i>S.L. Alderman, G.R. Farquar, E.D. Poliakoff, B. Dellinger</i>	5B07: Propargyl Recombination: Estimation of the High Temperature, Low Pressure Rate Constant from Flame Measurements <i>C.L. Rasmussen, M.S. Skøth-Rasmussen, A.D. Jensen, P. Glarborg</i>	5C07: Analysis of the Flame Thickness of Turbulent Flamelets in the Thin Reaction Zones Regime <i>L.P.H. de Goey, T. Plessing, R.T.E. Hermanns, N. Peters</i>	5D07: Sequential Hydrothermal Gasification of Biomass to Hydrogen <i>R. Hashaikh, Z. Fang, I.S. Butler, J.A. Kozinski</i>	5E07: A Systematic Lumping Approach for the Reduction of Comprehensive Kinetic Models <i>H. Huang, M. Fairweather, J.F. Griffiths, A.S. Tomlin, R.B. Brad</i>	5F07: Experimental and Numerical Determination of Heat Release in Counterflow Premixed Laminar Flames <i>A. Fayoux, K. Zähringer, O. Gicquel, J.C. Rolon</i>	5G07: Effect of Heat Release Distribution on Combustion Oscillation <i>S. Kato, T. Fujimori, A.P. Dowling, H. Kobayashi</i>
2:50	5A08: Mercury Emissions Control: The Similarities or Are They Generalities of Mercury and Alkali Combustion Deposition Processes? <i>K. Schofield</i>	5B08: Decomposition and Ring Expansion in Methyl Cyclopentadiene. Single-Pulse Shock Tube and Modeling Study <i>A. Lifshitz, C. Tamburu, A. Suslensky, F. Dubnikova</i>	5C08: Premixed Turbulent Combustion Modeling Using Tabulated Chemistry and PDF <i>B. Fiorina, O. Gicquel, L. Vervisch, S. Carpentier, N. Darabiha</i>	5D08: On the Mild Combustion of Gaseous, Liquid and Solid Fuels in High Temperature Preheated Air <i>R. Weber, J.P. Smart, W. vd Kamp</i>	5E08: Sensitivity of Intrinsic Low-Dimensional Manifolds with Respect to Kinetic Data <i>K. König, U. Maas</i>	5F08: Methane Flames in a Jet Impinging onto a Wall <i>W.-D. Hsieh, S.-S. Hou, T.-H. Lin</i>	5G08: Control of Oscillating Combustion and Noise Based on Local Flame Structure <i>G.-M. Choi, M. Tanahash, T. Miyauchi</i>
3:15	5A09: Effects of Mixing on Ammonia Oxidation in Combustion Environments at Intermediate Temperatures <i>J.F. Grcar, P. Glarborg, J.B. Bell, M.S. Day, A. Loren, A.D. Jensen</i>	5B09: Determination of the Rate Coefficient for the $C_3H_3 + C_3H_3$ Reaction at High Temperatures by Shock-Tube Investigations <i>R.X. Fernandes, H. Hippler, M. Olzmann</i>	5C09: Burning Velocity Correlation of Methane/Air Turbulent Premixed Flames at High-Pressure and High-Temperature <i>H. Kobayashi, K. Seyama, H. Hagiwara, Y. Ogami</i>	5D09: Characteristics and Structure of Inverse Flames of Natural Gas <i>A. Sobiesiak, J.C. Wentzell</i>	5E09: Reduction of Comprehensive Chemistry via Constraint Potentials <i>W.P. Jones, S. Rigopoulos</i>	5F09: Mechanism of Magnetic Field Effect on OH Density Distribution in a Methane-Air Premixed Jet Flame <i>M. Shinoda, E. Yamada, T. Kajimoto, H. Yamashita, K. Kitagawa</i>	5G09: The Interaction of Flame and Flow-Field in a Lean Premixed Swirl-Stabilized Combustion Operated on H_2/CH_4 /Air <i>D.M. Wicksall, A.K. Agrawal, R.W. Schefer, J.O. Keller</i>
3:40	5A10: NO_x Formation from NH_3 , HCN, Pyrrole and Caprolactam Under Incinerator Conditions <i>S. Koger, H. Bockhorn</i>	5B10: A Theoretical and Experimental Kinetic Study of Phenyl Radical Addition to Butadiene <i>H. Ismail, J. Park, B.M. Wong, W.H. Green Jr, M.C. Lin</i>	5C10: Direct Numerical Simulation of Turbulence/Radiation Interaction in Premixed Combustion Systems <i>Y. Wu, D.C. Haworth, M.F. Modest, B. Cuenot</i>	5D10: Combustion Simulation with Lattice Boltzmann Method in a Three-Dimensional Porous Structure <i>K. Yamamoto, N. Takada, M. Misawa</i>	5E10: A Directed Relation Graph Method for Mechanism Reduction <i>T. Lu, C.K. Law</i>	5F10: Extinction and Flame Bifurcations of Stretched Dimethyl-Ether Premixed Flames <i>Y. Xue, Y. Ju</i>	5G10: A Comparison of the Flow-Fields and Emissions of High-Swirl Injectors and Low-Swirl Injectors for Lean Premixed Gas Turbines <i>M.R. Johnson, D. Littlejohn, E.A. Nazeer, K.O. Smith, R.K. Cheng</i>