| | | | Monday | | | | | |
|-------|---|--|--|--|---|--|--|--|
| 9:00 | | Opening Remarks Plenary Lecture 1: Scott Jackson, Los Alamos National Laboratory, USA Condensed Phase Detonation: Are mesoscale effects needed to predict performance? Metcalf Hall, Chair: U. Maas | | | | | | |
| 10:00 | | | Coffee Break | | | | | |
| Room | Auditorium | Ballroom A | Ballroom B | East Balcony | Terrace Lounge | | | |
| Topic | Chemical Kinetics and Reaction Dynamics 1 Chairs: P. Dagaut, M.H. Wu | Laminar Flames 1 Chairs: N. Chaumeix, Y. Ju | Detonation Engines 1 Chairs: J. Yoh, R. Zitoun | Detonation Boundary Interactions 1 <i>Chairs: C.B. Kiyanda, M. Radulescu</i> | Flames in Narrow Tubes and Microchannels 1 Chairs: G. Dayma, K. Maruta | | | |
| 10:30 | A Rapid Compression Expansion Machine (RCEM) for Measuring Species Histories (859) M. Werler, R. Schießl, U. Maas | Effects of Pressure and Temperature on Laminar Burning Velocity of a Kerosene Surrogate (1069) R. le Dortz, M. Bellenoue, J. Sotton, C. Strozzi | Mid-Infrared Imaging of a Non- Premixed Rotating Detonation Engine (833) B.A. Rankin, J.R. Codoni, K.Y. Cho, J.L. Hoke, F.R. Schauer | Interactions of a Detonation Wave Confined by a High- Temperature Compressible Layer (970) M. Reynaud, F. Virot, A. Chinnayya | Large-Activation-Energy Analysis of Gaseous Reacting Flow in Pipes (808) D.M. Boza, I. Iglesias, A.L. Sánchez | | | |
| 10:55 | Validation of Hierarchical REDIM Based Reduced Models (1061) V. Bykov, A. Neagos, U. Maas | Observation of Double Flame Structures in Near-Limit Premixed Flames (1083) C.B. Reuter, Y. Ju | Performance Evaluation of a Rotating Detonation Engine (1098) J. Nishimura, K. Ishihara, K. Goto, S. Nakagami, K. Matsuoka, J. Kasahara, A. Matsuo, I. Funa ki, H. Mukae, K. Yasuda, D. Nakata, K. Higashino, H. Moriai | Oblique Detonation Interaction with a Wall for Large Angles of Attack (1105) M. Short, C. Chiquete, J.B. Bdzil, C.D. Meyer | Effects of Stoichiometry on Premixed Flames Propagating in Planar Microchannels (771) D. Fernandez-Galisteo, C. Jiménez, M. Sánchez-Sánz, V.N. Kurdyumov | | | |
| 11:20 | Predicting Large-Scale Effects During Cookoff of PBXs and Melt-Castable Explosives (852) M.L. Hobbs, M.J. Kaneshige, W.W. Erikson | Distinct Dependence of Flame Speed to Stretch and Curvature (1040) F. Thiesset, F. Halter, C. Bariki, C. Chauveau, I. Gokalp | Orderly Wave Initiation in a Rotating Detonation Engine (1088) C. Knowlen, M. Kurosaka | Effects of Lateral Relief of Detonation in a Thin Channel (815) K.Y. Cho, J.R. Codoni, B.A. Rankin, J.L. Hoke, F.R. Schauer | Numerical Study on Asymmetric Flame Spread in A Narrow Combustible Channel (1029) T. Matsuoka, S. Murakami, T. Yamazaki, Y. Nakamura | | | |
| 11:45 | Mixtures Considering Five Combustion Properties (919) Y. Sasaki, H. Nakamura, K. Maruta | A Numerical Study on the Effect of Hydrogen Mole Fraction on NO Formation in H2/CO Syngas/Air Laminar Diffusion Flames (801) Y. Ye, Z. Gu, J. Xi, A. Haiyang, Z. Xianpeng | Pulse Detonation Operation at Kilohertz Frequency (1065) H. Taki, N. Hirota, K. Matsuoka, K. Akira, J. Kasahara, H. Watanabe, A. Matsuo, T. Endo | Effect of Boundary Streamline Deflection Angle on Detonation Propagation (1077) C. Chiquete, M. Short, C.D. Meyer, J.J. Quirk | Flame Behaviour During Propagation in Small Tubes Characterized by Different Degrees of the End Opening (869) A.N. Gutkowski, P. Jasinski, M. Lecki, B. Jedrowiak | | | |

| | Chemical Kinetics and Reaction | Laminar Flames 2 | The Current Status and Future | Dust Explosions 1 | Flames in Narrow Tubes and |
|-------|---------------------------------------|---------------------------------------|---|---------------------------------------|---------------------------------|
| | Dynamics 2 | Chairs: N. Chaumeix, Y. Ju | Outlook on Gaseous Detonation | Chairs: R. Houim, A. Kuhl | Microchannels 2 |
| Topic | Chairs: P. Dagaut, M.H. Wu | · | Research 1 | | Chairs: G. Dayma, K. Maruta |
| | U | | Chairs: A. Higgins, H.D. Ng | | |
| 13:50 | Kinetic Effects of n- | Influence of Monodispersed | The Current Status and Future | Explosion-Induced Ignition and | Stationary Premixed Flames in |
| | Propylbenzene on n-Dodecane | Mist of Inert Liquid on Gas | Outlook on Gaseous Detonation | Combustion of Acetylene Clouds | Narrow Tubes with External |
| | Cool Flame Extinction (1101) | Flame Propagation (1053) | Research | (938) | Heat Transfer (1082) |
| | O.R. Yehia, C.B. Reuter, Y. Ju | N.S. Belyakov, V.I. Babushok, | J.H.S. Lee | A.L. Kuhl, H. Reichenbach, | A.O. Velázquez, L. Bauwens, |
| | | S.S. Minaev | | J.B. Bell, V.E. Beckner | F. Fachini |
| 14:15 | Utilization of Transport of | Laminar Flame Speed of Diluted | | Effect of Particle Size on the | Experiments on Flame |
| | Species and Heat Release to a | DME-Air Mixtures (1019) | Hydrodynamic Model for the | Dispersion of Dust Produced by | Propagation Regimes in a Thin |
| | DRG-Method-Based Reduction | A. Mohammad, A.N. Mohammed, | Detonation Structure for | a Shock Wave (1113) | Layer Geometry (1132) |
| | (996) | K.A. Juhany, S. Kumar, | Predicting Detonation Dynamic | O.J. Ugarte, R.W. Houim, | M. Kuznetsov, J. Grune |
| | K. Yamasaki, S. Honya, | R.K. Velmati | Parameters (1140) | E.S. Oran | |
| | A. Uemichi, M. Nishioka | | M.I. Radulescu | | |
| 14:40 | Modeling Real Gas Equations of | Pressure and Radiation Effects | Computation of the Mean | Promotion and Mitigation of | Pulsating Combustion of |
| | State in High Density | on the Dynamics of Hot and | Hydrodynamic Structure of | Premixed Flame Acceleration in | Ethylene in Micro-Channels |
| | Combustion (1127) | Cool Diffusion Flames (1073) | Detonation with Losses (961) | Dusty-Gaseous Environment | with Controlled Temperature |
| | C. Zheng, D. Coombs, B. Akih- | C.B. Reuter, E. Lin, Y. Ju | A. Chinnayya | with Various Combustible Dust | Gradient (755) |
| | Kumgeh | | | Distributions: A Computational | A. di Stazio, C. Chauveau, |
| | | | | Study (1138) | G. Dayma, P. Dagaut |
| | | | | S. Demir, H. Sezer, T. Bush, | |
| | | | | V. Akkerman | |
| 15:05 | Validation of Detailed Chemical | Laminar Flame Speed | | Turbulent Clustering of | Experimental and Numerical |
| | Kinetics Mechanisms for | Determination for | | Particles and Radiation-Induced | Study of Premixed Flame |
| | Reproduction of Ignition Delay | H2/N2/O2/Steam Mixtures | | Mechanism of Dust Explosions | Penetration in a Set of |
| | Times of C2-C5 Alkenes (927) | Using the Spherical Bomb | Discussion Period | (798) | Microchannels (845) |
| | A. Jach, W. Rudy, A.A. Pękalski, | Method (594) | 200000000000000000000000000000000000000 | M. Liberman, N. Kleeorin, | R. Fursenko, E. Sereshchenko, |
| | A. Teodorczyk | R. Grosseuvres, A. Bentaïb, | | I. Rogachevskii, N. Haugen | G. Uriupin, E. Odintsov, |
| | | N. Chaumeix | | | T. Tezuka, S. Minaev, K. Maruta |
| 15:30 | | | Coffee Break | | |

| | Ignition 1 | Explosion Safety 1 | The Current Status and Future | Flame-Wall Interaction | Turbulent Reacting Flows 1 |
|-------|--------------------------------------|---------------------------------|------------------------------------|--|-----------------------------------|
| | Chairs: S. Coronel, J. Melguizo- | Chairs: S. Dorofeev, I.S. Jeung | Outlook on Gaseous Detonation | Chairs: A. Comandini, U. Maas | Chairs: A. Poludnenko, |
| Topic | Gavilanes | , , | Research 2 | | L. Vervisch |
| | | | Chairs: A. Higgins, H.D. Ng | | |
| 16:00 | Hot Spot Dynamics: Quenching, | Flame Arrester Performance at | Critical Condition for | REDIM Reduced Modeling of | On the Supersonic Flame |
| | Ignition, Flame Propagation and | Increased Oxygen | Detonation Diffraction with | Quenching at a Cold Inert Wall | Structure in the Hyshot II |
| | Extinction (1115) | Concentrations (1060) | Stable and Unstable Mixtures | with Detailed Transport and | Scramjet Combustor (985) |
| | J. Santner, S.S. Goldsborough | S. Zakel, S. Henkel, F. Stolpe, | (963) | Different Mechanisms (811) | C. Fureby |
| | | M. Beyer, U. Krause | J. Kasahara, A. Kawasaki | C. Strassacker, V. Bykov, U. Maas | |
| | | | | | |
| 16:25 | Effect of Orientation on the | Effects of Open Area of a | Planar Blast Initiation of | Flame-Wall Interaction in | Extinction in Non-Premixed |
| | Ignition of Stoichiometric | Rupture Disk on the Self- | Detonations Using a Simplified | Premixed Reactive Turbulence | Ethanol Spray Flames Using |
| | Ethylene Mixtures by Stationary | Ignition of High Pressurized | Model (1116) | (775) | Direct Numerical Simulation |
| | Hot Surfaces (981) | Hydrogen Released Through a | S.M. Lau-Chapdelaine, | P. Zhao, L. Wang, N. Chakraborty | · · · · |
| | J. Melguizo-Gavilanes, | Tube (1023) | L.M. Faria, R. Rosales, | | J.C. Tang, H. Wang, E.R. Hawkes, |
| | J.E. Shepherd | H.J. Lee, S.Y. Lee, B.J. Lee, | M.I. Radulescu | | M. Bolla |
| | | I.S. Jeung | | | |
| 16:50 | Effect of Initial Laser Beam | Modeling the Growth and | Comparison of Models | 3-D Flame Patterns in a | Dynamic Pressure |
| | Diameter on Breakdown and | Formation of Instabilities | Predicting the Mode of Ignition | Backward Facing Step | Characterization of a Dual- |
| | Ignition Properties of n- | During Spherical Flame | Behind Reflected Shock Waves | Mesoscale Combustor for Non- | Mode Scramjet (1157) |
| | Decane/Air (741) | Propagation (4301) | in the Context of DDT (990) | Adiabatic Wall Conditions (857) | C. Aguilera, A. Ghosh, K.H. Shin, |
| | S. Rudz, P. Gillard | C.R.L. Bauwens, | L.R. Boeck | M. Malushte, S. Kumar | K.H. Yu |
| | | J.M. Bergthorson, S.B. Dorofeev | | | |
| 17:15 | | Numerical Modelling of Vented | | Heat Flux and Flow Topology | Development of a Multiscale |
| | | Lean Hydrogen–Air | | Statistics in Oblique Quenching | Adaptive Reduced Chemistry |
| | | Deflagration Using Hyfoam | | of Turbulent Premixed Flames | Solver (MARCS) for |
| | Free | (1093) | Discussion Period | by Isothermal Inert Walls (939) | Computationally Efficient |
| | | V.C.M. Rao, J.X. Wen | | J. Lai, N. Chakraborty | Combustion Simulations (1081) |
| | | | | | W. Sun, L. Wang, T. Grenga, Y. Ju |
| | | | | | |
| 17:40 | | | Adjourn | | |

| | Tuesday | | | | | | |
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| 9:00 | | Plenary Lecture 2: Katharina Kohse-Hoeinghaus, Universität Bielefeld, Germany Combustion Chemistry Developments Between Experiments, Modeling, and Theory Metcalf Hall, Chair: S. Shy | | | | | |
| 10:00 | | | Coffee Break | | | | |
| Room | Auditorium | Ballroom A | Ballroom B | East Balcony | Terrace Lounge | | |
| Topic | Chemical Kinetics and Reaction Dynamics 3 Chairs: U. Riedel, A. Teodorczyk | Turbulent Flames 1 Chairs: J. Driscoll, H. Kobayashi | DDT 1 Chairs: L. Boeck, G. Ciccarelli | Detonation Structure Chairs: C. Chiquete, J. Kasahara | Combustion Stability, Instabilities 1 Chairs: E. Petersen, F. Williams | | |
| 10:30 | Effect of CO2 Dilution on the Burning Velocity of Equimolar Syngas Mixtures at Elevated Temperatures (1033) R.J. Varghese, S. Kumar, H. Kolekar | A New Measured Regime Diagram of Turbulent Premixed Combustion, Based on Images of Flame Structure (949) A.W. Skiba, T.M. Wabel, J.F. Driscoll, C.D. Carter, S. Hammack | Flame Acceleration and Deflagration-to-Detonation Transition Through an Array of Obstacles (1109) H. Xiao, R.W. Houim, E.S. Oran | On the Averaging Analysis for Unstable Detonations (1085/1134) X. Mi, H.D. Ng, C.B. Kiyanda, A.J. Higgins, N. Nikiforakis | The Origin and Evolution of Mechanical and Thermodynamic Disturbances Caused by Localized Energy Deposition in Gaseous Volumes (816) D.R. Kassoy | | |
| 10:55 | Influence of Microscopic Stochastic Properties on the Auto-Ignition of Hydrogen / Oxygen Mixture (1052) C. Yang, Q. Sun | Influence of Turbulence on the Propagation of C7H8/Air Flames at Atmospheric Pressure and Temperature (1058) A. Lefebvre, M. Nait-Daoud, N. Chaumeix | Flame - Shock Wave Dynamic Studies at DDT in Diluted Stoichiometric Acetylene- Oxygen Mixtures (959) Y.A. Baranyshyn, P.N. Krivosheyev, O.G. Penyazkov, K.L. Sevrouk | Structure of Detonation Propagating in Lean and Rich Dimethyl Ether-Oxygen Mixtures (870) R. Mével | Subcritical Thermoacoustic Bifurcation in Turbulent Combustors: Effects of Inertia (828) G. Bonciolini, D. Ebi, E. Boujo, N. Noiray | | |
| 11:20 | Reduced Order Models for Shock-Induced Combustion of Fuel Mixtures (982) D.A. Schwer, K. Kailasanath | Combustion and Emission Characteristics of Premixed and Non-Premixed Ammonia/Air Turbulent Swirl Flames at the High Pressure and Temperature (997) K.D.K.A. Somarathne, A. Hayakawa, H. Kobayashi | Stages of Flame Acceleration and Detonation Transition in a Thin Channel Filled with Stoichiometric Ethylene/Oxygen Mixture (1017) H.P. Chan, M.H. Wu | Influence of Water Sprays on a Muli-Cellular Regular Detonation (1041) G. Jarsalé, F. Virot, A. Chinnayya | The Effects of Lewis Number on the Combustion Limit, Near-Limit Extinction Boundary, and Flame Regimes of Low-Lewis-Number Counterflow Flames Under Microgravity (904) T. Okuno, H. Nakamura, T. Tezuka, S. Hasegawa, M. Kikuchi, K. Maruta | | |
| 11:45 | Laminar Burning Velocities of Spherically Expanding Hydrogen/Air Mixtures for Temperatures Up to 423K at Ambient Pressure (1175) J. Beeckmann, H. Pitsch | Fuel Similarity and Turbulent Burning Velocities of Stoichiometric Iso-Octane, Lean Hydrogen, and Lean Propane at High Pressure (1176) M. Nguyen, L. Jiang, S. Shy | Cylindrical Flame Acceleration and Deflagration-to-Detonation Transition in Confinement Space (792) W. Han, N. Du, Z. Liu, W. Kong | Free | On the Effect of Pressure on Intrinsic Flame Instabilities in Lean Hydrogen-Air Mixtures – Part I: Detailed Chemistry Based Direct Numerical Simulation (765) J. Hasslberger, P. Katzy, T. Sattelmayer | | |

| Topic | Fire Dynamics Chairs: C.R. Bauwens, C. Proust | Turbulent Flames 2 Chairs: H. Kobayashi, S. Shy | Detonation Initiation <i>Chairs: M. Ihme, P. Vidal</i> | Detonation Limits Chairs: C. Chiquete, J. Kasahara | Combustion Stability, Instabilities 2 Chairs: E. Pertersen, F. Williams |
|----------------|---|---|---|---|---|
| 13:50 | Smoldering Spread Velocity Along a Thin Solid in a Narrow Channel (1005) K. Kuwana, K. Suzuki, Y. Tada, G. Kushida | Large Eddy Simulation of Supersonic H2-O2 Combustion (915) U. Guven, G. Ribert | Numerical Simulation of Detonation Initiation by Shock- Multiple Discrete Flames Interaction (1059) A.L. Gunter, H.D. Ng, C.B. Kiyanda, K.C.T. Yuk, X.C. Mi, N. Nikiforakis | Nonlinear Dynamics of Gaseous Detonations with Losses (1042) A. Sow, A. Kasimov, R. Semenko | Experimental Study of the Head- on Interaction of a Shock Wave with a Cellular Flame (1131) M. la Flèche, Q. Xiao, Y. Wang, M.I. Radulescu |
| 14:15 | The Critical Conditions for the Onset of Pool-Fire Puffing (993) W. Coenen, D. Moreno-Boza, A.L. Sánchez | Dependence of Limiting Oxygen Index of Buoyant Turbulent Diffusion Flame on Fuel (1074) D. Zeng, Y. Wang | Growth to Detonation in Hexanitrostilbene (HNS) (983) J.D. Olles, R.R. Wixom, R. Knepper, A.S. Tappan, C.D. Yarrington | A Study on Suppression of Detonation Propagation by Inert Gas Injection (1031) K. Ishii, K. Seki | On the Effect of Pressure on Intrinsic Flame Instabilities in Lean Hydrogen-Air Mixtures – Part II: Experimental Investigation Based on OH-PLIF Technique (764) P. Katzy, J. Hasslberger, T. Sattelmayer |
| 14:40 | Horizontal Flame Spread Along a Thin Paper-Disk in a Narrow Space (1047) T. Daitoku, T. Takahashi, T. Tsuruda | The Reattachment Process of Turbulent Lifted Diffusion Jet Flames Induced by Repetitive D.C. Electric Pulse Discharges (1125) T.W. Chang, H.Y. Li, T.S. Cheng, Y.C. Chao, M.H. Shen | Effects of Disturbance on Direct Detonation Initiation in H2/O2/Ar Mixture (956) Y. Wang, C. Qi, R. Deiterding, Z. Chen | Effect of Spatial Inhomogeneities on the Propagation Limit of Gaseous Detonations (1129) X. Mi, A.J. Higgins, H.D. Ng, C.B. Kiyanda, N. Nikiforakis | Combustion Instability Prediction Using Minimal Experimental or Computational Data (1130) S. Park, A. Ghosh, K. Yu |
| 15:05 | Traveling Vortex in a Natural Convection Field (1011) T. Tsuruda | Combustion Characteristics of Transverse Hydrogen Jet in a Supersonic Compact Inlet/Combustor Model (858) Z.W. Huang, G.Q. He, F. Qin, X.G. Wei, S. Wang | Free | Free | Application of Dynamic Mode Decomposition for Stabilization of Reactive Flow in a Subscale Combustor with an Injector (754) Y.J. Kim, G. Jourdain, C.H. Sohn |
| 15:30 15:30 | | | Coffee Break Poster Session I (15:30 - 16:45) Ziskind Lounge | | |

| Topic | Minimum Ignition Energies, Flammability Limits Chairs: M. Beyer, F. Marra | Explosion Safety 2 Chairs: S. Dorofeev, I.S. Jeung | The Current Status and Future Outlook on Gaseous Detonation Research 3 Chairs: A. Higgins, H.D. Ng | Dust Explosions 2 Chairs: A. Kuhl, M. Liberman | Reactive Systems 1 Chairs: K. Ishii, J. Yao |
|-------|--|---|---|--|--|
| 16:45 | Evaluation of Flammability Limits of H2/O2 Mixtures in Conditions Relevant to Nuclear Waste Transportation: Pressure and Nitrogen Addition Effects. (1032) N. Kouame, A. Comandini, M. Idir, P. Jean, C. Thomas, N. Chaumeix | Understanding the Effect of Multiple Adjacent Vent Panels on Explosion Overpressures (4300) C.R.L. Bauwens, S.B. Dorofeev | Autoignition and Detonation Development From a Hot Spot in Hydrogen/Air Mixture (793) Y. Gao, Z. Chen | Potential Accelerating Effect of Thermal Radiation in Dust Flame Propagation: Some Experimental Evidence (1096) C. Proust, R.B. Moussa, M. Guessasma, K. Saleh, J. Fortin | The Inability of Heterogeneously Reacting Particles to Ignite Below a Critical Size (818) M. Soo, S. Goroshin, J. Lightstone, D.L. Frost, J.M. Bergthorson |
| 17:10 | Effects of Composition Fluctuations on the Structure and Development of Laminar and Turbulent Flame Kernels (1043) A. Er-raiy, Z. Bouali, A. Mura | Re-Ignition by Hot Free Gas Jets A Parameter Study (1026) F. Seitz, R. Schieβl, D. Markus | An Evaluation of Ignition Criteria Through State Classification and Detailed Simulation (1072) K.P. Grogan, M. Ihme | Flame Propagation in Nano- Metal Dust Explosions (768) W. Gao, M. Bi, T. Mogi, R. Dobashi | The Vaporization-Controlled Inertial Regime in Nonpremixed Counterflow Spray Combustion (1119) J. Carpio, A. Linan, D. Martínez- Ruiz, A.L. Sánchez, F.A. Williams |
| 17:35 | Effects of Fuel Stratification on Ignition Kernel Development and Minimum Ignition Energy (807) Y. Wang, W. Han, Z. Chen | Influence of Congestion on Vented Hydrogen Deflagrations in 20-Foot ISO Containers: Homogeneous Fuel-Air Mixtures (1120) T. Skjold, H. Hisken, S. Lakshmipathy, G. Atanga, M. van Wingerden, K.L. Olsen, M.N. Holme, N.M. Turøy, M. Mykleby, K. van Wingerden | | Investigation on the Diffraction of a Medium Scale Gaseous Deflagration Pressure Wave Behind a Protective Wall (1049) L. Heudier, G. Lecocq, Y. Grégoire, C. Proust | Propagation Limits of Flames in Binary-Fuel Mixtures (876) J. Palecka, S. Goroshin, J.M. Bergthorson, A.J. Higgins |
| 18:00 | | | Adjourn | | |

| | | | Wednesday | | | | |
|-------|---|--|--|--|--|--|--|
| 9:00 | | Plenary Lecture 3: Hideaki Kobayashi, Tohoku University, Japan Dynamics of Ammonia Combustion Metcalf Hall, Chair: M. Short | | | | | |
| 10:00 | | Coffee Break/ | Work in Progress Poster Session Ziskind Lounge | (10:00 - 13:00) | | | |
| Room | Auditorium | Ballroom A | Ballroom B | East Balcony | Terrace Lounge | | |
| Topic | Explosions and Combustion in IC Engines Chairs: D. Dunn-Rankine, O. Penyazkov | Chemical Kinetics in Shock Tubes, in memory of Paul Roth Chairs: L. Bauwens | Detonation Engines 2 Chairs: A. Chinnayya, R. Zitoun | Detonation Boundary Interactions 2/ Detonation in Narrow Channels Chairs: A. Matsuo, X. Mi | Turbulent Reacting Flows 2 Chairs: A. Poludnenko, L. Vervisch | | |
| 10:30 | Direct Numerical Simulation of Two-Stage Combustion and Flame Stabilisation in Diesel Engine-Relevant Conditions (1143) D. Dalakoti, E.R. Hawkes, M.S. Day, J.B. Bell | The Contributions of Paul Roth in the Field of Dynamics and Explosions of Reactive Systems | Rotating Detonation Wave Mechanics Through Ethylene- Air Mixtures in Hollow Combustors, and Implications to High Frequency Combustion Instabilities (992) V. Anand, A.S. George, C.F. de Luzan, E. Gutmark | Interaction of a Condensed-Phase Explosive Detonation with a Compliant Boundary (988) J.B. Bdzil, M. Short, C. Chiquete | Two-Dimensional Numerical Analysis on Shock Flame Interaction in Premixed Gas of Hydrocarbon/Oxygen with Multi-Step Reaction Model (1050) M. Iwai, K. Yoshida, Y. Morii, N. Tsuboi, A.K. Hayashi | | |
| 10:55 | Shock Wave and Flame Front Induced Detonation in Rapid Compression Machine (995) Y. Wang, S. Xiang, Y. Qi, R. Mével, Z. Wang | Ignition Delay Time Study of Aromatic LIF Tracers in a Wide Temperature and Pressure Range (795) J. Herzler, M. Fikri, C. Schulz | Experimental Observations of Semi-Confined Steadily- Rotating Detonation (1084) V. Rodriguez, P. Vidal, R. Zitoun | Detonation Propagation in a Linear Channel with Discrete Injectors and Side Relief (1107) J.R. Burr, K.H. Yu | Experimental Investigation on the Flame Wrinkle Fluctuation Under External Acoustic Excitation (978) L. Zheng, S. Ji, Y. Zhang | | |
| 11:20 | Effects of Fuel/Air Mixture Distribution on End-Gas Autoignition and Pressure Wave Generations in Knocking Combustion (1008) T. Satoh, H. Terashima, N. Oshima | High Speed Imaging of Inhomogeneous Ignition in a Shock Tube (1004) A.M. Tulgestke, S.E. Johnson, D.F. Davidson, R.K. Hanson | 3D Numerical Study on Continuous Detonation Engine Using Reactive Navier-Stokes Equations (1066) L. Zhang, S. Zhang, J. Wang | Hydrogen-Oxygen-Argon Detonation Diffraction in a Narrow Channel (922) R. Mével, Q. Xiao, M.I. Radulescu | Sub-Grid Scale Modeling of the Equation of State for Fully Compressible Combustion LES (931) G. Ribert, P. Domingo, L. Vervisch | | |

| 11:45 | Autoignition of End Gas in a | Experimental Study of | Detonation Regimes in a Small- | Experimental Study on Behavior | Reaction Front Characterization |
|-------|-------------------------------------|-------------------------------|---------------------------------------|---------------------------------------|---------------------------------|
| | Rapid Compression Machine | Nitromethane Oxidation: CO | Scale RDE (1037) | of Methane/Oxygen Gas | in Turbulent Combustion Based |
| | Under Super Knock Conditions | and H2O Time-Histories Behind | S. Hansmetzger, R. Zitoun, | Detonation Near Propagation | on Entropy Production Field |
| | (929) | Reflected Shock Waves (911) | P. Vidal | Limit in Small Diameter Tube: | Curvature (1187) |
| | Y. Qi, Y. Wang, H. Liu, J. Wang, | O. Mathieu, C. Mulvihill, | | Effects of Equivalent Ratio (822) | R. Schießl, V. Bykov |
| | Z. Wang | E. Petersen | | K. Yoshida, T. Inoue, Y. Morii, | |
| | | | | K. Murakami, N. Tsuboi, | |
| | | | | A.K. Hayashi | |
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| 12:10 | Measurement of the | Combustion Properties of n- | Baffled Tube Ram Accelerator | Detonation Limits in Highly | Effect of Asymmetric Fuel |
| | Carcinogenic Polyaromatic | Heptane/Hydrogen Mixtures | Combustion (1117) | Argon Diluted Acetylene- | Injection on the Combustion |
| | Compounds in the Exhaust | (1045) | C. Knowlen, T. Byrd, J. Dumas, | Oxygen Mixtures (802) | Characteristics of Liquid Fuel |
| | Gases of a Gasoline Internal | A. Coma ndini, K. Brialix, | N. Daneshvaran, A.P. Bruckner, | B. Zhang | Fired Flameless Combustor |
| | Combustion Engine (909) | N. Chaumeix, J. MacLean, | A.J. Higgins | | (924) |
| | M.S. Assad, O.G. Penyazkov, | G. Ciccarelli | | | S. Sharma, H. Pingulkar, |
| | I.N. Tarasenko | | | | A. Chowdhury, S. Kumar |
| 12:35 | | | Lunch | • | |
| 14:00 | | | Excursion | | |
| 21:00 | | | Adjourn | | |

| | | | Thursday | | |
|-------|---|---|--|---|--|
| Room | Auditorium | Ballroom A | Ballroom B | East Balcony | Terrace Lounge |
| Topic | Memories of Toshi Fujiwara: Kindness, Splendor, and Physics Chairs: A.K. Hayashi, A. Matsuo | Laminar Flames 3 Chairs: F. Halter, H. Im | DDT 2 Chairs: L. Boeck, G. Ciccarelli | Diagnostics, Sensoring 1 <i>Chairs: R. Schieβl, S.Y. Yang</i> | Reactive Systems 2 Chairs: D. Dunn-Rankin, K. Ishii |
| 9:00 | Numerical Analysis on Liquid JP10 Rotating Detonation Engine (1003) A.K. Hayashi, W. Yoshida, M. Asahara, N. Tsuboi | Effect of Multi-Component Transport Model on Soot Prediction in Opposed-Jet Ethylene Diffusion Flames (1044) A. Borg, H. Lehtiniemi, F. Mauss | Effect of Surface Roughness on Deflagration-to-Detonation Transition in Submilimeter Channels (1067) R.W. Houim, E. Oran | High Speed PIV of Flame Propagation in Obstructed Channels (1070) T. Li, R.P. Lindstedt | Near-Structure Air Blast Simulations Using Zapotec, A Coupling of CTH and Sierra/SM (1094) A. Gullerud |
| 9:25 | Memories of Toshi Fujiwara E. Oran, J.H.S. Lee, J.P. Wang | Impact of Acoustic Excitation Frequency on Laminar Premixed Flame (979) L. Zheng, S. Ji, Y. Zhang | Deflagration-To-Detonation Transition in an Unconfined Space (759) A. Koksharov, V. Bykov, L. Kagan, G. Sivashinsky | Experimental Assessment of the Displacement and Consumption Speeds in Flame/Vortex Interactions (1038) F. Thiesset, F. Halter, C. Bariki, C. Lapeyre, C. Chauveau, I. Gokalp, L. Selle, T. Poinsot | Raman Study of Structural Change in 1,3,5-Triamino-2,4,6- Trinitrobenzene Under Non- Hydrostatic Pressure (903) X. Sun, C. Gao, Z. Sui, R. Dai, Z. Wang, X. Zheng, Z. Zhang |
| 9:50 | Modelling Mixing Near HE-Air Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, V.E. Beckner | Elevated Temperature Effects on Laminar Burning Velocity Temperature Exponent of Liquid Fuels (1012) A. Katoch, R. Kumar, S. Kumar | Propagation Mechanism of Detonations in Rough Walled Tube (1000) J. Li, J. Ning | Extinction Measurements of Soot Particles in a Diffusion Flame When Submitted to a DC Electric Field (1015) P. Gillon, V. Gilard, M. Idir, B. Sarh | Porous Wall Fed Liquid Fuel Nonpremixed Swirl-Type Tubular Flames (1114) V.M. Sauer, D. Dunn-Rankin |
| 10:15 | Memories of Toshi Fujiwara P. Wolanski, A. Matsuo | Effects of Applied Electric Fields on Liftoff Height in Laminar Lifted Coflow-Jet Flames (976) B.H. Seo, K.H. Van, G.T. Kim, N.P. Sapkal, O. Kwon, J. Park, S.H. Chung | Free | High Speed PIV Analysis of the Combustion Regimes During Autoignition of Homogeneous Fuel - Air Mixtures in a RCM (1124) C. Strozzi, A. Delicourt, M. Bellenoue, J. Sotton | Behavior of Explosive Bubbles Behind an Underwater Shock Wave (1024) N. Watanabe, K. Ishii |
| 10:40 | | | Coffee Break | | |

| 11:35 Pr | Chairs: M. Fikri, A. Teodorczyk | | Chairs: S. Jackson, J. Yoh | Chairs: A. Kasimov, M. Radulescu | Turbulent Reacting Flows 3 Chairs: U. Maas, G. Ribert |
|-----------------|---|--|--|---|--|
| Pr | Reduction of Detailed Chemical Mechanisms by Entropy Production Analysis in the Presence of Irreversible Reactions (1055) L. Acampora, M. Kooshkbaghi, C.E. Frouzakis, F.S. Marra | Combustion in a High-Swirl Turbulent Jet Undergoing Vortex Breakdown. Investigation by PIV and HCHO PLIF (1159) L.M. Chikishev, V.M. Dulin, A.S. Lobasov, D.M. Markovich | Small Size Rotating Detonation Engine: Scaling and Minimum Mass Flow Rate (1133) C.B. Kiyanda, S. Connolly-Boutin, V. Joseph, X. Mi, H.D. Ng, A.J. Higgins | Visualization of Detonation Propagation in a Round Tube Equipped with Orifice Plates (1091) G. Rainsford, G. Ciccarelli | Direct Numerical Simulations of Shock-Scalar Mixing Interaction (883) R. Boukharfane, Z. Bouali, A. Mura |
| | On the Dynamics of Ignition Process Behind Reflected Shock Waves Under the Influence of Bifurcation (774) O. Pryor, S. Barak, E. Ninnemann, S. Vasu | Experimental Measurements of Turbulent Burning Velocity in Gas Explosions with Two Obstacles of Variable Spacing: Implication to Gas Explosion Scaling (1156) A. Na'inna, H. Phylaktou, G. Andrews | Experimental Study on a Rotating Detonation Turbine Engine with an Axial Turbine (1080) H. Rh ee, C. Ishiyama, J. Higashi, K. Akira, K. Matsuoka, J. Kasahara, A. Matsuo, I. Funaki | Single-Head Detonation Propagation in a Partially Obstructed Square Channel (1135) M. Kellenberger, G. Ciccarelli | High-Order Numerics for Simulating Turbulent Deflagration Fronts Over Coarse Meshes (980) E. Bossennec, G. Lodato, L. Vervisch |
| Ch | Effects of Variation in Sample Mass, Gas Flow and Lid on Chemical Reactions During STA Measurements (1068) D. Lázaro, M. Lázaro, A. Alonso, | Disturbance Energy Analysis of Turbulent Swirling Premixed Flame in a Cuboid Combustor (1001) K. Aoki, M. Shimura, | Spectra Signals of Gas Pressure Pulsations in Nozzles (769) V.A. Levin, N.E. Afonina, V. G. Gromov, I.S. Manuylovich, A.N. Khmelevsky, V.V. Markov | Detonation Propagation in Rough Tube (991) Y. Liu, J.H. Lee, H. Tan | Fully-Implicit Density-Based Algorithms for Simulations of Arbitrary Gas Mixtures (1090) L. di Mare, F. Wang, F. Ferraro, F. di Mare |

| | Ignition 2 | Explosion Safety 3 | DDT 3 | Detonation Diffraction 1 | Combustion Stability, |
|-------|---------------------------------------|-----------------------------------|-----------------------------------|---------------------------------------|-----------------------------------|
| Topic | Chairs: S. Coronel, J. Melguizo- | Chairs: C. Proust, J. Wen | Chairs: M. Ihme, A. Kasimov | Chairs: A. Matsuo, X. Mi | Instabilities 3 |
| | Gavilanes | | | | Chairs: V. Bykov, G. Ribert |
| 13:50 | Effect of Low Initial Pressures | Evaluation of Engineering | Deflagration-To-Detonation | Propagation Characteristics of | Effects of External Heating on |
| | on Ignition Properties of Lean n- | Models for Vented Lean | Transition for Hydrogen- | 2H2/O2/2Ar Detonations in | Flame Stability in A Micro |
| | Decane/Air Mixtures for Laser | Hydrogen Deflagrations (1111) | Enriched Air Mixtures Through | Channels with Constant Area | Porous Combustor Fueled with |
| | Induced Breakdown (932) | A. Sinha, V.C.M. Rao, J.X. Wen | Pressure Wave Focusing in | Divergence (1110) | Heptane (944) |
| | S. Rudz, P. Tadini, F. Berthet, | | Pipes (968) | Q. Xiao, J. Chang, M. la Fleche, | J. Li, X. Chen, M. Feng, R. Yao, |
| | P. Gillard | | S. Bengoechea, J. Gray, J. Reiss, | Y. Wang, M.I. Radulescu | N. Wang |
| | | | J. Moeck, C. Paschereit, | | |
| | | | J. Sesterhenn | | |
| 14:15 | Thermomechanics of Laser- | The Essential Role of Science in | Numerical Study on Effects of | Propagation of a Detonation in a | Tomographic Visualization of |
| | Induced Shock Waves in | Explosives Safety (1099) | Obstacle Shape on Detonation | Converging Conical Channel | Thermo-Diffusive Instabilities of |
| | Combustible Mixtures (1108) | C.B. Skidmore, K.A. Fleming | Transition Mechanism (1027) | (984) | Lean Hydrogen/Air Mixtures |
| | N.D. Peters, D.M. Coombs, | | A. Ago, T. Niibo, N. Tsuboi, | I.H. Hung, J.H. Lee | (1036) |
| | B. Akih-Kumgeh | | A.K. Hayashi | | J. Goulier, N. Kouame, M. Idir, |
| | | | | | N. Chaumeix |
| 14:40 | Direct Numerical Simulation of | A Model to Account for the | Quasi-Detonation in Matrix of | Mechanism for Dynamical | Edge Flame Dynamics - |
| | Ignition by Hot Moving Particles | Effects of Friction During | Cylinders (1022) | Stabilization of Detonation in | Assisting the Stabilization of |
| | (1121) | Explosive Pinch (1020) | P.N. Krivosheyev, A.O. Novitski, | Expanding Channels (791) | Diffusion Flames in Mixing |
| | T. Zirwes, F. Zhang, T. Häber, | R. Timms, R. Purvis, J.P. Curtis | O.G. Penyazkov, K.L. Sevrouk | X. Cai, J. Liang, R. Deiterding, | Layers (887) |
| | D. Roth, H. Bockhorn | | | Z. Lin, S. Liu | Z. Lu, M. Matalon |
| 15:05 | | | Coffee Break | | |
| 15:05 | | | Poster Session II (15:05 - 16:20) | | |
| | | | Ziskind Lounge | | |

| Topic | Energetic Materials 1 Chairs: D. Frost, M. Hobbs | Shock Tubes, Ignition Delay Times, Kinetics 1 Chairs: U. Maas, E. Petersen | Detonation Engines 4 Chairs: R. Houim, C. Kiyanda | Detonation Failure and Propagation Chairs: K. Hayashi, R. Mével | Reactive Systems 3 Chairs: F. Marra, J. Yao |
|-------|--|---|--|---|---|
| 16:20 | Burning Characteristics of Aluminum-Air Flames (1054) R. Lo mba, F. Lespinasse, V. Lago, C. Chauveau, F. Halter | Ignition Delay Times of Methane/Diethyl Ether Blends Measured in a Rapid Compression Machine (RCM) (812) S. Drost, M. Werler, R. Schieβl, U. Maas | Numerical Investigation on the Behavior of Detonation Waves in a Disk-Shaped Rotating Combustor (1046) Y. Sato, A. Matsuo, J. Higashi, C. Ishiyama, K. Matsuoka, J. Kasahara | Detonation Failure in Stratified Layers - the Influence of Detonation Regularity (908) A.V. Gaathaug, K. Vaagsaether, D. Bjerketvedt | Calculation of Thermo- Chemical Equilibrium Using Phase Diagram Methods (1102) A.E. Gheribi, J.J. Lee |
| 16:45 | Spherically-Expanding Flames in Hybrid Aluminum-Methane- Oxidizer Mixtures at Atmospheric Pressure (799) J. Vickery, P. Julien, S. Goroshin, J.M. Bergthorson, D.L. Frost | Experimental and Numerical Study of the Ignition Delay Times of Primary Reference Fuels Containing Diethyl Ether (957) M. Fikri, Y. Sakai, J. Herzler, C. Schulz | Numerical Investigation on Detonation Behavior in a Disk- Shaped Rotating Detonation Combustor (1103) Y. Kumazawa, A. Matsuo, S. Nakagami, K. Matsuoka, J. Kasahara | Effect of Vertical Concentration Gradient on Detonation Behavior with Detailed Reaction Mechanism (776) W. Han, W. Kong, N. Du, Z. Liu | Turbulent Fuel Droplet Vaporization and the Initial Size Effect: Experimental Data at Elevated Temperature and Pressure (1076) C. Verwey, M. Birouk |
| 17:10 | Experimental Study on Effect of Large-Sized Granules in Powdery Explosives Under Drop- Weight Impact (948) Y. Wu, H. Guo, F. Huang, X. Bao | Ignition Delay Time Measurements of Sarin Surrogate (TEP, DMMP)-Based Mixtures in a Heated Shock Tube (1149) O. Mathieu, W.D. Kulatilaka, E.L. Petersen | A Numerical Study of H2-Air Rotating Detonation Combustor (1097) S. Yellapantula, V. Tangirala, K. Singh, J. Haynes | Experimental Investigation of Detonation Failure and Re- Initiation in Non-Uniform Compositions (1013) S. Boulal, P. Vidal, R. Zitoun, T. Matsumoto, A. Matsuo | Numerical Investigation on the Initial Development of Layered Coal Dust Combustion (958) K. Shimura, A. Matsuo |
| 17:35 | Free | Ethene / Dinitrogen Oxide - A Green Propellant to Substitute Hydrazine: Investigation on Its Ignition Delay Time and Laminar Flame Speed (1075) C. Naumann, T. Kick, T. Methling, M. Braun-Unkhoff, U. Riedel | Generation of Detonation in a Supersonic Flow of Combustible Mixture with Use of Bended Channel (1106) V.A. Levin, I.S. Manuylovich, V.V. Markov | Numerical Investigation of Detonation Failure in Non- Uniform Compositions and Comparison to Experiments (1030) T. Matsumoto, S. Boulal, A. Matsuo, P. Vidal, R. Zitoun | Impact of Water Mist on Chemical Reaction of Methane/Air/Water-Mist Premixed Flames (1035) S. Nakanishi, Y. Ogami, M. Ito, T. Tsuruda |
| 18:00 | | | Adjourn | | |

| | Friday | | | | | |
|-------|--|----------------------------------|--|--------------------------------|----------------------------------|--|
| Room | Auditorium | Ballroom A | Ballroom B | East Balcony | Terrace Lounge | |
| Tonio | Ignition 3 | Explosion Safety 4 | Detonation Modeling | Detonation Diffraction 2 | Spherical Explosions | |
| Topic | Chairs: D. Markus, S. Shy | Chairs: T. Tsuruda, J. Wen | Chairs: C. Chiquete, M. Short | Chairs: K. Hayashi, R. Mével | Chairs: V. Bykov, R. Schießl | |
| 9:00 | Flame Speed Measurements in | Electrochemical Reaction | Numerical Computation of | Propagation Behavior of | Effects of Endothermic Chain- | |
| | Turbulent Dispersions of Liquid | Kinetics for CO-CO2 | Linear Stability of Detonations | Diverging Cylindrical | Branching Reaction on | |
| | Fuels (1064) | Electrochemical Conversion in | (914) | Detonation in Mixture with | Spherical Flame Initiation and | |
| | P.M. de Oliveira, T. Higuchi, | the Nickel-Patterned Electrode | D.I. Kabanov, A.R. Kasimov | Reactivity Change (962) | Propagation (1007) | |
| | P.M. Allison, E. Mastorakos | (884) | | T. Okada, A. Matsuo, J.H. Lee | H. Li, H. Zhang, Z. Chen | |
| | | Y. Luo, Y. Shi, W. Li, N. Cai | | | | |
| 9:25 | A Simulation of Ignition | Blast From Pressurized CO2 | A Full Scale Hydrodynamic | Prediction of the Critical | Dynamic Behavior of | |
| | Thresholds for Low Voltage | Released Into a Vented | Simulation of Detonation and | Curvature for LX-17 with the | Spherically Expanding Flame of | |
| | Electrical Contact Arcs in a | Chamber (826) | Deflagration in an Energetic | Time of Arrival Data From DNS | H2/Air/CO2 Mixture in a Closed | |
| | Hydrogen-Air Mixture (910) | P.M. Hansen, A.V. Gaathaug, | Component System (892) | (1112) | Chamber (867) | |
| | R. Shekhar, C. Uber, U. Gerlach | D. Bjerketvedt, K. Vaagsaether | B. Kim, J.J. Yoh | J. Yao, L.E. Fried, W.C. Moss | T. Katsumi, K. Aiba, Y. Itakura, | |
| | | | | | S. Kadowaki | |
| 9:50 | A Computational Study of the | Flame Spread Over Electrical | | The Methods of Control of | | |
| | End Gas Autoignition and Shock | Wires with Various Diameters | | Stabilized Detonation Location | | |
| | Development by Flame Front | Under Applied AC Electric | | in a Supersonic Gas Flow in a | | |
| | and Local Hot Spot (1021) | Fields (943) | Free | Plane Channel (781) | Free | |
| | A. Sow, B.J. Lee, H.G. Im | S.H. Park, S.J. Lim, J. Park, | | V.A. Levin, T.A. Zhuravskaya | | |
| | | O.B. Kwon, O. Fujita, S.H. Chung | | | | |
| 10:15 | | | Coffee Break | | - | |

| | Ignition 4 | Shock Tubes, Ignition Delay | DDT 4 | Detonation in Non-Uniform | Reactive Systems 4 |
|-------|---|--|--|--|---|
| Topic | Chairs: D. Markus, S. Shy | Times, Kinetics 2 | Chairs: R. Houim, P. Vidal | Mixtures | Chairs: H. Im, W. Sirignano |
| | | Chairs: J. Herzler, U. Maas | | Chairs: S. Jackson, M. Short | |
| 10:45 | Experimental Investigation of | Experimental Measurement of | Exploration of Turbulence | Self-Sustained Oblique | Measurements of Laminar |
| | the Electrical Characteristics of | Ignition Delay Times of | Driven Deflagration to | Detonation in a Non-Uniform | Flame Speeds of Alternative |
| | Low-Voltage Contact-Arcs in | Thermally Cracked n-Decane in | Detonation of Fast Flames | Mixture (1009) | Liquid Fuel Blends (825) |
| | Hydrogen-Air Mixture (907) | Shock Tube (788) | (1087) | K. Iwata, S. Nakaya, M. Tsue | S.F. Samim, S. Ahmed |
| | C. Uber, R. Shekhar, U. Gerlach | S. Pei, H. Wang, X. Zhang, S. Xu, | J. Chambers, K. Ahmed, | | |
| | | L. Wang, G. Liu | A. Poludnenko | | |
| 11:10 | A Rapid Compression Machine | Numerical Investigations of the | The Influence of Turbulent | Numerical Study of a Gaseous | Diffusion Flame at High |
| | Study of n-Decane Ignition at | Impact of Tailored Driver Gases | Mixing on Deflagration to | Detonation Propagation Across | Pressure with Air and Water- |
| | Intermediate Temperatures | and Driver Inserts on Shock | Detonation Transition (1078) | a Density Interface (987) | Laden Methane (945) |
| | (926) | Tube Flows (1118) | B. Maxwell, M.I. Radulescu, | K.C.T. Yuk, X.C. Mi, J.H. Lee, | A. Jorda, W.A. Sirignano |
| | V.V. Leschevich, O.G. Penyazkov, | D.M. Coombs, B. Akih-Kumgeh | A.A. Pękalski | H. Teng, H.D. Ng | |
| | S.Y. Shimchenko | | | | |
| | | | | | |
| 11:35 | Investigation of the Flame | Chemical Reaction Mechanisms | Numerical Study of Deflagration- | Numerical Investigation on | Modelling Mixing Near HE-Air |
| 11:35 | Investigation of the Flame Kernel Propagation After | Chemical Reaction Mechanisms Validation Based on Ignition | Numerical Study of Deflagration- to-Detonation Transition in | Numerical Investigation on Characteristics of a Planar | Modelling Mixing Near HE-Air Interfaces in Explosions (937) |
| 11:35 | Kernel Propagation After Ignition by a Low Energy | Validation Based on Ignition Delay Time of C1-C5 | to-Detonation Transition in Homogenous and | Characteristics of a Planar Detonation Wave Across Layers | |
| 11:35 | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) | Interfaces in Explosions (937) |
| 11:35 | Kernel Propagation After Ignition by a Low Energy | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, |
| 11:35 | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, |
| 11:35 | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, |
| 12:00 | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) S. Essmann, D. Markus, U. Maas Hot Surface Ignition Dynamics | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, K. Matsuoka Physical and Mathematical | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, |
| | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) S. Essmann, D. Markus, U. Maas Hot Surface Ignition Dynamics in Hydrogen-Air Mixtures Near | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, K. Matsuoka | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, |
| | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) S. Essmann, D. Markus, U. Maas Hot Surface Ignition Dynamics in Hydrogen-Air Mixtures Near the Flammability Limits (1100) | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, K. Matsuoka Physical and Mathematical Modeling of Interaction of Detonation Waves in Mixtures | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, |
| | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) S. Essmann, D. Markus, U. Maas Hot Surface Ignition Dynamics in Hydrogen-Air Mixtures Near the Flammability Limits (1100) L.R. Boeck, J. Melguizo- | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, A. Teodorczyk | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, L.R. Boeck, J.X. Wen | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, K. Matsuoka Physical and Mathematical Modeling of Interaction of Detonation Waves in Mixtures of Hydrogen, Methane, Silane | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, V.E. Beckner |
| | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) S. Essmann, D. Markus, U. Maas Hot Surface Ignition Dynamics in Hydrogen-Air Mixtures Near the Flammability Limits (1100) | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, K. Matsuoka Physical and Mathematical Modeling of Interaction of Detonation Waves in Mixtures of Hydrogen, Methane, Silane and Oxidizer with Clouds of | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, |
| | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) S. Essmann, D. Markus, U. Maas Hot Surface Ignition Dynamics in Hydrogen-Air Mixtures Near the Flammability Limits (1100) L.R. Boeck, J. Melguizo- | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, A. Teodorczyk | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, L.R. Boeck, J.X. Wen | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, K. Matsuoka Physical and Mathematical Modeling of Interaction of Detonation Waves in Mixtures of Hydrogen, Methane, Silane and Oxidizer with Clouds of Inert Micro- and Nanoparticles | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, V.E. Beckner |
| | Kernel Propagation After Ignition by a Low Energy Electrical Discharge (1006) S. Essmann, D. Markus, U. Maas Hot Surface Ignition Dynamics in Hydrogen-Air Mixtures Near the Flammability Limits (1100) L.R. Boeck, J. Melguizo- | Validation Based on Ignition Delay Time of C1-C5 Hydrocarbons (928) W. Rudy, A. Jach, A.A. Pękalski, A. Teodorczyk | to-Detonation Transition in Homogenous and Inhomogeneous Hydrogen-Air Mixtures (834) R.K. Azadboni, A. Heidari, L.R. Boeck, J.X. Wen | Characteristics of a Planar Detonation Wave Across Layers of Burned Gas (994) N. Ohira, A. Matsuo, J. Kasahara, K. Matsuoka Physical and Mathematical Modeling of Interaction of Detonation Waves in Mixtures of Hydrogen, Methane, Silane and Oxidizer with Clouds of Inert Micro- and Nanoparticles (750) | Interfaces in Explosions (937) A.L. Kuhl, D. Grote, J.B. Bell, V.E. Beckner |
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| | Energetic Materials 2 | Dust Explosions 3 | Detonation Engines 5 | Diagnostics, Sensoring 2 | Reactive Systems 5 | | |
|-------|---------------------------------------|--------------------------------|----------------------------------|-------------------------------------|------------------------------------|--|--|
| Topic | Chairs: D. Frost, C. Proust | Chairs: G. Ciccarelli, E. Oran | Chairs: A. Chinnayya, | Chairs: R. Schießl, S.Y. Yang | Chairs: V. Bykov, U. Maas | | |
| 1 | , | , | C. Kiyanda | , , | 3 | | |
| 14:15 | On Minimum Flash Ignition | Analysis of Dust Cloud | Experimental Investigation on | Embedded Fiber Optic Sensors | A Computational Analysis of | | |
| | Energy of Energetic Igniter | Combustion Using High-Speed | Delay Time of Continuously | for Measuring Transient | Autoignition of H2/Air Mixture | | |
| | Using Aluminum Nanoparticles: | Infrared Imaging (913) | Detonation Engine (796) | Detonation/Shock Behavior: | with Temperature Fluctuations | | |
| | Effects of 2D Interparticle | F. Marcotte, S. Savary, | X. Han, S. Zhang, Z. Ma, J. Wang | Time-of-Arrival Detection and | Using Computational Singular | | |
| | Distances (1139) | M.A. Gagnon, V. Morton | | Waveform Determination (766) | Perturbation (923) | | |
| | J.Y. Yu, Y.P. Chan, Y.C. Hsu, | | | M.A. Chavez, M.D. Willis, | W. Song, E.A. Tingas, S.R. Lee, | | |
| | Y.C. Chao | | | T.T. Covert | H.G. Im | | |
| 14:40 | Experimental Investigations of | Dimensional Scaling for | The Effect of Combustor Width | Possibility of Applying Flame | IR Absorption Measurements of | | |
| | Combustion Enhancement of | Propagation in Particulate | on Continuous Rotating | Chemiluminescence and | the Velocity of a Premixed | | |
| | HAN-Based Green Propellant | Clouds with Lateral and | Detonation Wave Fueled by | Ionization Current to the | Hydrogen/Air Flame | | |
| | with K2CO3-Activated Carbon | Volumetric Losses (1126) | Ethylene (947) | Combustion Status Monitoring | Propagating in an Obstacle- | | |
| | (1063) | F. Lam, X. Mi, A.J. Higgins | H. Peng, W. Liu, S. Liu | (933) | Laden Tube (1057) | | |
| | M.K. Atamanov, K. Hori, | | | Y. Ding, D. Durox, N. Darabiha, | R. Scarpa, E. Studer, B. Cariteau, | | |
| | E. Aliyev, R. Amrousse, | | | T. Schuller | S. Kudriakov, N. Chaumeix | | |
| | Z.A. Mansurov | | | | | | |
| 15:05 | Development of Protection | Monitoring of a Dust Explosion | Numerical Study of Reinitiation | Infrared Radiation | Study on Low Temperature | | |
| | Recommendations for | in a 10 m3 Vessel (891) | Phenomenon in Continuous | Measurements at Failure of | Oxidation with a Separated Cool | | |
| | Warehouse Storage of Li-Ion | Y. Grégoire, C. Proust, | Detonation Engine (898) | Mobile Gas Vessels (1034) | Flame of n-Heptane in a Micro | | |
| | Batteries (817) | E. Leprette, D. Jamois | S. Yao, J. Wang | D. Krentel, M. Rudolph, | Flow Reactor with a Controlled | | |
| | B. Ditch | | | R. Tschirschwitz, M. Kluge, | Temperature Profile (920) | | |
| | | | | E. Askar, K. Habib, H. Kohlhoff, | R. Tatsumi, H. Nakamura, | | |
| | | | | G. Mair, P.P. Neumann, | S. Hasegawa, T. Tezuka, | | |
| | | | | B. Schalau, A. Schoppa, | K. Maruta | | |
| | | | | S.U. Storm, M. Szczepaniak | | | |
| 15:30 | | | Effects of Pre-Ignition | | | | |
| | Free | Free | Conditions on Continuous | Free | Free | | |
| | 1.166 | 1,166 | Detonation Engine (886) | 1,166 | 1766 | | |
| | | | S. Yao, S. Zhang, J. Wang | | | | |
| 16:00 | | Friday Farewell | | | | | |
| 18:00 | Adjourn | | | | | | |