

PGC-01	National Harbor 3	Monday	1/23/23
Session Title:	Computational Modeling, Simulation and Validation for PGC I		
Paper ID	Title	Presenter	Time
AIAA-2023-0169	Ideal Analysis of an Unsteady Detonation Based Combustion Cycle	Robert Fievisohn	9:30 AM
AIAA-2023-0171	Validation of a Density Base Navier-Stokes solver simulating the startup deflagration to detonation process of Rotating Detonation Engine (RDE)	Bruce Crawford	9:50 AM
AIAA-2023-0172	Parametric non-intrusive reduced-order models via operator inference for large-scale rotating detonation engine simulations	Ionut Farcas	10:10 AM
AIAA-2023-0173	Investigation of Three RDE Architectures for Propulsion Applications	Venkat Tangirala	10:30 AM

PGC-02	National Harbor 2	Monday	1/23/23
Session Title:	Combustor Operability, Optimization and Performance with Liquid and Gaseous Fuels I		
Paper ID	Title	Presenter	Time
AIAA-2023-1295	Flow Characterization of a Rotating Detonation Combustor Integrated with Various Convergent Nozzles	Ajay Agrawal	9:30 AM
AIAA-2023-2563	Experimental Research on Internal Flow Structure of Cylindrical Rotating Detonation Engine Using Alcohol	Tomoki Sato	9:50 AM
AIAA-2023-2564	Simulations of an Experimental Centerbody-less Rotating Detonation Combustor	Douglas Schwer	10:10 AM
AIAA-2023-0174	Effects of Injection Pressure on Rotating Detonation Engine Operation	Bayindir Saracoglu	10:30 AM
AIAA-2023-1296	Experimental Study of the Invariance of Pressure Gain with Respect to the Dynamics of Multiple Competing Waves in a Rotating Detonation Combustor	Alexander Feleo	10:50 AM

PGC-03	National Harbor 3	Monday	1/23/23
Session Title:	Study of Rotating Detonation Rocket Engines I		
Paper ID	Title	Presenter	Time
AIAA-2023-0354	Experimental Results for Geometrically Scaled Rotating Detonation Rocket Engines	Carl Knowlen	2:00 PM
AIAA-2023-0355	Design, manufacture, and analysis of an additively manufactured rotating detonation rocket engine chamber for calorimetry and thermal management assessment	Joseph Hernandez-McCloskey	2:20 PM
AIAA-2023-0356	Liquid Jet Response to Detonation Waves in a Linear Detonation Combustor	Charlie Black	2:40 PM

AIAA-2023-0357	Development of a High Pressure, Cold Flow Test Facility for Characterizing Novel, Ultra High Performance, Additively Manufactured Injector Elements for Pressure Gain Engines	Ari Goldman	3:00 PM
AIAA-2023-0358	Scaling Effects of Increased Annular Diameter in a Rotating Detonation Rocket Engine	Blaine Bigler	3:20 PM

PGC-04	National Harbor 2	Monday	1/23/23
Session Title:	Measurement and Diagnostics for Detonation I		
Paper ID	Title	Presenter	Time
AIAA-2023-0359	Detonation Flow Characterization Using Megahertz Rate Particle Image Velocimetry	Joshua Berson	2:00 PM
AIAA-2023-0360	Visualization and Velocimetry Techniques for Supersonic Reacting Flows	Rachel Hytovick	2:20 PM
AIAA-2023-0361	Investigating quantitative ion probe measurements in a rotating detonation engine	Clinton Bedick	2:40 PM
AIAA-2023-0362	Dependence of premixture jet height on detonation wave propagation inside a pressure gain combustion channel	Faming Wang	3:00 PM
AIAA-2023-0363	Experimental Studies of the Interaction of Liquid Rocket Fuel Droplets with Detonation Waves	Nicolas Berube	3:20 PM

PGC-05	National Harbor 3	Monday	1/23/23
Session Title:	Combustor Operability, Optimization and Performance with Liquid and Gaseous Fuels II		
Paper ID	Title	Presenter	Time
AIAA-2023-0572	Characterization of Injection Mixing in The Rotating Detonation Rocket Engine	Austin Burden	4:00 PM
AIAA-2023-0573	Time resolved visualization of liquid jet interaction with H2-air rotating detonations using MHz rate diesel PLIF	Venkat Athmanathan	4:20 PM
AIAA-2023-0574	Triplet Impinging Injector Flow Area Effect on Mixing and Recovery Performance in a Detonative Combustion Environment	Michaela Hemming	4:40 PM
AIAA-2023-0575	Characterization of Liquid Fuel Droplet Breakup Interacting with Shock Waves and Detonations	Steven Schroeder	5:00 PM
AIAA-2023-2063	Synthetic Laser Measurements in Rotating Detonation Rocket Engine Simulations	Mathias Ross	5:20 PM

PGC-06	National Harbor 2	Monday	1/23/23
Session Title:	Applications, System Integration and Thermal Management I		
Paper ID	Title	Presenter	Time
AIAA-2023-0576	Second-Generation Development of a Radial Rotating Detonation Engine	Marc Polanka	4:00 PM
AIAA-2023-0577	3D Evaluation of Premixed Gas Injection Ports Number on Flow Field in Disk RDE	Takumi Ito	4:20 PM
AIAA-2023-0578	Multi-wave Operation of a Radial Rotating Detonation Engine with Integrated Aerospike	Ajay Agrawal	4:40 PM
AIAA-2023-0579	Numerical Optimization of Disk RDE Integrated with an Aerospike Using Cross-Sectional Area Profiling	Ajay Agrawal	5:00 PM
AIAA-2023-2061	Development of TDLAS-based Thermal Sensor for Measuring the Exhaust Gas Temperature of Shuttling Transverse Combustor	Po-Hsiung Chang	5:20 PM

PGC-07	National Harbor 3	Tuesday	1/24/23
Session Title:	Model Validation for Propulsion Workshop		
Paper ID	Title	Presenter	Time
No paper	Macroscopic effects of numerical schemes in a rotating detonation engine	Matthew Bananni	9:30 AM
No paper	Three Dimensional Numerical Simulation of Liquid RDE	Sebastian Abisleiman	9:50 AM
No paper	In-Channel MHz-rate Measurements of Gas Properties in a Methane-Oxygen Rotating Detonation Rocket Combustor for Model Validation	Nick Kuenning	10:10 AM
No paper	Chamber Dynamics and Transient Behavior in MVP RDRE	Trevor Kickliter	10:30 AM
No paper	Open discussion		10:50 AM

PGC-08	National Harbor 3	Tuesday	1/24/23
Session Title:	Measurement and Diagnostics for Detonation II		
Paper ID	Title	Presenter	Time
AIAA-2023-0928	Detonation Wave Visualization in a Rocket RDE with Continuous Variation of Fuel Injection Location	Allyson Haynes	2:00 PM
AIAA-2023-2062	Simultaneous in-chamber MHz Sensing of CO, H2O, Temperature and Pressure Via Mid-Infrared Laser Absorption in a Rotating Detonation Rocket Engine	Nicholas Kuenning	2:20 PM
AIAA-2023-0929	Experimental Comparison of Different Pressure Gain Measurement Techniques for RDCs	Hongyi Wei	2:40 PM
AIAA-2023-0930	Uncertainties and Limitations of Experimental Thrust and Pressure Gain Measurements in a Rotating Detonation Combustor	Alexander Feleo	3:00 PM

AIAA-2023-0931	Analysis of Quasi-steady, Transitional, and Short Timescale Galloping within Rotating Detonation Engines	Kristyn Johnson	3:20 PM
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PGC-09	Virtual / National Harbor 3	Tuesday	1/24/23
Session Title:	Applications, System Integration and Thermal Management II		
Paper ID	Title	Presenter	Time
AIAA-2023-1107	Simultaneous Shadowgraph and Chemiluminescence Measurements of a Reactive Flow-Through Rotating Detonation Combustor	Rachel Wiggins	4:00 PM
AIAA-2023-1105	Experimental research on the Performance of Hollow and Annular Rotating Detonation Engines	Yunzhen Zhang	4:15 PM
AIAA-2023-1106	Particle Image Velocimetry Measurements of Unsteady Exhaust from a Linearized Continuous Detonation Combustor	Xin Huang	4:30 PM
AIAA-2023-1103	Annular Gap Width Variation in 25-mm Rotating Detonation Rocket Engine	Tyler Mundt	4:45 PM
AIAA-2023-1104	Operating Characteristics of a 76-mm Rotating Detonation Rocket Engine	Tyler Mundt	5:00 PM

PGC-10	National Harbor 3	Wednesday	1/25/23
Session Title:	Computational Modeling, Simulation and Validation for PGC II		
Paper ID	Title	Presenter	Time
AIAA-2023-1290	Computational Assessment of the Impact of Wave Count on Rotating Detonation Engine Performance	Daniel Paxson	9:30 AM
AIAA-2023-1291	Low-Order Model for Detonation Velocity Suppression in Rotating Detonation Combustors	Provence Barnouin	9:50 AM
AIAA-2023-1292	Investigation of Geometric RDC Dependencies Using a Fast Reactive Euler Solver	Roman Klopsch	10:10 AM
AIAA-2023-1293	Markov Chain Monte Carlo Parameter Estimation of Deflagration Losses in a Rotating Detonation Engine	Riley Huff	10:30 AM
AIAA-2023-1294	Numerical simulations of mode transition in Rotating Detonation Engines	Prashant Tarey	10:50 AM

PGC-11	National Harbor 3	Wednesday	1/25/23
Session Title:	Fundamental Investigation of Detonation for PGC I		
Paper ID	Title	Presenter	Time
AIAA-2023-1493	Numerical Investigation on the Deflagration-to-Detonation Run-up Distance of Hydrogen Flames at elevated Pressure	Robyn Cideme	2:00 PM

AIAA-2023-1494	Wave Propagation Phenomenon in Shuttling Transverse Combustion	Zhen Teo	2:20 PM
AIAA-2023-1495	Transient Evolution of Wedge Induced Dynamics in Supersonic Reacting Flow	Taylor Brown	2:40 PM
AIAA-2023-1496	Statistical Characterization of Hydrogen-Oxygen Detonations	Joshua Berson	3:00 PM
AIAA-2023-1497	Experimental Study of Oblique Detonation Wave Stabilization on a Wedge	Zachary White	3:20 PM

PGC-12	National Harbor 2	Wednesday	1/25/23
Session Title:	Applications, System Integration and Thermal Management III		
Paper ID	Title	Presenter	Time
AIAA-2023-1498	The Effects of Aerogel Lining on a H ₂ -Air Fueled Annular RDC Combustor	Jorge Betancourt	2:00 PM
AIAA_2023-1499	Thermoacoustic Suppression in a Rotating Detonation Combustion using Perforated Liner	Tyler Pritschau	2:20 PM
AIAA-2023-1500	Choked Flow in a Converging/Diverging Rotating Detonation Engine Exit	Justin Weber	2:40 PM

PGC-13	National Harbor 3	Thursday	1/26/23
Session Title:	Study of Rotating Detonation Rocket Engines II		
Paper ID	Title	Presenter	Time
AIAA-2023-1869	Structural and Fatigue Analysis of a Rotating Detonation Rocket Engine	Krzysztof Stopka	9:30 AM
AIAA-2023-1870	In-space Demonstrations of Rotating Detonation Engines: from Gaseous Propellant to Liquid Propellant Applications	Noboru Itouyama	9:50 AM
AIAA-2023-1871	Time-Resolved Stagnation Pressure Measurement Technique in a Rotating Detonation Rocket Combustor	Kevin Dille	10:10 AM
AIAA-2023-1873	Current State of NASA Continuously Rotating Detonation Cycle Engine Development	Thomas Teasley	10:30 AM

PGC-14	National Harbor 3	Thursday	1/26/23
Session Title:	Fundamental Investigation of Detonation for PGC II		
Paper ID	Title	Presenter	Time
AIAA-2023-1874	Transverse Detonation Waves in Near-Limit Detonations	Mark Frederick	2:00 PM
AIAA-2023-1875	Experimental Investigation on Losses in Detonations at Elevated Pressure with Variable Channel Confinement	Robyn Cideme	2:20 PM
AIAA-2023-1876	Effects of Nitrogen Dilution on Detonation Wave Physics in a H ₂ -Air Non-premixed Rotating Detonation Combustors	Robert Wang	2:40 PM

AIAA-2023-1877	Nitric oxide sensitization of hydrogen detonations	Karl Chatelain	3:00 PM
AIAA-2023-2565	Numerical Study on Pressure Gain of Rotating Detonation System	A Koichi Hayashi	3:20 PM

PGC-15	National Harbor 3	Friday	1/27/23
Session Title:	Fundamental Investigation of Detonation for PGC III		
Paper ID	Title	Presenter	Time
AIAA-2023-2391	Imaging Exhaust Flow of Radial RDE using Rainbow Schlieren Deflectometry	Ajay Agrawal	9:30 AM
AIAA-2023-2392	High Speed Imaging of Gaseous Detonations in Planar Curved Channels with High Aspect Ratio	Regan Hencel	9:50 AM
AIAA-2023-2393	Interferometric visualization of detonation waves inside a pressure gain combustion channel at low-mass flow rates	Toshiharu Mizukaki	10:10 AM
AIAA-2023-2394	Survey of Machine Learning Based RDE Diagnostics: Evaluation and Comparison for Broad Application in Experimental Facilities	Kristyn Johnson	10:30 AM
AIAA-2023-2395	Cellular Properties of Unstable Detonations from Mixtures of Ethylene with Nitrous Oxide	Mitchell Hageman	10:50 AM