

**2022 AIAA Aviation (Hybrid)
June 27 - July 1, 2022**

**Summary of PGC Program Sessions
(Updated June 30, 2022)**

Few general notes:

- All sessions are 100 minutes long
- Each session includes up to 5 presentations, each is 20 minutes long
- Mode is hybrid; we have 2 in-person sessions and 1 virtual

The following list summarizes the Pressure Gain Combustion TC sessions only, and it is provided as a guidance. Please verify what provided here against the final program published online: <https://virtualaviation.aiaa.org>

Additional information about the event and its format can be found here: <https://www.aiaa.org/aviation/presentations-papers/technical-presenter-resources/hybrid-event-faqs>

The forum will be held in person in Chicago, IL, and online via the virtual platform on 27 June – 1 July 2022.

Early bird registration for in-person attendance is ends 6 June, 2022.

Day 3 — Friday June 29, 2022

Session ID: INPSI-07/HSABP-06

Session title: Inlet/Exhaust System Integration Design, Performance, and/or Operability II

Meeting time: 16:00 — 17:15 CDT

Room: Virtual

Chairs: Ragini Acharya and Robin Hunt

Title of paper	Name of presenter
Experimental Study of an Annular Aerospike Nozzle with Hybrid Rocket Motor Using a Liquefying Fuel (AIAA-2022-3861)	Umang Jain
Robust Design Under Uncertainty of Hypersonic Inlets (AIAA-2022-3862)	Nick DiGregorio
Mode Transition in a Strut Based Dual-Mode Scramjet Combustor (AIAA-2022-3863)	Rajesh Kumar
RDE Performance Mapping and Stability Characteristics (AIAA-2022-3864)	Craig Nordeen
Wind Tunnel Test of a Highly-Compact Serpentine Supersonic Inlet (AIAA-2022-3865)	Stephen M Barr

Day 5 — Friday July 1, 2022

Session ID: PGC-01

Session title: Modeling and Design of RDEs

Meeting time: 9:50 — 11:10 CDT

Room: 4M, in-person

Chairs: Rackel Hytovick and Kareem Ahmed

Title of paper	Name of presenter
Experimental Investigation of Injector Sizing In The Rotating Detonation Rocket Engine (AIAA-2022-4106)	Austin Burden
Computational Fluid Dynamic Optimization of an Experimental Rotating Detonation Rocket Engine Nozzle (AIAA-2022-4107)	Daniel Paxson
Numerical Investigation of Rotating Detonation Engine with Injection from the Combustor Side Wall (AIAA-2022-4108)	Takumi Sada

Session ID: PGC-02

Session title: RDE Operation and Detonation Waves

Meeting time: 14:00 — 15:40 CDT

Room: 4M, in-person

Chairs: Daniel Paxson

Title of paper	Name of presenter
Experimental Research on Thrust Performance of Rotating Detonation Engine with Liquid Ethanol and Gaseous Oxygen (AIAA-2022-4143)	Took Sato
Development of an Automation System for a Detonation Tube (AIAA-2022-4144)	Joshua Berson
An Investigation on the Flame Acceleration of Oxygen Enriched Ethylene Flames (AIAA-2022-4145)	Rachel Hytovick
Design Of a High Aspect Ratio Detonation Tube with High Initial Pressure (AIAA-2022-4146)	Robyn Cideme