



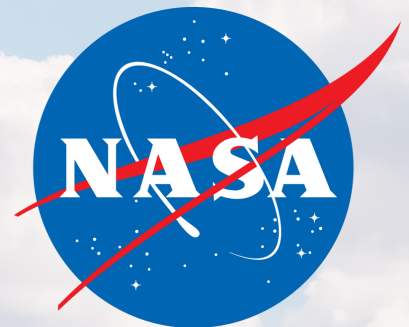
GATEWAYS TO
BLUESKIES

**CLEAN AVIATION ENERGY
COMPETITION**

June 1-2, 2023

NASA's Glenn Research Center

Cleveland, OH



WELCOME

Engaging college students in design ideas and technology innovations to support the climate-friendly aviation industry of tomorrow.

A Message from Blue Skies Sponsor: Koushik Datta

Ames Research Center (ARC) | Project Manager, University Innovation Project



Congratulations, Blue Skies competitors, and welcome to the second annual Blue Skies Forum! Did you know Ohio is considered the “Birthplace of Aviation” or that NASA’s Glenn Research Center began studying the power and efficiency of aircraft engines more than 75 years ago? There is so much history here, and now you will be a part of it! This year, we asked you to research and conceptualize the source-to-flight lifecycle of one potential clean aviation energy source of the 2050s, in terms of feasibility, viability, and environmental impact—and you delivered. As finalists, you have already revealed your creativity, innovation, and commitment toward green aviation. Becoming a finalist in the Blue Skies Competition is no easy feat, so be proud of your work. We are excited to view your presentations, interact over your infographics, and channel your energy and enthusiasm into NASA’s work in advancing the aviation industry toward a zero-emissions future through this Blue Skies Forum!

Carnegie Mellon University



TEXAS
The University of Texas at Austin

UC San Diego

BOSTON
UNIVERSITY



TEXAS A&M
UNIVERSITY



THE OHIO STATE UNIVERSITY



MANHATTAN COLLEGE

AGENDA

NASA's Glenn Research Center

Wednesday, May 31, 2023

- 6:30 – 7:30 PM** **Blue Skies Forum Team Check-in**
Crowne Plaza Cleveland at Playhouse Square
1260 Euclid Ave, Cleveland, OH 44115
- 7:30 – 8:30 PM** **Dessert Networking Reception**
Palace West Ballroom, Crowne Plaza

Thursday, June 1, 2023

NASA's Glenn Research Center
Mission Integration Center (MIC)

- 8:15 – 8:50 AM** **Judges Meet & Greet (Room 130)**
- 9:00 – 9:15 AM** **Welcome and Introductions**
MIC Auditorium
- 9:15 – 9:45 AM** **NASA's ARMD Presentation**
NASA Aeronautics Research Vision & Program
Bob Pearce, ARMD Associate Administrator
- 9:50 – 10:35 AM** **Boston University**
Aluminum Powder Combustion
Advisor: James Geiger
- 10:35 – 10:50 AM** **Morning Coffee Break**
- 10:50 – 11:35 AM** **Manhattan College**
High on Hydrogen!
Advisor: Dr. Bahareh Estejab
- 11:45 AM – 12:30 PM** **Ohio State University**
Project Source to Soar
Advisor: Dr. Bhavik Bakshi
- 12:30 – 1:30 PM** **Lunch**
- 1:30 – 2:00 PM** **Judges Meeting (Room 130)**
- 1:30 – 2:00 PM** **Team Photos**
- 2:00 – 2:15 PM** **Group Photo**
- 2:20 – 3:05 PM** **University of California, San Diego**
Aircraft Propulsion by Directed Energy Beam Bursts (DEB-B)
Advisor: Dr. Sylvia Herbert
- 3:05 – 3:20 PM** **Afternoon Snack Break**
- 3:20 – 4:05 PM** **Texas A&M University**
Nuclear Aviation Project
Advisor: Dr. Ahmed Abdelaal
- 4:15 – 5:30 PM** **Poster Session – Day 1 Teams**
MIC Lobby

Friday, June 2, 2023

NASA's Glenn Research Center

- 8:45 – 9:30 AM** **Carnegie Mellon University**
The Role of Hydrogen in Aviation Decarbonization
Advisors: Dr. Peter Zhang, Dr. Jared Cohon
- 9:40 – 10:25 AM** **Boston University**
Iron Powder as a Clean Aviation Fuel Source
Advisor: Dr. Anthony Linn
- 10:25 – 10:40 AM** **Morning Coffee Break**
- 10:40 – 11:25 AM** **University of Texas, Austin**
A Life Cycle Analysis of Space-Based Solar Power for Aircraft
Advisor: Dr. Christian Claudel
- 11:35 AM – 12:20 PM** **Poster Session – Day 2 Teams**
MIC Lobby
- 12:20 – 1:20 PM** **Lunch**
- 1:30 – 4:30 PM** **Teams Tour NASA's Glenn Research Center**
- NLT 1:45 PM** **Judges Deliver Finalized Scores**
- 2:00 – 4:00 PM** **Deliberation (Room 130)**

Great Lakes Science Center

- 6:10 – 6:50 PM** **IMAX Screening**
Dome Theater, Great Lakes Science Center
601 Erieside Ave, Cleveland, OH 44114
- 7:00 – 8:00 PM** **Awards Dinner**
Level 1, Patio, Great Lakes Science Center
- 8:00 – 8:30 PM** **Awards Ceremony & Group Photo**
Level 1, Discovery Stage
Great Lakes Science Center
- 8:30 – 9:30 PM** **Gallery & Exhibit Viewing**
Level 1, Glenn Visitor Center
Great Lakes Science Center

AGENDA LEGEND

Events restricted to Judges & Staff are **GREEN**.
Events restricted to Paid Registrants (teams, judges, staff) are **BLUE**.

A Livestream of the presentations can be viewed at: <https://livestream.com/viewnow/blueskies>

Team Infographics can be viewed at: <https://blueskies.nianet.org/finalists>

Teams may visit NASA's Gift Shop during Lunches & Breaks. Hours of Operation are June 1-2: 9:00 AM – 2:30 PM

2023 GATEWAYS TO BLUE SKIES JUDGING PANEL



STEVEN HOLZ

Blue Skies Co-Chair & Sponsor
NASA Langley Research Center



ANDREW PROVENZA

Blue Skies Co-Chair & Sponsor
NASA Glenn Research Center



SUSAN BAYLEY

LIFTE H2



MATTHEW BOUCHER

NASA Armstrong Flight
Research Center



PEGGY CORNELL

NASA Glenn Research Center



KOUSHIK DATTA

Sponsor
NASA Ames Research Center



MANI GAVVALAPALLI

U.S. Department of Energy



DEVIN PUGH-THOMAS

NASA Langley Research Center



JEANNE YU

NASA Ames Research Center



Help Blue Skies improve by
completing the Forum Survey!

The Gateways to Blue Skies Competition is sponsored by NASA's
Aeronautics Research Mission Directorate and is managed by the
National Institute of Aerospace.



<https://blueskies.nianet.org>



Scan to access the
digital program book.