



2024 **B**reakthrough, **I**nnovative & **G**ame-changing (BIG)

Idea Challenge Forum

Engaging Universities in NASA's Mission to Develop Space
Exploration Technologies for the Moon to Mars

INFLATABLE SYSTEMS FOR LUNAR OPERATIONS



NOVEMBER 11-12, 2024 | LAS VEGAS, NV

WELCOME

Engaging Universities in NASA's Mission to Develop Space Exploration Technologies for the Moon to Mars



Congratulations finalists, and welcome to the 2024 BIG Idea Forum and to the thrilling city of Las Vegas! NASA is pleased to be able to hold this year's Forum in tandem with the Lunar Surface Innovation Consortium's (LSIC) Fall Meeting on the beautiful campus of the University of Nevada, Las Vegas. We are excited to learn more about the inflatable technologies and systems you have been working on these past several months and are thrilled to provide a platform for you to share your work with a wider audience here in Las Vegas. Both the BIG Idea Forum and LSIC Fall Meeting provide unique opportunities to engage directly with the aerospace industry by providing face time with potential employers, mentors, and friends. I invite you to learn as much as you can over the next few days and highly recommend you take advantage of this time to develop your network by getting to know your fellow competitors, esteemed judges, and NASA and industry experts. Above all else - enjoy yourselves. You've earned it! Thank you for your dedication, innovation, and BIG ideas! – *Niki Werkheiser Director, Technology Maturation Domain Formulation Lead, Surface Infrastructure and Exploration (Live) NASA STMD*



Caltech

BYU

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AGENDA

November 11-12, 2024 | Las Vegas, NV

Monday, November 11

6:00 - 8:00 PM **BIG Idea Forum Check-in & Networking Dinner***
Buca Di Beppo, Excalibur Hotel & Casino
3850 S Las Vegas Blvd. 89109

Tuesday, November 12

University of Nevada, Las Vegas
Richard Tam Alumni Center
4505 S. Maryland Pkwy, Las Vegas, NV 89254

8:45 - 9:45 AM **Morning Pastries***
William Trent Lounge

8:45 - 9:35 AM **Late Check-in & Registration**
Lobby

8:45 - 9:35 AM **Team A/V Checks**
Marietta Tiberti Grand Hall

8:45 - 9:20 AM **Pre-Forum Judges' Meeting**
Fred C. Albrecht Boardroom

9:45 - 10:00 AM **Welcome, Introductions & Announcements**
Marietta Tiberti Grand Hall

10:05 - 10:55 AM **California Institute of Technology with
NASA's Jet Propulsion Laboratory, Cislune,
and Friends of Amateur Rocketry**
*PILLARS: Plume-deployed Inflatable for
Launch and Landing Abrasive Regolith
Shielding*

11:00 - 11:50 AM **Arizona State University**
AEGIS - Inflatable Lunar Landing Pad System

11:50 - 12:50 PM **Lunch***
William Trent Lounge

12:50 - 1:40 PM **Brigham Young University**
*Untethered and Modular Inflatable Robots for
Lunar Operations*

Tuesday, November 12 (cont'd)

1:45 - 2:35 PM **Northwestern University with National
Aerospace Corporation and IMS
Engineered Products**
*METALS: Metallic Expandable Technology
for Artemis Lunar Structures*

2:35 - 2:50 PM **Afternoon Break**
William Trent Lounge

2:50 - 3:40 PM **University of Michigan**
*Cargo-BEEP (Cargo Balancing Expandable
Exploration Platform)*

3:45 - 4:35 PM **University of Maryland**
Auxiliary Inflatable Wheels for Lunar Rover

4:35 - 4:45 PM **Group Photo**
Marietta Tiberti Grand Hall

4:50 - 5:45 PM **Judges' Meeting**
Fred C. Albrecht Boardroom

6:30 - 8:30 PM **Dinner***
Off the Strip, The LINQ Hotel
3535 Las Vegas Blvd. 89109
****Artemis Award Announced****

AGENDA LEGEND

Events restricted to Judges & Staff are **GREEN**.
Events restricted to Forum Participants are **ORANGE**.
***Note:** Meals are restricted to Paid Registrants only



Teams' digital posters & technical papers can be viewed at: <https://bigidea.nianet.org/2024-forum-results>

Recorded presentations will also be posted to this location after the Forum.

2024 BIG IDEA JUDGING PANEL



Doug Litteken
Co-Chair, NASA Johnson



KEVIN KEMPTON
Co-Chair, NASA Langley



DR. ATHONU CHATTERJEE
Johns Hopkins University/APL



DR. MILENA GRAZIANO
Johns Hopkins University/APL



RYAN GUNDLING
Ryzing Technologies



TOM JONES
NASA Marshall



DR. JIN HO KANG
NASA Langley



DR. MICHAEL NORD
Johns Hopkins University/APL



ARIANNA SANCHEZ
Stellar Solutions (NASA HQ)

The BIG Idea Challenge is sponsored by NASA through a collaboration between the Space Technology Mission Directorate's Game Changing Development (GCD) program and the Office of STEM Engagement's Space Grant Project, and is managed by a partnership between the National Institute of Aerospace and the Johns Hopkins University Applied Physics Laboratory.

<https://bigidea.nianet.org>

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