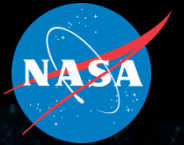




National Aeronautics and
Space Administration

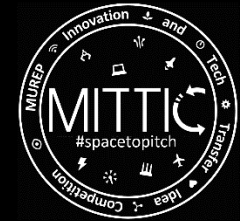


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MUREP Innovation and Tech Transfer Idea Competition

Competition Overview

go.nasa.gov/NASAMITTIC



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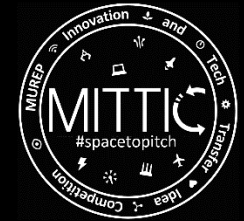


Change the world using NASA technology!

The Minority University Research and Education Project (MUREP) Innovation and Tech Transfer Idea Competition provides a space to develop new, innovative uses for NASA intellectual property.

The competition is open to multi-disciplinary student teams enrolled at HBCUs and Minority Serving Institutions (MSIs).

MITTIC is *every major's* #SpaceToPitch!



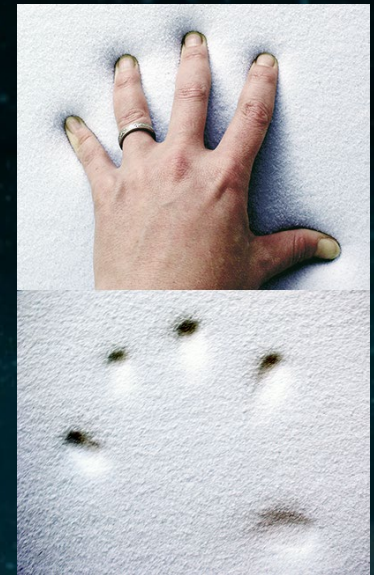
What is a NASA Intellectual Property (IP)?

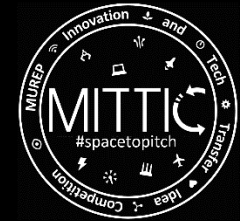
An idea or invention created by NASA.

Example NASA IP: Slow Spring Back Foam
AKA "Temper Foam"

NASA Use: Developed in 1966 at NASA's Ames Research Center in improve safety of aircraft cushions

Spinoff Commercial Applications: mattresses, X-ray pads, sports equipment, pillows, shoes, blankets, cushions, etc.





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NASA Intellectual Property Changes the World!



Infrared Thermometer



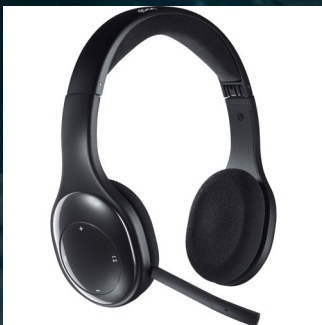
Skin Cream



LED Light Bulbs



Cordless Power Tools



Wireless Headset



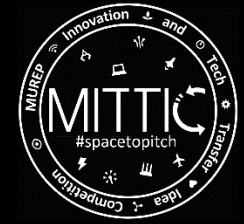
Cloud Computing



Digital Displays



NASA TECHNOLOGY TRANSFER PROGRAM



Competition Phases



Phase 1: Open Proposals

Choose one NASA Intellectual Property (IP) and create a proposal that explains a product or service utilizing that IP.



Phase 2: Space Tank

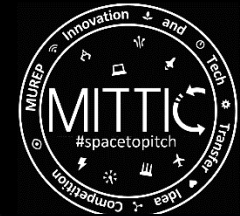
Selected teams tour NASA's Johnson Space Center in Houston, refine their concepts, and pitch in the Space Tank Competition. MITTIC covers travel and lodging for selected teams.

*****\$20,000 and \$10,000 1st and 2nd place prizes are on the line!*****

Phase 3: Ames Experience in Silicon Valley

Space Tank winning team (1 fall, 1 spring) will be awarded paid travel and lodging to San Jose, California to experience NASA's Ames Research Center and other Silicon Valley companies.





Prize money!
\$20,000 for 1st
\$10,000 for 2nd
 *\$2,500 of each prize is awarded directly to the PI as a stipend



Connections for your institution to find additional funding and opportunities with NASA.



NASA internships funded by MUREP

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Benefits of Participation



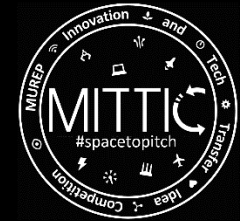
Networking with NASA and industry experts



Private tours of exciting NASA facilities



Professional coaching from business experts



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Who can apply?

Teams of 3-6 students and a faculty member from a Minority Serving Institution (MSI)

When are proposals accepted?

Session 1: Aug 7 – Oct 16, 2023
Session 2: Jan 3 – Mar 13, Spring 2024

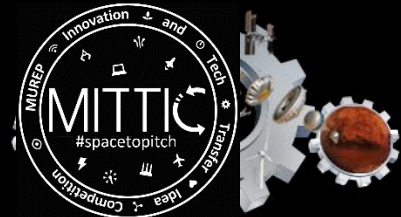
Where is the competition?

Phase 2 takes place at NASA's Johnson Space Center in Houston. Visits will occur Nov 29-Dec 1, 2023 (fall session) and April 24-26, 2024 (spring session).



What is required?

Phase 1: Teams submit a technical paper and a lightning pitch
Phase 2: Team poster, intro/exit videos, & additional deliverables



20	21	22	23	24	25	26
27	28	29	30	31		

OCTOBER						
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29	30	31				

DECEMBER						
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31						

FEBRUARY						
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APRIL						
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24-25 - TBD Week

17	18	19	20	21	22	23
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NOVEMBER						
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JANUARY						
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MAY						
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26	27	28	29	30	31	

October
16 – Fall Proposal Window Closes
 31 – Acceptance Letters to Selected Teams

November
 8 – Virtual Orientation & On-Site Preview
 15 – Preliminary Pitch Review (Virtual)
 29-30 – JSC Fall Immersion Experience

December
 1 – Fall Space Tank Competition

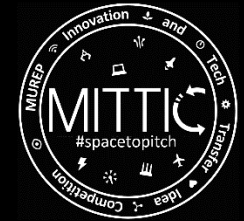
January
3 – Spring Proposal Window Opens

February

March
13 – Spring Proposal Window Closes
 29 – Acceptance Letters Send to Teams

April
 10 – Virtual Orientation & On-Site Preview
 17 – Preliminary Pitch Review (Virtual)
 24-25 – JSC Spring Immersion Experience
 26 – Spring Space Tank Competition

May
 8 – Virtual Ames Orientation Session
 15-16 – Ames Immersion Experience for *both*
 Space Tank winning teams



Eligibility Requirements



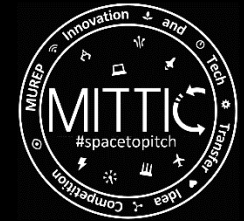
Student team members must be at least 18 and U.S. citizens

Students must be enrolled full-time through the first two phases of the competition

Students may be at the undergraduate or graduate level

60% of team members must be enrolled at a Minority Serving Institution (MSI)





Team Requirements



Teams must have a Principal Investigator (PI) who works for the proposing MSI
Ex: Professor, Dean, Admin

Each PI may sponsor up to 3 MITTIC teams

- Teams may be made of multiple institutions
- Multiple-MSI Team
 - MSI + Non-MSI Team

The “core team institution” MUST be an MSI and employ the team’s primary Principal Investigator (PI)

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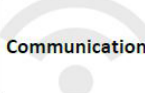




**“ MITTIC is for EVERYONE!
It is an amazing experience to explore different interest and discover your passion in STEM and business. ”**






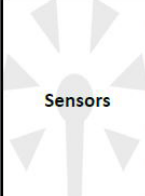
- PATRICK BABB - MITTIC ALUMNI

Apply here: <https://go.nasa.gov/nasamittic>

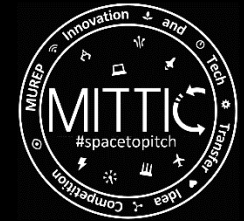
Sample NASA Intellectual Property (IP) Technologies List



 <p>Aerospace</p>	<p>FACET: Future Air Traffic Management Concepts Evaluation Tool</p> <p>Method and System for Air Traffic Rerouting for Air-space Constraint Resolution - NASCENT</p> <p>Flight-Path Angles</p> <p>Flight Awareness Collaboration Tool (FACT)</p> <p>Unmanned Aerial Systems (UAS) Traffic Management</p> <p>Artificial Immune System-Based Approach For Airborne Vehicle Maneuvering</p> <p>Green aviation - improved aerodynamic efficiency and less fuel burn</p> <p>Multi-Objective Flight Control Optimization Framework</p> <p>Co-Optimization of Blunt Body Shapes for Moving Vehicles</p> <p>Aeroelastic Wing Shaping</p> <p>Multirotor Aircraft Noise Reduction</p> <p>AirBOS-SR: Visualizing Supersonic Shock Waves with Advanced Imaging Techniques</p>
 <p>Communication</p>	<p>Soft Decision Analyzer</p> <p>Microwave Power Combiner</p>
 <p>Environment</p>	<p>Flame Piloted Vortex (SCWO-FPV) Reactor</p> <p>Tool for Rapid Identification of TCE in Plants</p>
 <p>Health</p>	<p>Methylophilic Microorganisms Expressing Soluble Methane Conversion Monooxygenase Proteins</p> <p>Rapid Nucleic Acid Isolation Method and Fluid Handling Devices</p> <p>Microorganism Cultivation Platform for Human Life Support</p> <p>Nanosensor Array for Medical Diagnoses</p>
 <p>Information Tech and Software</p>	<p>Traffic Aware Planner</p>
 <p>Manufacturing</p>	<p>Pyramid Image Quality Indicator</p> <p>Calibration System for Automated Fiber Placement</p> <p>Internal Friction Reduction (IFR) Tool</p> <p>Laser Wire Direct Closeout (LWDC)</p> <p>System for In-situ Defect Detection in Composites During Cure</p> <p>Durable Redundant Joint (DRJ)</p>

 <p>Materials and Coatings</p>	<p>Silicon Carbide Fiber Tows</p> <p>Carbon Fiber-Carbon Nanotube Yarn Hybrid Reinforcement</p> <p>Multilayered Fire Protection System</p>
 <p>Mechanical and Fluid Systems</p>	<p>Method to Reduce Stabilization Time for Shape Memory Alloys</p> <p>Compact Active Vibration Control System</p> <p>Spacecraft Atmosphere Carbon Dioxide (CO2) Capture via Deposition</p>
 <p>Optics</p>	<p>Active Pointing Monitor for a 2-axis Optical Control System</p>
 <p>Power</p>	<p>Li-ion Cell Calorimeter</p> <p>Relaxor Piezoelectric Single Crystal Multilayer Stacks for Energy Harvesting Transducers</p>
 <p>Robotics</p>	<p>Multi-Parameter Aerosol Scattering Sensor</p> <p>Robotic Assembly of Photovoltaic Arrays</p> <p>Autonomous Crash Management System (CMS)</p>
 <p>Sensors</p>	<p>Multidimensional Damage Detection System</p> <p>Luminescence-Based Temperature Mapping and Sensing Systems</p> <p>Multivariate Monitoring for Human Operator and Machine Teaming</p> <p>Universal Wireless Flight Sensor Systems</p> <p>Floating Ultrasonic System</p> <p>Electric Field Imaging System</p>

45 NASA IP shown include extra details and webinars that may assist a team with development of their concept. **However**, a team may use **ANY** IP from the NASA patent portfolio as the basis for their business/proposal.



After MITTIC: What's Next?



T2X and AN programs accelerate commercialization for NASA tech-derived startups



Ignite funds early-stage companies and their tech to be more attractive to the private sector
Up to \$1,000,000



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MUREP Innovation and Tech Transfer Idea Competition
Innovation and entrepreneurship competition for teams of students at any HBCU/MSI
Up to \$20,000

NASA STTR PROGRAM SOLICITATION



NASA internships allow students to contribute to agency projects under the guidance of a NASA mentor.

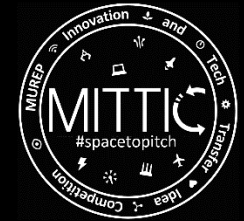
M-STTR partners MSIs with small businesses to provide planning grants
Up to \$150,000



MUREP engages underrepresented populations through initiatives. Multiyear grants are awarded to faculty and students in research of pertinent missions.



Program connecting universities with NASA research and tech



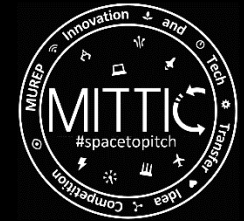
#SpaceToPitch



How to Pitch Your Idea in 3-5 Minutes



This and other videos can be found in the Resources section of the [MITTIC website](#)



Questions?

NASA MITTIC wants to schedule a personalized session with YOU!

Email Us:

HQ-MITTIC@mail.nasa.gov

OR

Join us for our open info sessions and office hours on Mondays & Thursdays from 1-2 p.m. EDT on [Microsoft Teams](#)



#SpaceToPitch

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