

IIAS's Next Spaceflight Crew Leads Research Team in Microgravity

Aeronautics Institute Researchers Conduct 18 Novel Microgravity Experiments with the National Research Council of Canada.

OTTAWA, ONTARIO, CANADA, September 23, 2024 /EINPresswire.com/ -- The [International Institute for Astronautical Sciences](#) (IIAS) announced today that it had successfully flown 18 new experiments aboard a Falcon-20 reduced gravity aircraft operated by the [National Research Council of Canada](#) (NRC), the same aircraft used to train Canadian astronauts. All experiments were human-tended and conducted by IIAS researchers from 10 countries: Australia, Canada, Egypt, Germany, India, Ireland, Norway, Trinidad and Tobago, Switzerland, and the United States. Research topics were diverse, including studies on female reproduction studies, AR/XR headsets, 3-body motion and docking, thermofluidics, 3D-bioprinting, and locomotion in lunar gravity.

Throughout the campaign, IIAS researchers worked closely with NRC's Flight Research Lab to flight certify the payloads, procedures, and ethics review. The IIAS team also included a dedicated ground support crew and interested observers from Carleton University, the Massachusetts Institute of Technology, and [Virgin Galactic](#).

IIAS astronaut Kellie Gerardi, along with newly named IIAS astronaut members Dr. Shawna Pandya and Dr. Norah Patten, performed group flights and operated payloads in preparation for their upcoming Virgin Galactic Delta-class spaceflight.

"I am grateful for the continued support and expertise of NRC Canada's Flight Research Lab as IIAS researchers keep pushing the envelope of human-tended spaceflight research." said IIAS Director of Bioastronautics, Dr. Aaron Persad. Since 2015, Dr. Persad has led the IIAS reduced



The crew of the IIAS-02 Mission: Kellie Gerardi of the United States, Dr. Shawna Pandya of Canada, and Dr. Norah Patten of Ireland.

gravity flight campaigns as part of microgravity and space suit research courses he had developed for IIAS.

Notable this year has been the advancement of payloads that demonstrate a 'fly-fix-fly' model that enable improvements to hardware or operating procedures within a turnaround of just a few hours. Such payloads included the fluid cell and biomonitoring Astroskin payloads that flew with Gerardi on the IIAS-01/GAL05 VG spaceflight.

The IIAS research manifest also included several payloads developed or operated by IIAS members collaborating with space sector companies Luxsonic Tech, Astreas, Carre Tech, and Space Redi. IIAS researchers were also invited to Carleton University and hosted by Dr. Prashant Waghmare' interfacial Science and Surface Engineering Lab (iSSELab).



Women's health issues, including studies of IUD insertion in microgravity environments, are included in the IIAS research manifest.

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*Dr. Aaron Persad, IIAS
Director of Bioastronautics*

The next IIAS flight campaign is scheduled for Summer 2025.

About the International Institute for Astronautical Sciences

Founded in 2015, the International Institute for Astronautical Sciences (IIAS) is a 501c3 nonprofit research and education organization with licensure from the State of Connecticut. With students from over 60 different countries, IIAS provides educational services and research opportunities in aeronomy, bioastronautics, microgravity

science, space medicine, space suit evaluation, operational science, and flight test engineering through partnerships with the National Research Council of Canada, Florida Tech, Survival Systems USA, NAUI, and the Canadian Space Agency. IIAS science and research campaigns produce peer-reviewed scientific publications, deployable space technologies, and inspire the next-generation of international space professionals. Additionally, IIAS also sponsors three outreach programs designed to serve under-represented minorities in STEM: PoSSUM13, Out Astronaut, and Space for all Nations. More at <https://astronauticsinstitute.org>.

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Dr. Pandya evaluates novel space medicine procedures in virtual reality while in the microgravity environment.

This press release can be viewed online at: <https://www.einpresswire.com/article/745464063>

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