

# AIAA Huntsville award winners Kumar, Ligrani recognized at post-pandemic dinner

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Courtesy AIAA

After two years of pandemic delay, a graduate student and a professor at The University of Alabama in Huntsville (UAH) were publicly recognized by the American Institute of Aeronautics and Astronautics (AIAA) Greater Huntsville Section for their contributions to aerospace science in a May 22 ceremony at the Huntsville Botanical Garden.

Saroj Kumar, a doctoral student and graduate research assistant in the Department of Mechanical and Aerospace Engineering at The University of Alabama in Huntsville (UAH), a part of the University of Alabama System, was honored as the Graduate Student of the Year for 2021, along with awardees from 2020 and 2022.

Dr. Phillip Ligrani, the eminent scholar in propulsion and a professor in UAH's Department of Mechanical and Aerospace Engineering, was recognized as the 2020 recipient of the Herman Oberth Award, along with the 2021 and 2022 honorees. The award is given in recognition of outstanding individual scientific achievement in the fields of astronautic and space sciences, and the promotion and advancement of the aeronautical sciences.

Both Kumar and Dr. Ligrani are on staff at the UAH Propulsion Research Center.



Saroj Kumar was honored as the AIAA Graduate Student of the Year for 2021.

*Michael Mercier / UAH*

Kumar received his award for his research contribution in mission analysis and spacecraft design for scientific exploration missions using Nuclear Thermal Propulsion (NTP). He was advised by Dr. Dale Thomas, UAH eminent scholar in systems engineering, and Dr. Jason Cassibry, an associate professor of mechanical and aerospace engineering. The research work is funded by NASA's Space Technology Mission Directorate through the Space Nuclear Propulsion project.

"I felt wonderful and honored to receive the Graduate Student of the Year award, publicly given," Kumar says. "The in-person award ceremony also gave me the opportunity to interact with experts from the aerospace industry and explain my research work."

His research focuses on demonstrating the capability of NTP for robotic missions to the outer solar system.  Very little work has been done in this area, and I am constantly working on multiple mission architectures and high-fidelity analysis to determine how best to achieve the objectives of the space missions which are aligned with NASA's planetary science program," Kumar says.



Dr. Phillip Ligrani was recognized as the 2020 recipient of the Herman Oberth Award.

*Michael Mercier / UAH*

For Dr. Ligrani, the delay in ceremonial recognition was no problem.

“The ceremony was excellent and beautifully staged,” he says. “It was a privilege to be recognized amongst so many other deserving, accomplished and talented AIAA members.”

An expert in transonic, supersonic and hypersonic research and development, Dr. Ligrani was recognized for overall achievements that include sponsored, fundamental and applied research for a variety of funding agencies in the USA and Europe, as well as successfully managing a wide variety of research programs for various industrial, foundation and government sponsors.

He has presented or is scheduled to present seven invited keynote papers, 12 invited papers, and 12 invited plenary keynote papers at different international conferences, and is the author or co-author of more than 213 publications in archival journals.

Dr. Ligrani is an associate editor or on the editorial board for 10 different international journals and book series. He has numerous research accomplishments related to transonic heat transfer, flow characteristics, film cooling, swirl tube heat transfer, and slip and accommodation coefficients from different surface roughness textures in microscale flows.

The AIAA Greater Huntsville Section is among the largest in the country and includes all universities in Alabama and Mississippi. Carrying forward more than 80 years of leadership, AIAA’s purpose is to ignite and celebrate aerospace ingenuity and collaboration.

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