

AEROSPACE ENGINEERING

<https://www.ae.msstate.edu/>

NEWSLETTER

ASE Introduces New Interim Department Head



Professor Rani Warsi Sullivan was named Interim Department Head of Aerospace Engineering (ASE) at Mississippi State University (MSU) in July 2021. She is the holder of the Richard H. Johnson Endowed Chair and Director of the ASE High Performance Composite Materials Laboratory. Her professional experience includes faculty fellowships at NASA Glenn Research Center and the Air Force Research Laboratory at Wright Patterson AFB. Dr. Sullivan's research interests include polymer matrix composite materials and structures for aerospace applications, composite

manufacturing, structural health monitoring, and engineering education. Her research in these areas is published in over 90 journal articles, book chapters, and conference proceedings and recognized with awards such as the 2018 George Stephenson Gold Medal for best original paper from the Institution of Mechanical Engineers. She is the founder and advisor for the Women of Aerospace student organization at MSU and she serves on the Bagley College of Engineering (BCoE) Diversity, Equity, and Inclusion Working Group. Prof. Sullivan is an Associate Fellow of the American Institute for Aeronautics and Astronautics. She is the recipient of the 2019 Hermann Oberth Award for advancement in aeronautical sciences. In 2014, she was named the Diversity Educator of Mississippi and received the SAE International Ralph R. Teetor Educational Award. She is a member of the MSU BCoE Academy of Distinguished Teachers. She received BS, MS and PhD degrees in Aerospace Engineering from MSU – a BULLDOG all the way!

ASE Spotlight!

2021 Astronaut Scholar: Britain Steele

AFRL Scholar (Munitions Directorate): Campbell Taylor

2021 Startup Summit Grand Winner: Triton Aerotech - Shuvam Saha, Aditya Shah, Christian Coker for their one-stop solution for modular hydrogen fuel cell-powered UAVs with extended range.

Merlin Flight Simulation Competition Project Presentation Award: J. Freer, G. Harris, P. Ford, C. White, A. Asishana, J. May, M. Ayala, N. Wilson for their entry of "Big Bertha", a high capacity, short-range transport.



MISSISSIPPI STATE UNIVERSITY™
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Upcoming Events

TAILGATING!!!

ASE will host tailgates for the following games at our normal spot (northwest corner across the intersection from the entrance to the football stadium):

1. LSU – 09/25/2021
2. Alabama – 10/16/2021
3. Kentucky – 10/30/2021

Hail State- Go Dawgs!

Fall 2021 Career Fair

28-30 September

MSU Fall Career Expo.

Dress code is business professional. This is a great opportunity to start building connections with various companies. It's time to break out your best power suit, print multiple copies of your resume, and conquer the job/intern market!

Good Luck!

Meet our New Faculty

Shreyas Narsipur



Dr. Shreyas Narsipur is an aerodynamicist, low-order method developer, and educator and has 10 years of experience in the field of applied aerodynamics. His research interests include unmanned aerial vehicles (UAVs), flow sensing and control, novel aerodynamically and aero-acoustically efficient vehicles and flow-energy harvesting devices, bio-inspired flight, and urban air mobility. He has been involved in multiple research projects including low-speed airfoil testing, computational analysis of multi-element airfoils, low-order method development for unsteady aerodynamic predictions, and experimental characterization of small UAV propeller aerodynamics and aeroacoustics. Shreyas Narsipur teaches courses in Fluid Mechanics and Aerodynamics and serves on the AIAA Applied Aerodynamics Technical Committee.

Chuangchuang Sun



Dr. Chuangchuang Sun is an assistant professor at the aerospace engineering department since August 2021. Prior to that, he was a postdoctoral associate in the department of aeronautics and astronautics at MIT. He received his Ph.D. in August 2018 from the Ohio State University and a B.S. degree from the Beijing University of Aeronautics and Astronautics, China in 2013, both in Aerospace Engineering. His research interests focus on control, optimization, reinforcement learning with applications in robotics and space systems. More info about his research can be found in this website <https://sites.google.com/view/sun-research-lab/home>. During his leisure time, Dr. Sun enjoys tennis, hiking, and road trips!

Han-Gyu Kim



Dr. Han-Gyu Kim joined ASE as an Assistant Professor in August 2021. Dr. Kim earned his Ph.D. degree in Civil Engineering with a focus in Structural Engineering and Mechanics from the University of Washington in 2019. He then worked as a Postdoctoral Research Associate in the William E. Boeing Department of Aeronautics & Astronautics at the university for the last two years. Prior to the academic career, Dr. Kim had an industry career, where he worked as a manager for a large-scale underground project. A major thrust of his research is the development of multi-scale and multi-physics models for structural design and life prediction for high-speed aircraft. For this long-term project, he has been collaborating with the Structural Science Center in Dayton, Ohio. His research has been supported by the Air Force Research Lab (AFRL) and the Air Force Office of Scientific Research. Continuing his collaboration with AFRL at MSU while extending his research spectrum into the mechanics of stitched composites and damage detection using unmanned aircraft systems in collaboration with the Advanced Composite Institute and Raspet Flight Research Laboratory.

Get Involved in ASE!

The Department of Aerospace Engineering offers a host of activities and clubs to get students involved. Student organizations include:

- **AIAA**- American Institute of Aeronautics and Astronautics (Pres. *Kyle Ford*; Advisor- *R. Wolz*)
- **Space Cowboys**- Nationally competitive rocketry team (Pres. *Briana Taylor*; Advisor- *R. Wolz*)
- **Team Xipiter**- UAS integrated products design team (Pres. *Joshua Gwaltney*; Advisor- *C. Walker*)
- **CubeSat MSU**- Study and design of miniaturized satellites (Pres. *Jack Parr*; Advisor- *Y. Cheng*)
- **Women of Aerospace** – Mentoring & professional development group for ASE students (2021 Pres. *Niyati Chokshi*; Advisor- *R. Sullivan*)



Giving to ASE

Your gift greatly benefits the ASE Department. Donations enhance the quality of our academic and research programs. Your generosity enables student scholarships, improved facilities and capabilities. We are grateful for your kind and generous support.

If you would like to give to the ASE program, please visit our webpage at <https://www.ae.msstate.edu/> and select [GIVING TO ASE](#)



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In Memoriam

Kenneth E. Miller was among the first group of African Americans admitted to MSU and the second African American to graduate from MSU's aerospace engineering (ASE) program in 1975. Mr. Miller founded KEM and Associates and became a recognized strategist and trusted advisor to a broad range of national and international defense, security, and aerospace firms. In 2016, he



established the Ken Miller Fund for Excellence, which established flight simulation capabilities in ASE. He served his country with over 30 years of civilian service to the U.S. Navy and the U.S. Air Force, and retired as one of the highest-ranking civilians in the Department of Defense. Memorial donations in honor of Miller's legacy of mentorship, generosity, and gratitude and his unwavering commitment to supporting future MSU black engineering leaders may be made to the MSU Kenneth E. Miller Excellence Endowment at:

<https://bit.ly/3B59OyP>