

Ella Marie Atkins

Excerpts from Virginia Tech Academics article by Jama Green of May 13, 2022

Ella Atkins has been appointed head of the Kevin T. Crofton Department of Aerospace and Ocean Engineering in the College of Engineering at Virginia Tech, effective August 1, 2022.

Ella was born in Union, WV July 30, 1966. She is the daughter of the late Mason Otis and Eloise Neely Atkins of Union and niece the late Genevieve Neely McNeer of Pipestem.

Ella was the 1984 West Virginia Junior Miss and she graduated with honors from Hinton High School Class of 1984. She earned her Bachelor of Science degree in 1988 and her Master of Science degree in Aeronautics and Astronautics from the Massachusetts Institute of Technology in 1990. In 1999, Ella earned her Doctor of Philosophy in Computer Science and Engineering from the University of Michigan. She previously worked in the aerospace industry as a structural dynamics engineer prior to obtaining her Ph.D. and subsequently served on the aerospace engineering department faculty at the University of Maryland and the University of Michigan.

“Atkins currently holds the position of professor of aerospace engineering at the University of Michigan, where she directs the Autonomous Aerospace Systems Lab and until 2020 served as associate director of the university’s Robotics Institute. Recently, during a period of reduced appointment at the university, she spent a year as a technical fellow at Collins Aerospace, gaining industry research and development experience while also offering expertise in aerospace artificial intelligence and machine learning.

As an academic researcher, Atkins has focused on perception, decision-making, and control algorithms to improve performance and safety of unmanned aircraft systems and advanced air mobility operations. With autonomous systems and artificial intelligence increasingly applied to both aeronautics and space engineering applications, Atkins envisions a wealth of new opportunities to inform and exploit cloud-based data, real-time perception, and explainable data structures

“To exit, hit the “X” on your browser’s tab for this page”

to support optimal decision-making with long-duration mission autonomy and for collaborative human-machine systems.

She was an integral partner in building the University of Michigan's robotics program from the ground up, serving on the initial steering committee and participating in its growth into an institute as well as its pending transition into a full department this fall. She takes pride in the lasting impact this vibrant and thriving program will have on future generations of engineers, which is supported and driven by a diverse group of robotics faculty at all ranks.

Atkins was drawn to Virginia Tech's aerospace and ocean engineering program because she sees an established, high-quality program brimming with potential to expand into new areas of research. With a number of capital projects on the horizon, including plans for the long-awaited engineering showcase building Mitchell Hall and the development of Virginia Tech's Innovation Campus in the greater Washington, D.C., metro area, Atkins believes the department is positioned to build upon and expand into new and strategic thrust areas, attracting both new faculty and prospective undergraduate and graduate students.

Atkins previously collaborated with Virginia Tech faculty through her involvement in the Center for Unmanned Aircraft Systems, a multi-university Industry/University Cooperative Research Center sponsored by the National Science Foundation. She is excited by the prospect of utilizing Virginia Tech facilities, such as the Drone Park netted facility and the hangar and airstrip at the Kentland Experimental Aerial Systems Laboratory, and eager to collaborate with the multidisciplinary research groups, such as the Center for Marine Autonomy and Robotics.

Recent research led by Atkins includes the investigation of airspace geofencing for safety and traffic management of unmanned aircraft systems, mapping out a smart service system for traffic management in low-altitude airspace, and cyber-physical communication for cooperative human-robot mobility. She additionally has experience with marine robotics, having previously developed an autonomous solar-powered seaplane named Flying Fish that takes off and lands on water, the first craft of its kind.

Atkins has published more than 250 papers and advised more than 25 Ph.D. students. She has received numerous accolades for her research and leadership,

“To exit, hit the “X” on your browser’s tab for this page”

including the American Institute of Aeronautics and Astronautics Intelligent Systems Award in 2022, the University of Michigan Robotics Leadership Award in 2020, and the Inaugural President's Award for National and State Leadership at the University of Michigan in 2017.

Committed to diversity and inclusion, Atkins previously served on the University of Michigan's College of Engineering Executive Committee, supporting unconscious bias training and events aimed at breaking down barriers among students, staff, and faculty. She has participated in recruitment efforts at national conferences for the Society for Women Engineers and mentored doctoral candidates within the Michigan's Rackham Merit Fellowship program.

Atkins has been active in the professional community, serving as a fellow of the American Institute of Aeronautics and Astronautics (AIAA) and through leadership in technical committees, conference organization, and currently as editor-in-chief of the AIAA Journal of Aerospace Information Systems.”

Ella, her husband, Deano Smith and their sons, Lucas, Alan and Stuart, make their home in Ann Arbor, MI.

Ella Marie Atkins, We Salute You!

“To exit, hit the “X” on your browser’s tab for this page”

Page 3 of 4



**“To exit, hit the “X” on your browser’s tab for this page”
Page 4 of 4**