

NATIONAL ENGINEERS WEEK

The National Society of Professional Engineers founded National Engineers Week in 1951. It's always celebrated at the time of George Washington's birthday. Our nation's first president was a military engineer and a land surveyor. The mission then, and now, is to increase public awareness and appreciation of the engineering profession.

Peninsula Engineers Council Annual Banquet

With Presentation of the 2023 Engineer of the Year and Doug Ensor Awards

Engineer of the Year—Mr. Charles Southall



A lifelong resident of Poquoson, Charles Southall began his Newport News Shipbuilding career in 1986 as an engineering intern in the submarine program and came on board full time in 1988. Over his career at NNS he has served in various roles of increasing responsibility, culminating in Vice President of Engineering and Vice President of the Columbia Class program at the time of his retirement, July 1, 2022. Charles has a penchant for leading new organizations and developing new

technologies. As the department head for Submarine Engineering Machinery, he stood up a dedicated IR&D group and teamed with NAVSEA to support cutting edge technologies and progressive system designs on Navy submarines. While working in the Virginia Class Submarine (VCS) Program Office, he developed and stood up the Design for Affordability team, including key design-build, quality and administrative staff. During his tenure as director of advanced submarine programs, he established the Columbia-class submarine program office. He led the push for a Chief Engineer's (CHENG) office at Newport News Shipbuilding and was chosen to reestablish this roll. He staffed the CHENG office with deputy chief engineers from various disciplines that provide technical leadership support and resolution of all major technical problems encountered in the broad range of Navy products supplied by NNS to the Navy. Charles's career was not limited to submarines, as Chief Engineer at NNS, he provided leadership in solving technical issues to complete construction of the first of new design class

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Doug Ensor Award—Ms. Michelle N. Banchy



Ms. Michelle Banchy is a lead research aerospace engineer in the Configuration Aerodynamics Branch at the NASA Langley Research Center and a member of the AIAA Hampton Roads Section (HRS), who has distinguished herself in many aspects of aerospace engineering practice as a young professional. With 7 years of experience, Ms. Banchy has made exceptional technical contributions in the field of aerodynamic design, specifically in the development and application of natural laminar flow

systems. She has led a wide range of natural laminar flow wing design efforts, including computational studies, a wind tunnel test, and a flight test campaign, which demonstrates the versatility of her skills and leadership ability. She has distinguished herself as an internationally recognized Subject Matter Expert (SME) in these areas, which has led to several domestic and international collaborative research projects and significant advancement for the technical community. The research led by Ms. Banchy and her colleague, Mr. Richard Campbell, aims to address this historic challenge and finally enable large extents of natural laminar flow on the wings of transport vehicles. Ms. Banchy and Mr. Campbell co-developed the Crossflow Attenuated Natural Laminar Flow (CATNLF) design method. This innovative technology shapes the wing airfoils to produce specific pressure distributions found to reduce the crossflow boundary layer instabilities that typically lead to premature transition. For the transonic transports studied by Ms. Banchy, the CATNLF design method is predicted to reduce the

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Distinguished Keynote Speaker



*Dr. Kenneth Fridley
Dean, Batten College of Engineering and Technology, Old Dominion University*

Dr. Kenneth Fridley joined the Old Dominion University Batten College of Engineering as dean on July 1 2022, after a long tenure at the University of Alabama (UA). Dr. Fridley served as senior associate dean for administration at UA's College of Engineering from 2014 to 2022 and as interim dean of the Honors College from 2019 to 2020. He also served as head of UA's Department of Civil, Construction and Environmental Engineering from 2003 to 2014. During his tenure, the department experienced significant growth in enrollment – with undergraduate and graduate enrollment more than doubling and doctoral enrollment tripling.

Fridley brings significant experience developing and advancing philanthropic opportunities, economic development, externally funded

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**FRIDAY, February 24, 2023 – NEWPORT NEWS SHIPBUILDING,
230 41st St., Building 520, 6th floor, James River Room, Newport News, Virginia 23607
5:30 PM - Social Hour, Dinner and Program, 6:30 PM**

Menu: Flat iron steak with Chimichurri sauce; Herb roasted chicken breast with Chabis sauce; Maryland style crab cakes; Vegetable ratatouille Wellington all served with garlic roasted broccolini and potato Au Gratin Dauphnoise, Dessert: Trilogy chocolate cake, apple tartlet

Tickets: \$45 per person. To purchase tickets, please go online to <http://bit.ly/3HVxoEh> or contact Bill LaBelle at (757) 619-9050 or your professional society's PEC representative.

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aircraft carrier, CVN 78 and in support of refueling and overhauling the Nimitz Class Carrier fleet. Also during his career he was directly involved in advancing technologies at the shipyard that supported the Shipyard's customers in areas including but not limited to Metal Additive Manufacturing, Advanced Submarine Construction Fixtures; Digital Twin for Weapons Elevator on CVN78 class; Advanced Launching systems for submarines - Tango/Bravo Project for External Torpedo Launch systems for Submarines; Large Scale Vehicle (LSV2) design and testing quarter scale submarine; Foundry improvements to support Tech Pub 300 (Automated Ovens and Quench Tank) and Robotic cutting using the External Cutting Trolley.

Charles completed an Associate's degree from Thomas Nelson (1985), a Bachelor's degree in Mechanical Engineering Technology from Old Dominion University (1988) and is a Registered Professional Engineer (PE) in the Commonwealth of Virginia.

An avid fisherman, Charles has served on the Recreational Fisheries Advisory Board of the Marine Resources Commission for several years, initially as a member and for the past 5 years as vice-chair of the board. His father Bud is a flight instructor and Charles held a pilot's license of his own for several years. Charles and his wife Lisa have two children and three grandchildren. His boat, "Special Kate" is named after his daughter. Charles's son, Hunter, is a Marine Police Officer. Now retired, Charles remains active in the community.

Doug Ensor Award—Ms. Michelle N. Banchy

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fuel burn of the vehicle by 5-10%. The promising computational results inspired a wind tunnel test to be conducted, for which Ms. Banchy served as the Principal Investigator. She designed the wind tunnel model and led the wind tunnel test and data analysis. The results showed extents of laminar flow that doubled extents seen in any previously-published wind tunnel or flight tests on configurations with comparable wing sweep. The wind tunnel test was awarded a NASA Group Achievement Award in 2019, where Ms. Banchy was recognized as Team Lead.

Ms. Banchy's leadership and technical contributions have resulted in her being recognized with several significant awards, including the NASA Aeronautics Research Mission Directorate Associate Administrator High Potentials Award (2017), the Royal Aeronautical Society Nangia Young Persons Prize (2018), the NASA Early Career Achievement Medal (2019), and the AIAA Hampton Roads Section Young Engineer of the Year Award (2022). Her skills are regularly sought after to aid in the design of new configurations, such as the Swept Wing Flow Test (SWiFT) wind tunnel model for the international NATO STO AVT-298 research program.

Ms. Banchy has demonstrated a commitment to community service and supporting the future of the aerospace industry through volunteering for a variety of activities. She has mentored 7 student interns during her time at NASA. She holds an Officer position within the Asian American and Pacific Islander NASA Employee Resource Group, where she serves as the Ambassador to the Allies and Advocates for Women NASA Employee Resource Group. She has also volunteered locally whenever possible for student outreach activities hosted by the HRS K-12 STEM Outreach Committee, including FIRST Lego League competitions and local elementary school science fairs and STEM days. Ms. Banchy is an active participant in local clubs and organizations that focus on promoting an active and healthy lifestyle, such as the Tidewater Strides Run and Walk Club and the Tidewater Appalachian Trail Club.

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research and other fundraising efforts.

At UA, he led efforts to establish a five-year BSCE/MSCE program, Bachelor of Science degrees in construction engineering, architectural engineering and environmental engineering and the cross-disciplinary MSCE/ MBA and MSCE/JD dual-degree programs. Dr. Fridley developed the Engineering Positive and Intentional Change (EPIC) Scholars honors program and led efforts to establish The CUBE, an interdisciplinary prototyping and 3D printing lab designed to promote student innovation in engineering. Much of Dr. Fridley's research – including over \$14.4 million in sponsored research – has directly impacted the civil engineering profession, resulting in changes in national design specifications, standards and codes. While at UA, he founded the Center for Sustainable Infrastructure and was part of a team that created the Integrative Center for Athletic and Sport Technology. He was elected a fellow of the American Society of Civil Engineers in 2008 and received the ASCE Excellence in Civil Engineering Education (ExCEED) Leadership Award in 2010.

Dr. Fridley previously taught at Purdue University (1990-1992), the University of Oklahoma (1992-1994), Washington State University (1994-2001) and the University of Nevada, Las Vegas (2001-2003). At UNLV, Fridley served as associate dean of research and information technology for the Howard Hughes College of Engineering. He earned his B.S. in civil engineering from Washington State University, his M.S. in architectural engineering from the University of Texas at Austin and his Ph.D. in civil engineering from Auburn University.

Dr. Fridley, who recently relocated to East Beach, has been married to his wife, Paula, for 38 years and has three grown children and two grandchildren.