ONR Awards Benedict College and Integer Technologies Partnership $7.9M Contract for Research and Workforce Development

Benedict College and Integer Technologies were pleased to host Rear Admiral Kurt J. Rothenhaus, Chief of Naval Research, to discuss how this partnership will augment cybersecurity research and STEM workforce diversity for the military. Pictured from left to right: Gurcan Comert, Ph.D., associate professor at Benedict College; Aravind Prakash, Ph.D., lead cyber physical systems scientist at Integer; Dylan Temple, Ph.D., director of technology development at Integer; Abdulmajid Mrebit, Ph.D., assistant professor at Benedict College; Rear Adm. Kurt J. Rothenhaus; Godwin E. Mbamalu, Ph.D., associate vice president for research and distinguished professor at Benedict College; Negash Begashaw, Ph.D., associate professor at Benedict College; Josh Knight, Ph.D., COO at Integer; Crystal Pee, Ph.D., STEM Workforce Development Research Scientist at Integer. Not pictured: Benedict College President and CEO, Roslyn Clark Artis, J.D., Ed.D., and Duke Hartman, CEO of Integer. Photo credit: Terrell Maxwell.

Funding for Tech and Talent to Secure Autonomous Systems Against Cyberattack

COLUMBIA, S.C. – July 23, 2024 – Benedict College and Integer Technologies announce that the Office of Naval Research (ONR) has awarded a $7.9 million contract to increase the cyber resilience of autonomous systems and enhance the workforce supporting the defense research enterprise.

The two main components of the program, titled *Resilient Autonomous Systems and Workforce Diversity*, include: 1)

research into automated cyber-physical security to improve the resilience of intelligent autonomous systems (IAS) against cyberattacks, and 2) enhancing the defense research capacity and STEM curriculum (science, technology, engineering, and math) at Benedict College to support the development of a highly skilled, technical workforce trained to meet the specialized technology needs of the U.S. Department of Defense (DoD).

Recruiting, educating, and retaining a world-class workforce is one of the strategic goals in the Navy's IAS Science and Technology Strategy. Historically black colleges and universities (HBCUs) represent a critical resource for STEM graduates, especially as they have a high percentage of students who are U.S. citizens, a key requirement for DoD projects. Both the industry and academic portions of the work will be performed in Columbia, SC.

Funding from this contract will support the development of a master's degree program in computer science and engineering at Benedict College, which would be the first graduate engineering degree of its kind at an HBCU in South Carolina.

"ONR is proud to sponsor research on a unique opportunity like this that both enhances our cyber resilience and the diversity of our defense workforce," said Dr. Thomas C. Fu, head of ONR's Sea Warfare and Weapons Department. "Investing in research and workforce development at HBCUs is a priority for us to advance our national security objectives with a broad pipeline of highly trained, highly skilled men and women."

"Benedict College has been strategically investing in STEM and our research capacity for years, and this award is a result of that effort. As we will demonstrate in this work, HBCUs have an important contribution to make to America's national security and workforce," said Benedict College President and CEO, Roslyn Clark Artis, J.D., Ed.D. "Integer has been an incredible partner to help us navigate doing business with the

Department of Defense, strengthening our STEM infrastructure, and connecting our students to the defense industry, and we're looking forward to working with them on this exciting program."

"This program will enable Benedict College to increase our research capacity by recruiting highly skilled faculty for research and teaching in contemporary engineering disciplines, such as simulating cyberattacks against autonomous vehicles, cybersecurity engineering, machine learning, etc., and will provide our students with real-world experience to help launch them into great careers in the defense industry and other STEM fields," said Godwin E. Mbamalu Ph.D., FAIC, Associate Vice President for Research at Benedict College, and Distinguished Professor.

"Autonomous vehicles are no longer science fiction. They are on the road, in the air, and in the sea, impacting our lives today. While they have the potential to benefit society greatly, hackers are increasingly targeting them, and we need to invest in ensuring they are safe and secure against cyberattacks," said Duke Hartman, CEO of Integer Technologies. "The research Benedict College has done in securing automotive vehicles against cyberattacks was excellent and applying that expertise to the maritime domain was a natural progression. This project will improve South Carolina's competitiveness in this emerging industry, both in terms of academic research and workforce development at Benedict College, and in terms of technology development and commercialization at Integer Technologies."

"Providing South Carolinians with opportunities to thrive and succeed, especially those in rural and underserved communities, has always been my priority," said Congressman James E. Clyburn (SC-06). "Academic-industry partnerships like this help grow South Carolina's STEM workforce and build our technology infrastructure. This project will equip our aspiring STEM workers with valuable experience and put them at

the forefront of technological research and innovation.”