Abstract: Creating Technological Surprise

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The Defense Advanced Research Projects Agency (DARPA) was created in 1958 with a singular mission: to make the early pivotal investments in breakthrough technologies for national security, and thus give the nation new options for preventing and creating technological surprise.

To accomplish its mission, DARPA pursues high-risk, high-payoff research initiatives across a broad spectrum of science and engineering disciplines including biological technologies; advanced maritime, ground, air and space systems; information innovation and cyber systems; social and behavioral science; microelectronics; advanced mathematics; and integrated, networked composable systems.

Dr. Walker will give an overview of DARPA and some of its ongoing research projects including making gene editing technology safer, developing robotic ocean-going naval vessels, computing and sensing our environment using molecules and atoms, giving machines the ability to reason and partner with humans, and building large space constellations with the commercial sector.

Dr. Walker will reveal the “secret sauce” critical to DARPA’s successful innovation over the last 60 years and discuss how Virginia Tech can play a bigger role with DARPA to create technological surprise moving forward.

Dr. Walker is the father of two current Hokie students and an alumnus of Notre Dame. He looks forward to a tie game on October 6.