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# DARPA Director Introduces NPS to Agency's Latest Advanced Research

Ochoa, Victoria

Naval Postgraduate School, Monterey, California

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**DARPA Director Introduces NPS to Agency's Latest Advanced Research**

Article By: PO2 Victoria Ochoa

Dr. Arati Prabhakar, Director of the Defense Advanced Research Projects Agency (DARPA), addressed students, staff and faculty during an NPS Secretary of the Navy Guest Lecture (SGL) in King Auditorium, Oct. 18. Prabhakar highlighted the newest developments initiated at DARPA, and their effects on the current and future defense environment.

"It's an honor and a pleasure to be here at this wonderful learning institution," said Prabhakar. "I want to tell you what we're doing at DARPA.

"Those of you who know a little about DARPA know that our story started in 1957. That was the year that, for the first time ever, human beings put an artificial satellite in orbit. You would have thought that was great news, but it was actually a matter of great consternation for those of us in the U.S.," she continued, referring to Russia's launch of the Sputnik satellite.

"When this organization was created, our purpose was to prevent technological surprises. The people who created the original organization understood that the best way to prevent surprise was to go create a few surprises of our own," said Prabhakar.

Since her arrival at DARPA in 2012, Prabhakar has focused the agency's efforts on rethinking complex military systems in fundamental ways. The organization has discovered ways to harness the information explosion to address national security challenges, she says, leading to several innovations in the fields of mathematics, synthetic biology, and neurotechnology.

"At any given time, we can have about 200 ongoing programs in the agency across a \$3 billion budget," said Prabhakar. "One of our programs is primarily focused on military systems and capability, which are phenomenally powerful."

DARPA also looks into various communities from small start-ups to government labs, and universities like NPS, to make pivotal early investments to help fund and innovate new breakthrough technologies for national security.

"Over the past few decades, our adversaries around the world have had an opportunity to see and learn more about those systems. To help us advance our goals, we put out feelers into organizations that express interest in an area we have interest in, because we want to hear from them and do business," added Prabhakar.

Some of the programs that Prabhakar mentioned included semi-autonomous ships, UAV technology, and prosthetics that could be controlled with the mind.

"Think about a United States destroyer that could launch a predator class UAV from its back deck, and have that aircraft be able to identify enemy ships," said Prabhakar. "Then through communication relays, using parafoil, communicate with submarines that have the ability to launch a torpedo to take out that adversary ship. And think about that happening not 10 miles, but hundreds of miles away.

"You can see why these technologies, integrated together, give us a way to exercise our influence over the vastness of oceans in a way that is far more powerful and efficient than the scale we are able to operate at today," stressed Prabhakar.

DARPA's mission is to prevent and create strategic technological surprise by maintaining the technological superiority of the U.S. defense establishment. The agency sponsors revolutionary, high-payoff research bridging the gap between fundamental discoveries and their military use, and communicates with leaders in the scientific and engineering community to identify new challenges and game-changing potential solutions.

Posted October 26, 2016



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