

# Innovation Coast holds first Women in Technology Lecture

*By Richard Conn, CREO Staff Writer*



Innovation Coast kicked off its Women in Technology lecture series April 28 with a presentation from Dr. Dawn Kernagis, a research scientist at the Florida Institute for Human & Machine Cognition.

Innovation Coast is an alliance of companies and institutions of higher learning in Northwest Florida that works to promote and grow technology and knowledge-based companies in the region. Kernagis' talk was held at the National Flight Academy.

Kernagis specializes in human performance optimization and risk mitigation for operators in extreme environments, such as undersea divers, aviators and astronauts. A professional diver who has led numerous underwater explorations and who this year was inducted into the Women Diving Hall of Fame, Kernagis said she focused her postdoctoral work at Duke University on identifying indicators of decompression sickness in divers.

“So, I moved from being a professional diver for over a decade and a half to pitching a project to the Office of Naval Research,” Kernagis said. “And, I said I want to study potential biomarkers for decompression stress – so essentially the stress our bodies undergo when you have bubbles that are in the blood or tissues. And, there really wasn’t anything out there at the time. There were no potential markers out there for identifying the stress the body goes through.”

Part of the research involved studying “gene expression” or how genes react to certain stressors, Kernagis said.

Working with the Navy Experimental Diving Unit in Panama City Beach, tests on divers showed that certain genes are turned on and off in response to decompression stress, which will serve as biomarkers for future studies, Kernagis said.

“We’re really excited to have a starting point because up to that point we had absolutely nothing,” Kernagis said. “Everybody was kind of just throwing everything into a pot and looking at it.”

Kernagis said the bulk of her research has been funded primarily by the Office of Naval Research and the American Heart Association.

“We have a couple of studies lined up right now,” she said. “We are getting ready to start a study looking at epigenetic changes that are associated with saturation diving – divers that stay

underwater for a long period of time and their tissues saturate with inert gas.”

Michelle Horton, chairwoman of the Innovation Coast’s Women in Technology Committee, said the goal of the committee is “to develop an alliance to advance, advocate and support women in technology.”

“Obviously, with the interest in this first forum we expect this to grow. We expect to collaborate in this area and really develop an ecosystem of support and collaboration, and networking, so that we can follow our passion like Dawn,” Horton said.