

A Mechanical Engineering team was recently chosen for the National Science Foundation Innovation Corps Teams Program (I-Corps Teams). Their robot gripper technology was selected for the six-month program, which will provide training and access to resources to help transition and commercialize the technology if found commercially feasible.

The team received a \$50,000 grant, and participated in an I-Corps Teams curriculum that is designed to provide real-world, hands-on, immersive learning about what it takes to successfully transition research into commercially feasible products and processes that benefit society.

The team consists of entrepreneurial lead Paul Mitzlaff, a USF mechanical engineering graduate; principal investigator Redwan Alqasemi, a USF research professor; and I-Corps team mentor Stephen Sundarrao, owner of USF start-up company Rehab Ideas, Inc.

The robot gripper is related to robotic end effector technology developed at USF by an interdisciplinary research team lead by Dr. Redwan Alqasemi from the Center for Assistive, Rehabilitation and Robotics Technologies (CARRT). The technology satisfies a substantial need for research universities and manufactures to purchase end effectors that are safe, lightweight, reliable, durable, low cost, independent of the robotic arm, and easy to mount on their hardware.

As part of the I-Corps program, the team will exploit innovative and novel techniques to research and develop a robotic gripper that is self-contained, ergonomically designed to handle various object shapes, affordable, and capable of being attached to many different robotic arms. Through this project, the group will build upon and refine their current gripper design to develop a commercially feasible product, develop a customer base, and validate business hypotheses.

The NSF established the I-Corps Teams program to identify NSF-funded researchers, and provide them mentoring and funding in order to accelerate the translation of knowledge derived from fundamental research into emerging products and services.

Five prototypes of the current gripper have been produced for CARRT's local use, and they are very useful to the point where the team thought commercialization makes sense to share the innovation with the world.

