

UTAustin Mechanical Engineering Associate Professor [Ashish Deshpande](#) awarded \$22,000 Innovation Grant to advance the commercial adoption of his upper-body robotic exoskeleton for stroke therapy. This grant was made possible by a gift from Shahid Ullah (BSPE '82), an Engineering Advisory Board member.

Stroke is one of the most serious health care problems in the U.S. that leaves millions disabled and results in billions of dollars in treatment costs. A significant number of stroke survivors suffer from the loss of use of one or more of their arms, frequently caused by shoulder dysfunction. A patient's recovery of coordinated shoulder movement is closely associated with gains in functional abilities and multiple activities of daily living.

Professor Deshpande has developed a robotic exoskeleton for shoulder and upper-limb rehabilitation that wraps around both of the subject's shoulders, arms and wrists, and gently moves the joints through their natural motions.

The exoskeleton is equipped with a suite of sensors that collects motion data at a high speed. The data collected serves as biomarkers for monitoring patient progress and for providing subject-specific therapy. With the ability to control force of its motors, the robot can be programmed to power the user's motion either gently or firmly to achieve various levels of assistance and even to provide a customized resistive force.

The Cockrell School of Engineering Innovation Center's Grants program bridges the funding gap between research and commercialization. Specifically, it enables UTAustin professors to assess and advance the commercializability of their successful research.

If you are interested in learning more or in making a tax-deductible gift so that what starts here CAN change the world, contact Louise Epstein, Managing Director, Innovation Center at the Cockrell School of Engineering. Louise.Epstein@utexas.edu or 512-567-1849. www.engr.utexas.edu/innovation.