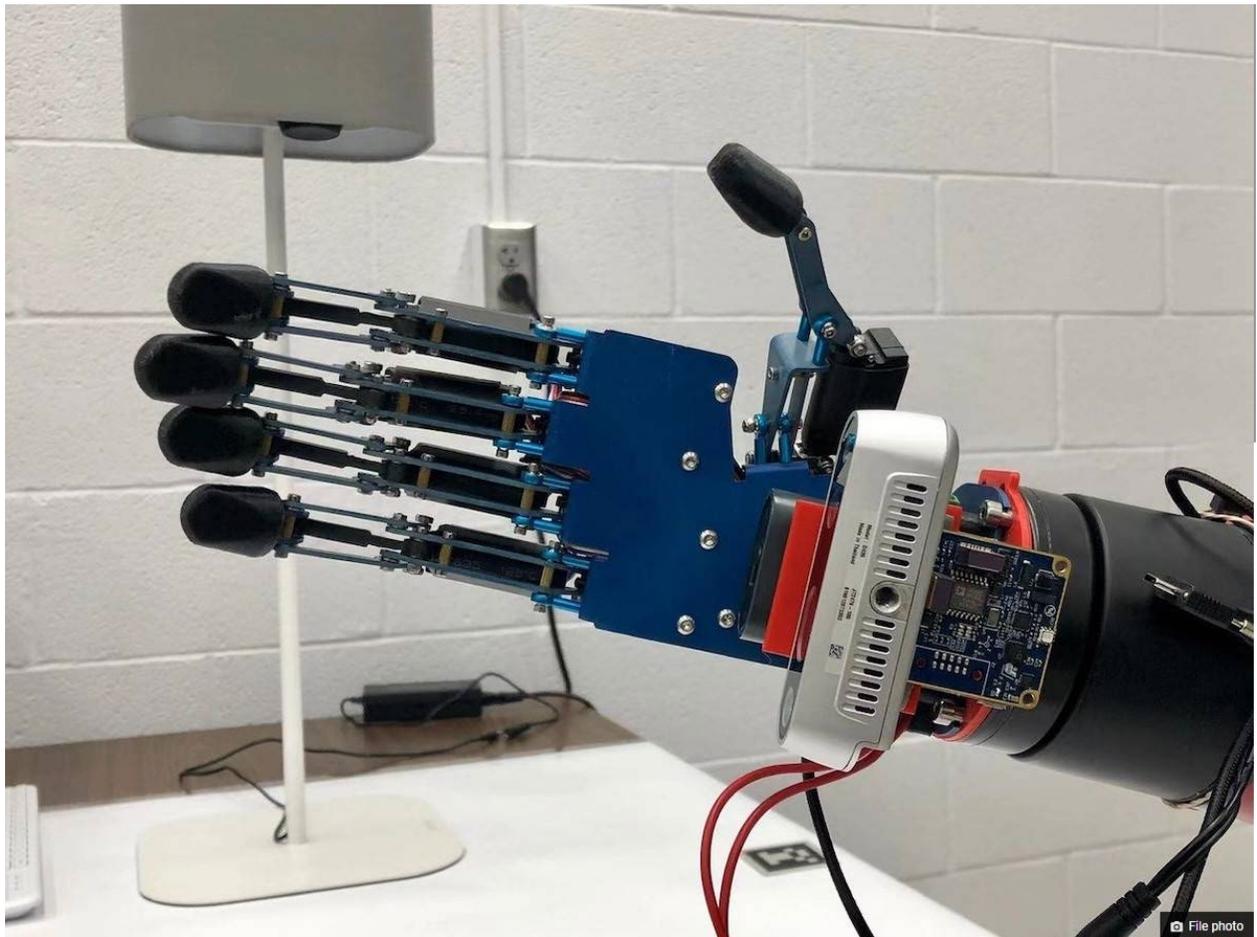


WSU News

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Wichita State's MagicHand team takes project to NSF Innovation program

By WSU Strategic Communications



The MagicHand is designed to achieve various dexterous object manipulations, including object sorting, arranging and packaging.

- **The MagicHand intelligent grasping platform is can be used to sort, move, arrange and package objects.**
- **Wichita State's MagicHand team is pursuing commercialization with a seven-week NSF Innovation Corps program.**
- **The Shocker Innovation Corps supports entrepreneurial activities at Wichita State.**

MagicHand, an anthropomorphic robotic hand designed by a Wichita State University engineering team, is participating in the National Science Foundation Innovation Corps program.

The MagicHand is designed to achieve various dexterous object manipulations, including object sorting, arranging and packaging. The MagicHand team began the seven-week path to commercialization in March.

The team conducts research into robotic grasping, dexterous manipulation, and context perception. The team consists of Hui Li, engineering graduate student; Hongsheng He, assistant professor in the School of Computing; and Vis Madhavan, professor of industrial and manufacturing engineering and founder of [Fairmount Technologies](#) LLC. Li serves as the entrepreneurial lead. Dr. He is the team's academic lead, and Madhavan is the team's mentor – roles required by the NSF for all I-Corps projects.

“The team is particularly grateful to the Shocker I-Corps program and director Sherry Whitson for the commercialization training, advising, and recommendation of the team to the NSF I-Corps program,” Dr. He said. “The dexterous MagicHand could be an enabling technology for packing and manipulation of irregular-shaped, unknown, or deformable objects for e-commerce and manufacturing industries.”

The team proposed innovative perception and learning approaches as well as combinations of those with applications to manipulating unfamiliar, assorted, stacked, or deformable objects in an unstructured environment. Provisional patent applications for the innovation have been filed.

MagicHand participated in the Shocker I-Corps program, administered by WSU Strategic Initiatives in summer 2021. Wichita State University is an NSF I-Corps Site. The Shocker Innovation Corps nurtures and supports Wichita State entrepreneurial teams interested in transitioning their STEM ideas, devices, processes, or other intellectual activities into the marketplace in anticipation of profit. Ideas and projects can originate from student work, research (funded or unfunded) and institutional or industrial projects. The topical focus of a project must be in a STEM area.