

Two new centers added to the RAVEN medical robotics research community

[Applied Dexterity, Inc.](#), a recent spin-out from the University of Washington Center for Commercialization (C4C), has announced that two new institutions are joining the community of medical robotics researchers using the company's RAVEN-II™ surgical robotics system – the Hamlyn Centre at Imperial College London and the Korea Institute of Science and Technology.

The RAVEN-II, based on patented technology licensed from UW's C4C, is a research platform with a vibrant user community accelerating innovation in surgical robotics. The control software at the system's core is available to researchers under an open-source license, which means that researchers have full access to the source code. This open-source software approach, combined with a common hardware platform, is already facilitating research at 11 top robotics research organizations. Collaborators share software and hardware innovations for research purposes.

The Hamlyn Centre at Imperial College London has recently ordered a RAVEN system. The Centre was established to develop safe, effective, and accessible imaging, sensing and robotics technologies that can reshape the future of healthcare for developing and developed countries.

“RAVEN is an open platform well known to the medical robotics research community,” said professor Guang-Zhong Yang, director and co-founder of the Centre. “We are looking forward to using the system, both to accelerate our translational research and aid in training our students.”

The Korea Institute of Science and Technology (KIST), a government-funded research institute, is collaborating with Applied Dexterity and the University of Washington to develop the Dr. Hujoon surgical robot. KIST is a leader in fostering innovative international technology programs and initiatives with more than 80 partner institutes worldwide. The intent of the five-year Dr. Hujoon project is the development of a next-generation micro-surgical robot based on an open platform.

Driving Innovation in Surgical Robotics

Additional collaborators include Vanderbilt University, Sung Kyun Kwan University, KOREA TECH, Asan Medical Center, NT Medi Inc., and L&K Biomed. A custom version of the RAVEN robotic manipulator will form the foundation for the new system.

“We are very happy to collaborate with the developers of RAVEN,” said Sungchul Kang, the Principal Investigator for the project. “Their expertise and the RAVEN platform will help ensure the success of our initiative to develop a reliable and cost-effective system that will extend the capabilities of surgeons.”

In its standard configuration, RAVEN offers two compact robotic arms, manipulating instruments for use in minimally invasive surgery. The system is also available in a four-arm configuration, which enables collaborative procedures to be performed by two surgeons. While the system is not currently approved for use on people, it has been used successfully in animal surgery and can be used to develop new instruments, procedures, and higher-level software for computer-aided surgery.

Additional RAVEN Resources

[Raven II Wiki](#)

[Raven II Developer Blog](#)

About Applied Dexterity, Inc.

The company was founded to support and grow the burgeoning user community formed around the RAVEN surgical robotics system. The combination of a ready-to-use research hardware platform, an open software environment, and an established user base at key robotics research centers has resulted in the RAVEN Community. While this group provides mutual support and shares results for research purposes, users are also free to develop their own Intellectual Property around tools and systems that interact with the core platform. Applied Dexterity builds, sells, and supports RAVEN systems, and aids users with system integration and the design and supply of custom robotic solutions.

Driving Innovation in Surgical Robotics

About the University of Washington Center for Commercialization (C4C)

As one of the leading recipients of federal funding for research, UW is producing innovations that have the power to change the world—from biofuel alternatives, to more effective treatments for Alzheimer’s disease and brain cancer, to purification technology for drinking water in the developing world. C4C is dedicated to helping UW researchers achieve the greatest impact from their innovations. Its New Ventures Facility at Fluke Hall is a business incubator that provides UW start-ups with access to critical lab and office space on the UW campus. The facility is one key element in a larger commercialization initiative aimed at increasing the quantity and quality of Washington technology companies by priming some of the most promising UW early-stage start-ups for outside investment and success.

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