Pressemitteilung Press Release

Robotics for a more effective cancer treatment: KUKA at the ICRA robotics conference in London

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Augsburg/London, 15th May, 2023 - At the renowned ICRA conference, KUKA is demonstrating with two applications how robotics can be used for complex medical treatments - for the benefit of patients.

New technologies such as sensitive robotics are opening up new possibilities, particularly in medicine, for treating patients more gently and in a more targeted manner. KUKA's sensitive lightweight robot LBR Med, for example, is the first collaborative robot to be certified specifically for integration into a medical device, thus opening up new treatment options.

At the IEEE Robotics and Automation Society's flagship conference from May 29 to June 2, KUKA and partners will showcase innovative applications using the LBR Med, including a robotic magnetic endoscopy for painless colon cancer screening.

Cancer screening with robotics

Colonoscopy is a procedure that is widely used to detect colorectal cancer at an early stage. It offers major advantages; however, current technology is also associated with significant drawbacks such as patient discomfort, associated sedation complications and high variability in procedure outcomes.

Atlas Endoscopy seeks to perform a paradigm shift in the standard of care with its robotic platform and ultra-flexible magnetic endoscope. The concept is to navigate the endoscope gently through the colon using “intelligent magnetic manipulation” with an external magnet positioned by an LBR Med. With this innovative concept, the team won the KUKA Innovation Award in 2019.

Highly complex biopsies with cutting-edge technology.

In addition, KUKA and partners are demonstrating how the LBR Med can be used in medicine for sensitive treatments such as brain tumor biopsies.

In the application, a tumor biopsy is simulated on a model with real-time tracking. In the process, the user can place the biopsy needle with the help of the robot. The target and entry positions are planned in advance based on computed tomography data and displayed on an interactive screen. The application is an example of what can be achieved in medical technology thanks to robotic application.

Bringing research and industry together

For many years, KUKA has been a sponsor at ICRA, which is held annually at different locations. It is one of the most important international events for the robotics community. The aim is to bring together the world's best researchers and the most important companies to exchange ideas and progress. Many significant developments in the field of robotics and automation were presented for the first time at ICRA.

KUKA

KUKA is a global automation corporation with sales of around 4 billion euro and around 15,000 employees. The company is headquartered in Augsburg, Germany. As one of the world's leading suppliers of intelligent automation solutions, KUKA offers customers everything they need from a single source. From robots and cells to fully automated systems and their connectivity in markets such as automotive with a focus on e-mobility & battery, electronics, metal & plastic, consumer goods, e-commerce, retail and healthcare.