



INTELLIGENT GRIPPING SYSTEM

FOR SMART ROBOTS



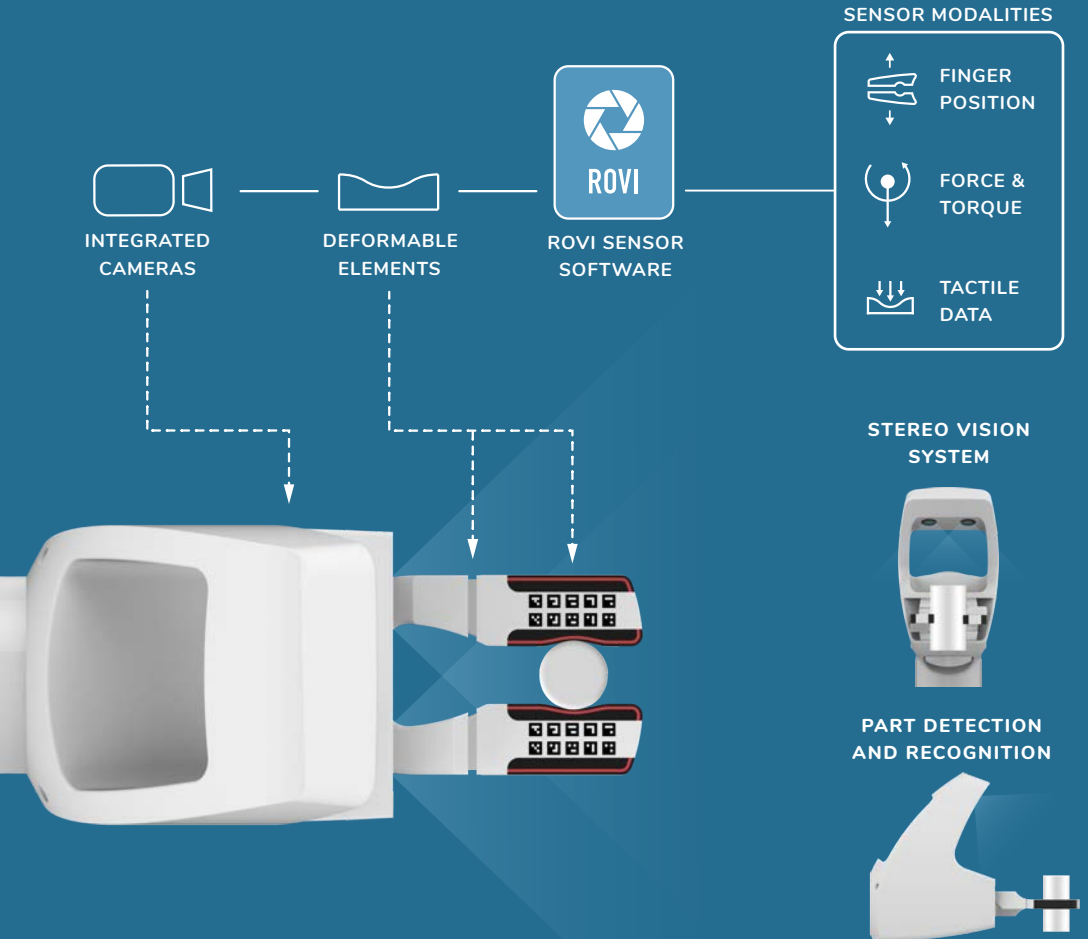
INTELLIGENT GRIPPING SYSTEM

Today's solutions for grasping are quite inflexible – fingers are specially adapted to a single object, and sensory feedback from the grasping process is very limited.

RoVi's intelligent gripping system is a ready-to-use solution for flexible and sensitive grasping applications. It integrates an industrial gripper, a stereo camera, as well as RoVi's camera-based sensors for tactile data and optionally force/torque.

The rubber foam on the finger ensures a secure grasp of various objects. At the same time, it serves as the sensitive element for our camera-based tactile sensors. The integrated sensing software provides rich feedback about the grasping processes. Control features enable grasping of a wide variety of objects with a single gripper/finger, and also enable handling of fragile parts without time-consuming reprogramming.

SENSOR PRINCIPLE



ADVANTAGES



VERSATILE SENSITIVE GRASPING

Locate and pick a wide variety of objects using a single gripper without the need for adapted fixtures



RICH SENSOR FEEDBACK

Measure and analyze the picking process based on the sensor feedback



NO WIRING IN THE FINGERS

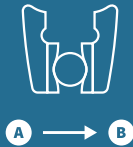
Simply replace or adapt fingers as they are completely passive and without integrated electronics



INTEGRATED GRASPING

Fully integrated grasping solution with plug-and-play software

EXEMPLARY USE CASES



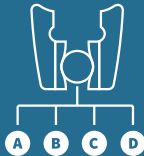
PICK AND PLACE

Pick-and-place applications where versatility is a key requirement



PICKING OF SENSITIVE ITEMS

Safe picking of fragile or sensitive items with varying size and shape, e.g. plastic parts or food.



COMMISSIONING OF SMALL PARTS

Commission parts for subsequent processing steps or packaging



PROCESS MONITORING

Monitor the quality of automated processes based on the sensor feedback

FOUNDING TEAM



Dr.-Ing.

Nicolas Alt

Computer Vision
Business Development



Dr.-Ing.

Clemens Schuwerk

Control Engineering
Marketing and Sales



M. Sc.

Stefan Lochbrunner

Electronics Engineering
System Integration

ABOUT US

RoVi was founded by three engineers as a spin-off from Technical University of Munich (TUM). Our common vision is to create robots that improve our daily lives. Robots that are simple and low-cost yet smart enough to take over dull, dirty and dangerous tasks. We know each other for several years. Nicolas and

Clemens have been working together during their PhD. Our camera-based sensing technology mainly comes from Nicolas' research in computer vision and visuo-haptic perception. Clemens' past research focus was in haptics and telerobotics. Stefan is an experienced electronics and hardware engineer.



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SPIN-OFF AT
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aufgrund eines Beschlusses des Deutschen Bundestages

