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Manipulation Enhancement through Robotic Guidance and Intelligent Novel Grippers

Coordinated by



Thimonnier

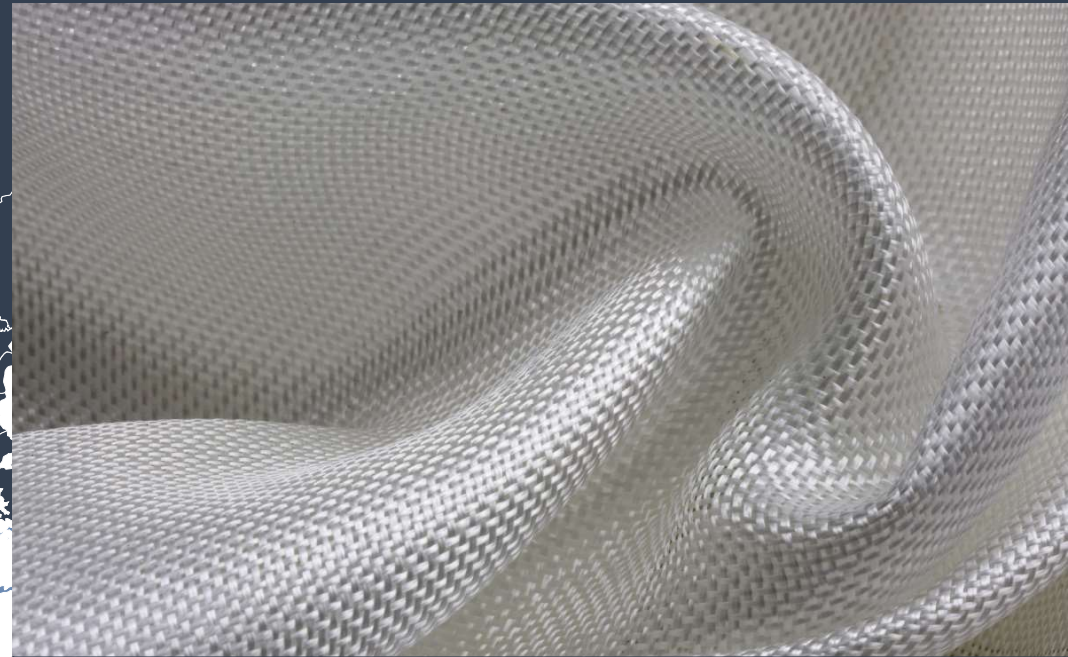


OPTTEAMUM

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selmark LINGERIE



A European project that aims at creating a robotic platform that can manipulate soft materials in industrial environments, by pioneering new robotic gripper and technologies with application of artificial intelligence



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 869963.

The three industrial use cases



Textile and garment industry

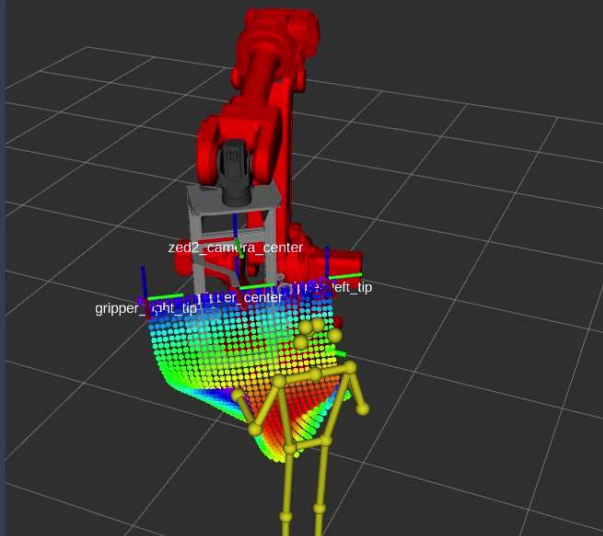


Food packaging industry

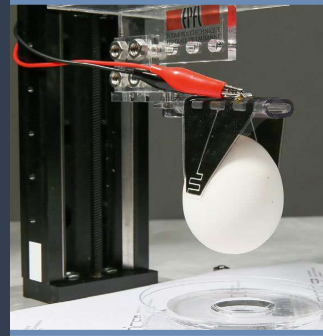


Composites for automotive industry

“The MERGING project aims to provide manufacturers with a versatile, easy-to-use and low-cost solution to automate or assist the handling of flexible and fragile objects. By addressing challenges such as handling of soft materials using robots, developing handling devices which are intelligent and universally dexterous, and making future robots capable of handling soft products while controlling their level of deformation, it will lead to disruptive innovations in many sectors.”

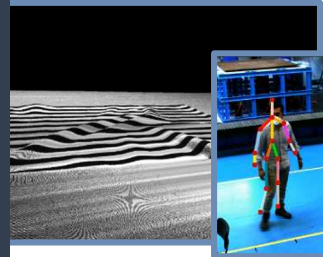


The enabling technologies



Dexterous gripper equipped with electroadhesion skin

Skill based programming

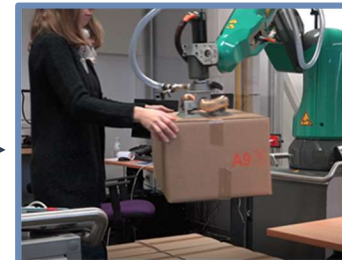


Deformable object detection and synthetic datasets



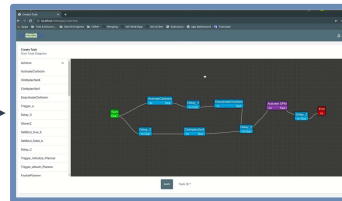
Human tracking and activity recognition

Learning based teaching methods



Haptics comanipulation

Orchestration and handling controlling tools



Model-based comanipulation

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