TITLE
Modular Variable Stiffness Actuator

INVENTORS
Darwin Caldwell, Gianluca Pane, Amir Jafari, Nikolaos Tsagarakis

DESCRIPTION
The novelty of the proposed variable stiffness actuation unit is the use of specially cam shaped lever arm mechanism with a variable pivot axis (instead of regulating the effective arm length or the point where the force is applied). This permits the compact implementation of the variable stiffness module through the use of: reduced length lever arm, smaller springs and a rack and pinion mechanism to regulate the lever arm pivot position.

APPLICATIONS
This solution allows the compact and modular realization of the variable stiffness unit, which permits the exploitation of the actuator in multi dof robotic systems.

KEYWORDS
actuator, variable stiffness

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CONTACTS
Technology Transfer Office  Lorenzo De Michieli  +39 010 71781 569
lorenzo.demichieli@iit.it