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Subject: Deployable mechanisms for robotics with plastic joints and rigid links

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Laboratory: PMAR Robotics. Space and Robotics lab at BeiHang Univ., Beijing

Field of research: Mechanisms for robotics. Synthesis and analysis

Motivations and general objectives: Contribution to the development of methods of synthesis and design, methods of analysis, and design of deployable mechanisms with rigid links and elastic, plastic or elastoplastic joints. The relative motion between the links is allowed by some deformation localized at the connections between links; here variability of the resistance to different relative displacement determines the allowable or preferred relative motion between connected links. The research requires skills in rigid body motion, rigid body kinematics, and solid and continuum mechanics. Examples of mechanisms are generated from known architectures of kinematic deployable mechanisms.

Signature of the local coordinator

2016/06/03