

Key Technologies (7)  
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## BIO-INSPIRED COMPLIANT ROBOT FOR PLANETARY SURFACE EXPLORATION

### **Abstract**

Compliant robotics has been a new area of robotics. It has the potential to perform certain activities which could not be achieved by conventional robots. Mostly it is made of highly compliant material. There has been a trend to implement compliant robots for space exploration. This project is about bio-inspired compliant robot for Martian and Lunar surface exploration. This kind of robot is made of smart materials which can take certain shape or actuate as per the predefined structure. Our robot is focused on such properties to have properly balanced locomotion with carrying a certain payload. The prototype is made in such a way thus it would require a limited range of power supply. This kind of robot has less number of electronics components and less complexity to deal with. It has a better possibility of sustainability and it's easy to handle the particular task which can be performed by the compliant robotic setup. This kind of robot could help to explore the surface and monitor certain parameter for planetary surface exploration. This kind of robot has been developed to explore and carry certain payload in harsh environment.