Soft Bodied Hexapedal Robot

Tech ID: 32160 / UC Case 2021-809-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	2022019389	06/23/2022	2021-809

BACKGROUND

Soft robots have many advantages over traditional rigid-bodied robots. For example, they cost less to manufacture when compared to rigid-bodied robots. In addition they can be engineered to have bioinspired properties such as self-healing bodies. The applications for soft bodied robots include biomedical, manufacturing and search and rescue. However as the field of robotics evolves, additional applications may be developed for soft bodied robots

BRIEF DESCRIPTION

Prof. Konstantinos Karydis' lab at the University of California, Riverside has developed a soft hexapedal robot (SoRx) that may serve as a new tool to applications where operation over rough and/or unstructured terrain is required. For example when looking for survivors in the aftermath of an earthquake this soft legged robot may be easily deployed. Operation in such terrains still challenges more rigid legged robots; instead, soft legged robots could squeeze and bend to overcome obstacles and fit into crevices to explore their environment.

Other uses of SoRX may include educational and recreational applications.

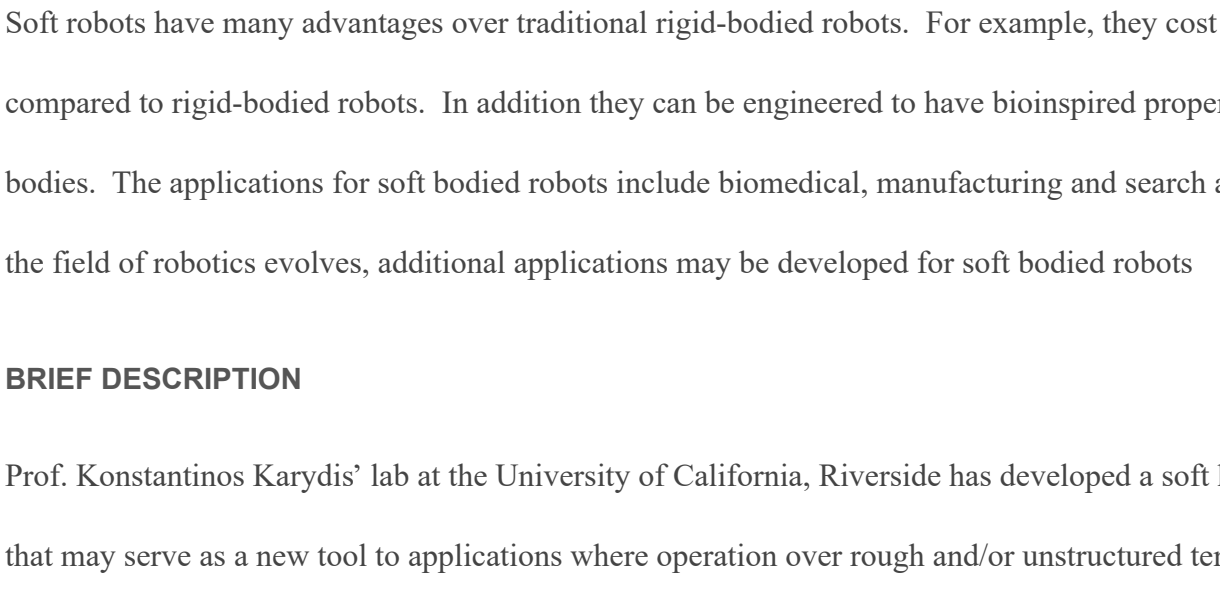

Fig 1: shows that SoRX maintains stable locomotion on an unstable platform that is oscillating in the X-Y plane at speeds comparable to the robot's forward speed,

APPLICATIONS

- Used for agricultural applications like surveillance and harvesting.

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OTHER INFORMATION

KEYWORDS

soft robot, search and rescue, agriculture, medicine, recreation, education, manufacturing

CATEGORIZED AS

- Engineering
  - Robotics and Automation

RELATED CASES

2021-809-0

- For use in search and rescue operations.
- May be used for biomedical applications like robotic surgery.
- May be used as a recreational device for hobbyists
- Adapted as an educational product

RELATED MATERIALS

- 2020 IEEE International Conference on Robotics and Automation (ICRA) - 05/31/2020

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