MECHANICAL LINEAR ACTUATOR THAT IS LOW COST AND HIGH PERFORMANCE

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PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,630,208	04/21/2020	2015-165

BRIEF DESCRIPTION

Linear motion is an essential mechanical property used in huge variety of applications. There are multiple ways to create linear motion, including screws, cams, pulleys, pneumatic and hydraulic actuation. Overall performance of these linear actuators can be defined in terms of cost, scale, speed, and efficiency. Current actuators are strong in one or two of these performance categories, which limits their use to specific applications.

UC Berkeley researchers have designed a novel linear actuator that is strong across all four performance categories. The clever Berkeley design provides fast and efficient actuation, and its unique structure is scalable for multiple applications. It is especially conducive to applications that have tight space confines, need a large degree of displacement at a high rate, and are cost constrained.

SUGGESTED USES

- Tensegrity structured robotics
- Compliant/soft robotics
- General robotics
- Childrens toys

ADVANTAGES

- Fast length displacement
- Simple to power
- Lightweight and flexible
- Scalable for different size applications
- Few components making cost-effective manufacturing possible

RELATED MATERIALS

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OTHER INFORMATION

CATEGORIZED AS

» **Materials & Chemicals**

» Other

» **Sensors & Instrumentation**

» Analytical

» Biosensors

» Physical Measurement

RELATED CASES

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