



LiftTiles

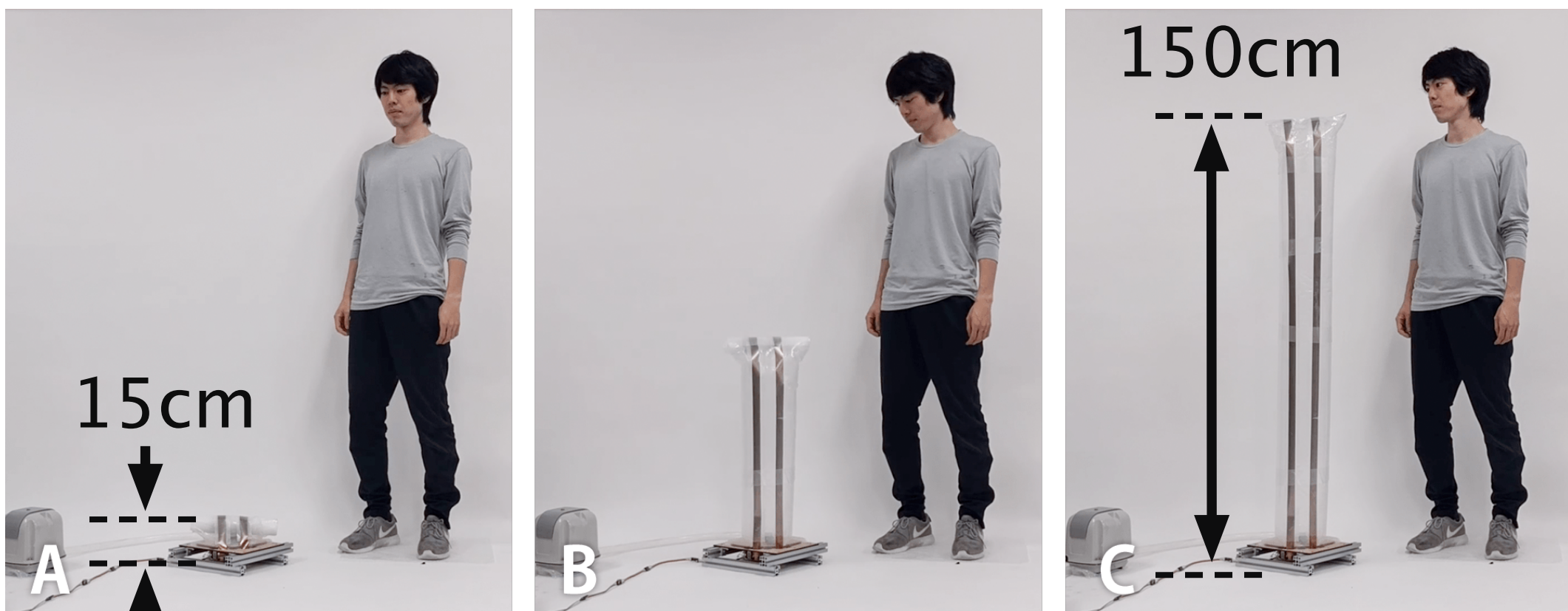
Modular and Reconfigurable Room-scale Shape Displays through Retractable Inflatable Actuators

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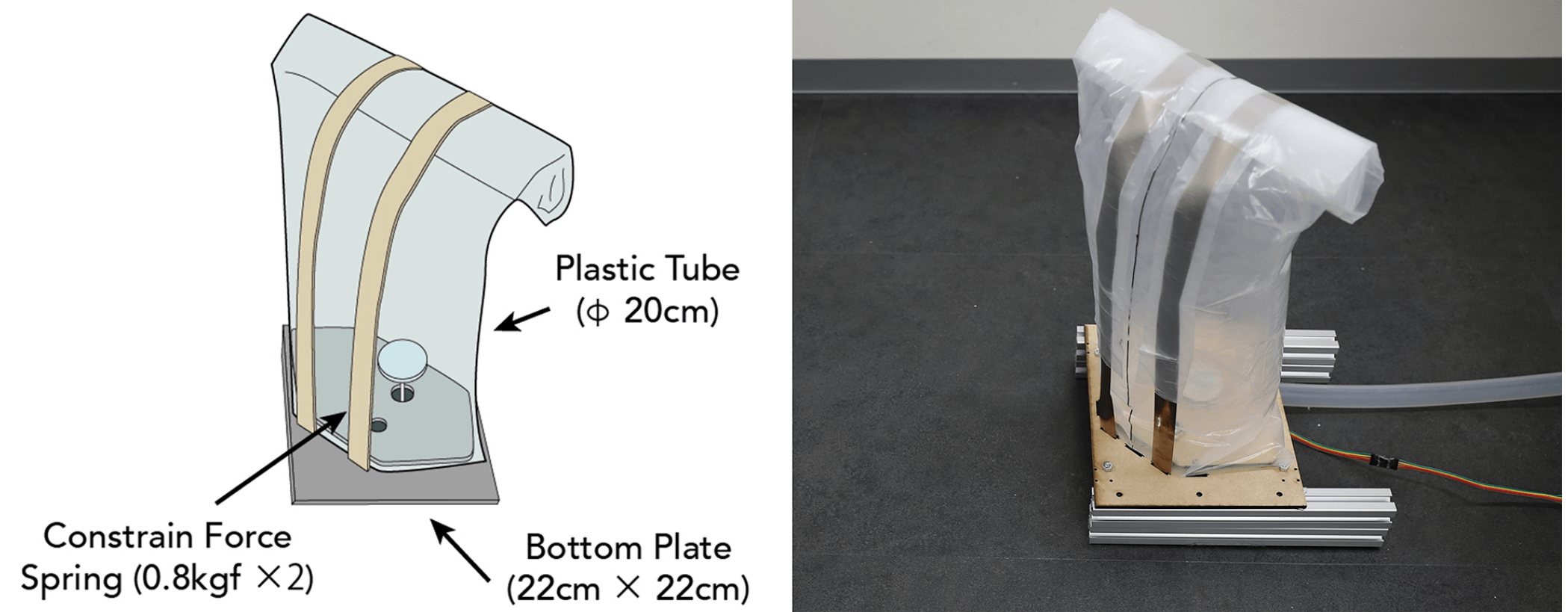
Room-scale Shape Display

This paper introduces LiftTiles, a modular and reconfigurable room-scale shape display by leveraging retractable inflatable actuator.

Inflatables + Force Spring



Actuators can extend with air supply and retract with constant force spring



- Compact:** 15 cm in height
- Extendable:** up to 1.5m with air supply
- Strong:** withstand 10kg object
- Lightweight:** 1.8kg for each unit
- Large Footprint:** 30cm x 30cm
- Low-cost:** \$8 USD for each
- Modular:** reconfigurable (horizontal + vertical)

Applications

