

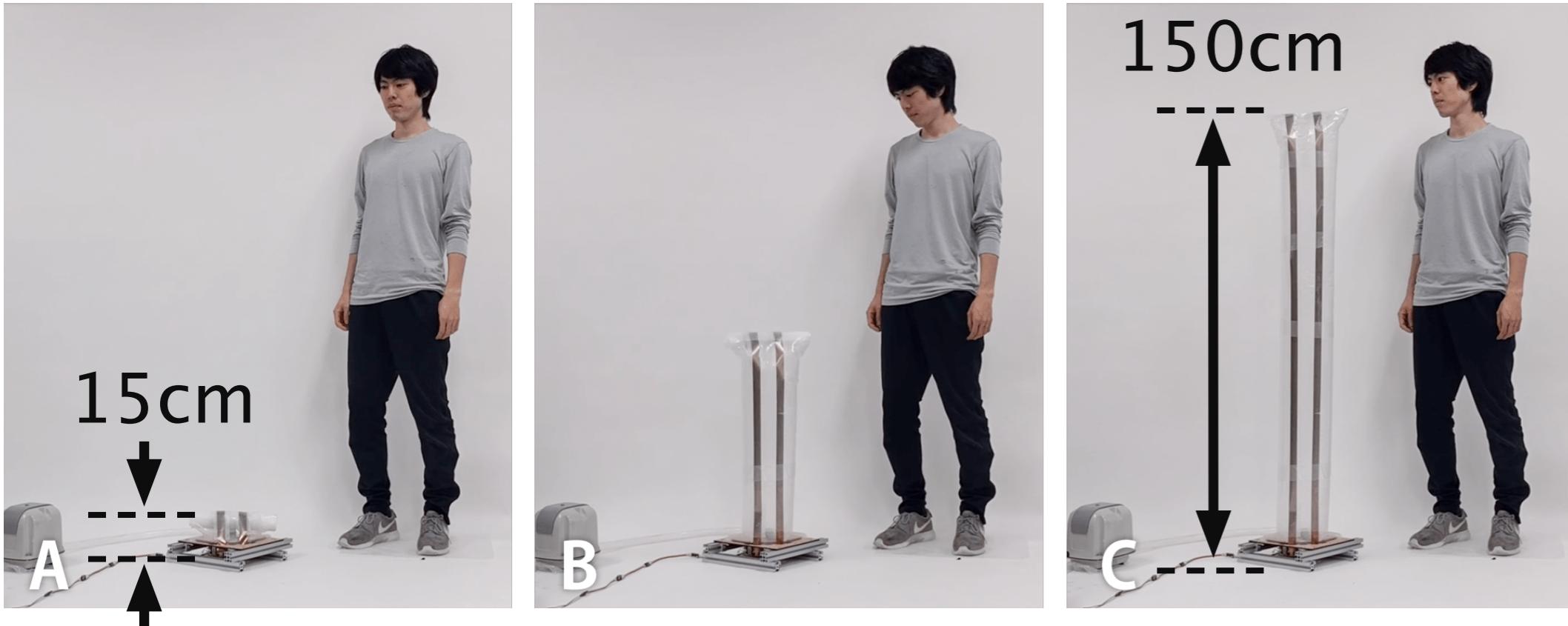
ShapeTiles

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

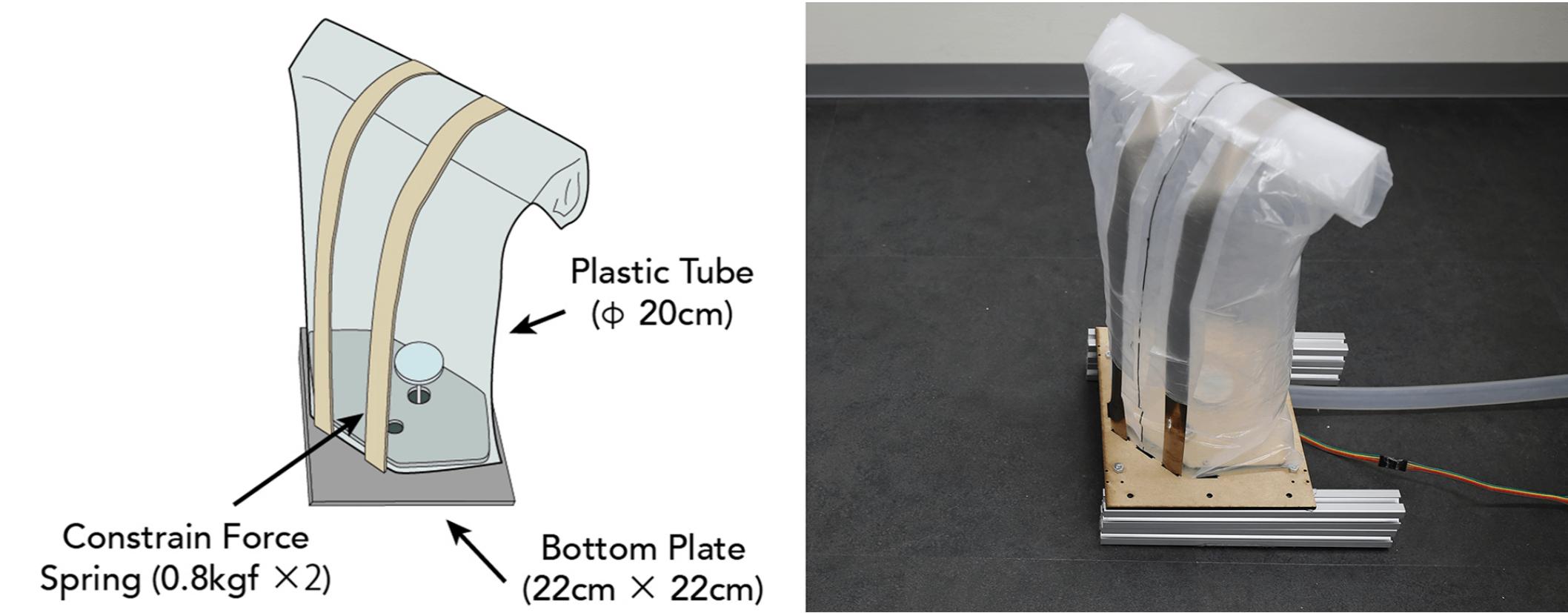
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Room-scale Shape Display Inflatables + Force Spring

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



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

