
Supplementary information

Functional mimicry of Ruffini receptors with fibre Bragg gratings and deep neural networks enables a bio-inspired large-area tactile-sensitive skin

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Supplementary Videos

Supplementary Video 1 | Example experimental testing of artificial skin sensitivity with Von Frey hairs.

Supplementary Video 2 | Raw wavelength variations of FBG transducers due to pressure applied throughout the sensitive skin.

Supplementary Video 3 | Real-time force intensity and contact localization while indenting the skin in the test set with a mechatronic platform.

Supplementary Video 4 | Demonstration of skin ability to decode force intensity and contact location in real-time while touching the sensorized patch via the experimenter own finger.

Supplementary Video 5 | Demonstration of collaborative behaviours that could be implemented by a robot arm endowed with the developed sensitive skin while interacting with humans.