



ISTITUTO ITALIANO  
DI TECNOLOGIA

#### TITLE

Artificial skin

#### INVENTORS

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#### DESCRIPTION

The Robotics, Brain and Cognitive Sciences research group, in the scope of the iCub project has developed a soft, flexible, sensitive and high spatial resolution tactile sensor, suitable as a "sensitive skin" for humanoid robots or, for instance, in automotive, entertainment, sportswear and nautical applications. The solution is based on arrays of small size, high dynamic range capacitive sensors, fabricated on a flexible substrate and connected through an innovative serial topology to a signal acquisition chip integrated in the same substrate.



#### APPLICATIONS

A key application for this sensor arrangement is in the field of humanoid robotics where tactile sensors are necessary to give the robot consciousness of itself and the environment, reaching a higher grade of cognition. Anyway the fields of applications are those in which a soft, flexible surface has to be sensorized with tactile sensors.

#### KEYWORDS

tactile sensors, artificial skin, robotic skin

#### BIBLIOGRAPHIC DATA TO2007A000779 No.1380079

Disposizione di sensori tattili e sistema sensoriale corrispondente

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