

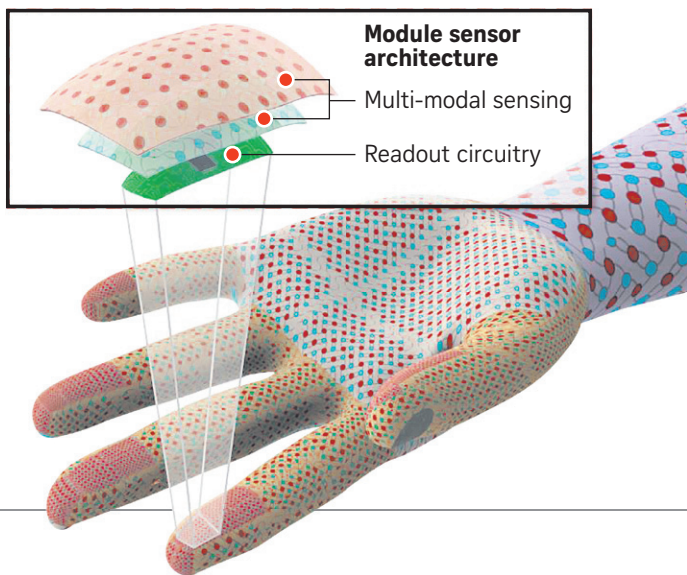
Electronics of the future

Electronics, an essential part of modern society, are set to become even more versatile by being bendable and stretchable. Here is a sneak peek at some of the flexible electronics applications that scientists here are working on to transform every aspect of people's lives.

ELECTRONIC SKIN FOR ROBOTS

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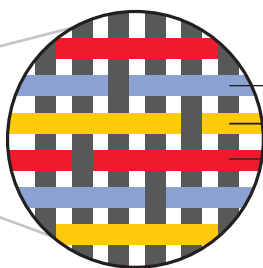
- A glove with thousands of pressure sensors on the surface
- Printed using an inkjet printer with a special ink that conducts electricity
- Sensors collect data at more than 5,000 times a second
- Enables robot to pick up household objects without excessive force



SOLAR-POWERED TEXTILE

SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

- Stainless steel wires in a 5-harness satin weave commonly used for closer thread spacing and stability
- Wires are coated with semiconductor material and light-sensitive dyes needed for solar electricity generation
- Wearers can potentially power their smartphones, cooling devices or military equipment



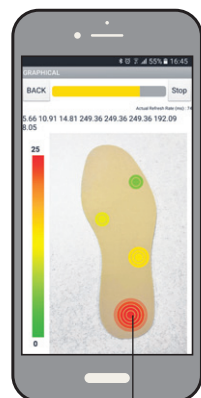
Fibrous electrode:

Combination of photo-electrodes with colourful dyes

INSOLE FOR MONITORING FOOT PRESSURE

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- Shoe insole fitted with flexible sensors containing a liquid metal alloy of gallium and indium
- Electrical resistance of alloy increases with pressure
- Data is transmitted wirelessly to smartphone which shows pressure changes in real time
- Helps detect excessive pressure that may cause problems like diabetic foot ulcers



Mobile app: Pressure points are colour-coded to show the amount of stress on each point