

**DEPARTAMENTO DE INGENIERÍA TEXTIL Y PAPELERA**  
**UNIVERSIDAD POLITÉCNICA DE VALENCIA**



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**STUDY ON THE ELECTRICAL RESPONSE OF  
PIEZORESISTIVE FABRICS SUBJECTED TO STRETCHING  
AND DEFORMATION BY PRESSURE**

**ABSTRACT**

The thesis deals with the development of piezoresistive materials. Its objective is to investigate a system formed of a knitted fabric to be used as a piezoresistive sensor that allows electrical behaviour to be interrelated based on the elongation applied. Simultaneously, the correlation between elastic deformation and that caused by applying pressure by detecting the area where the pressure is produced will also be studied. For this purpose, knitted fabrics will be used and conductive textiles will be added to them. A testing method will be designed and the properties of the fabric will be evaluated. As a result, a smart textile will be obtained.

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