

Paper:

Conductive Thread Materials for Integration of Contactless Sensors for Stress Level Monitoring Cloths

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Many attempts were done for integration of sensors and electronics into textiles – mostly it is an integration of common electronic features into clothing more or less perfectly. To come to a real textile integration and textile configuration of sensors and their information transport and power supply, the ConText Project (www.context-project.org) was initiated.

The objective of the ConText project is to create a system where different types of contactless sensors are incorporated into textiles to be used in continuous monitoring of individuals. For the first time contactless sensors will be developed for the purpose of measuring EMG and ECG, creating a large freedom of movement and more comfort for the user as no direct skin contact is needed anymore. Textile integration of these sensors is a logical choice because human beings are constantly surrounded by textiles in clothing and upholsteries and also because textiles are flexible and drapeable. This means that with textile integration a device can be made for continuous unobtrusive monitoring of stress level.