LIGHTCARE

Smart garment for elderly care

A smart garment that monitors stress level, thanks to Smart textiles ComfTech. Through the use of SunFibre, a lighting tech, it displays the mood of the person wearing it, calling others to action.

Lightcare consists of two garments: one, integrated with sensors, to be placed in direct contact with the skin and able to monitor a person's stress level and health status; the other is worn over the clothes and, thanks to bright SunFibre, displays the person's mood translated into colours. It is designed for older people struggling to express themselves to stimulate empathy through colour and to encourage interaction with others. Moreover, the system includes a SunFibre frame for the care-giver's, to inform them of the elderly status and whether they need intervention in a non-intrusive manner.

Areas of materials involved.

Feasibility of the idea.

CONCEPTUAL — READY-TO-MARKET

Luca Cappetti
Design & Engineering, Polimi

Davide Franci
Integrated Product Design, Polimi

Laura Pizarro
Mechanics & Industrial Design, TECNUN

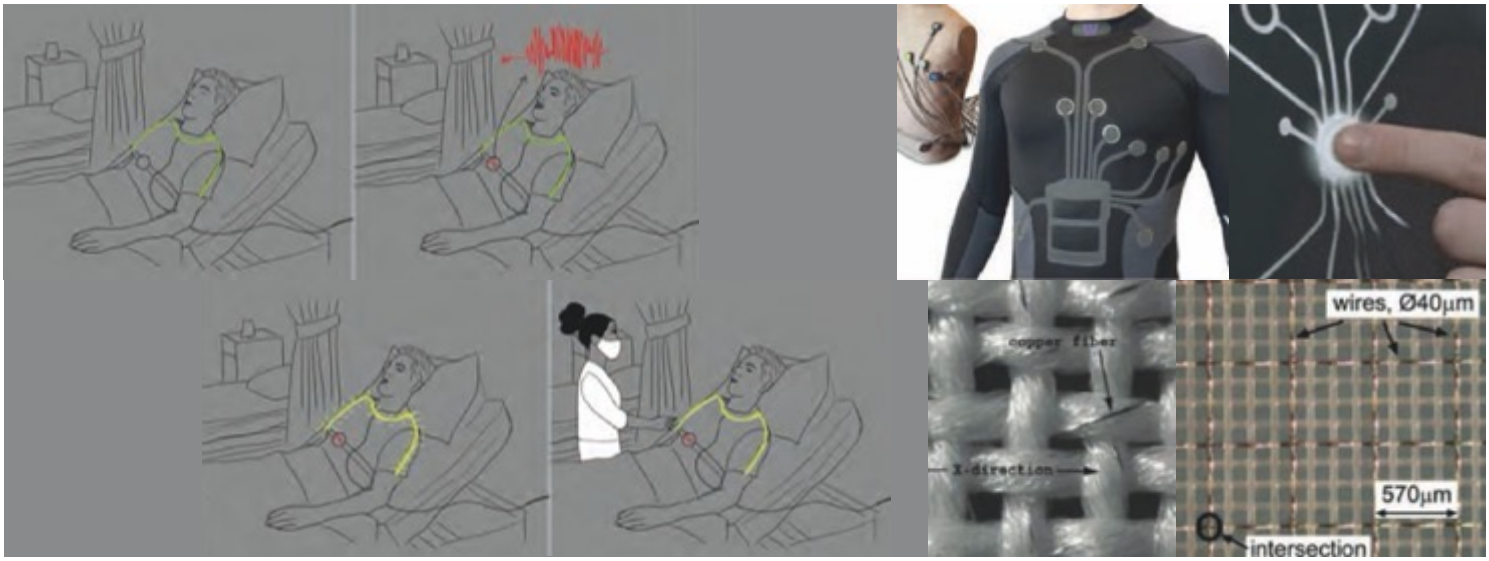
Sara Saccoccio
Digital and Interaction Design, Polimi

CAREN

Wearable monitoring system for hospitals

A wearable technology that aims to enhance a patient's medical care response in wards and hospitals where individual bed monitors are not available for every patient.

Caren is ideally designed for basic wards in hospitals where it is often not possible to give attention to each patient all the time. It aids the nurses and doctors in identifying a patient in need of urgent help. It uses SunFibre to visually alert the medical staff nearby, whether it is while the patient is sleeping or walking in the halls of the hospital. The SunFibre is triggered by ComfTech's sensor that senses any distress of the patient. In case of severe situations, where immediate treatment is needed, the garment can be easily removed at once thanks to the snap buttons in the centre front.



Areas of materials involved.

Feasibility of the idea.

CONCEPTUAL — READY-TO-MARKET

Andrea De Bernardi
Digital and Interaction Design, Polimi

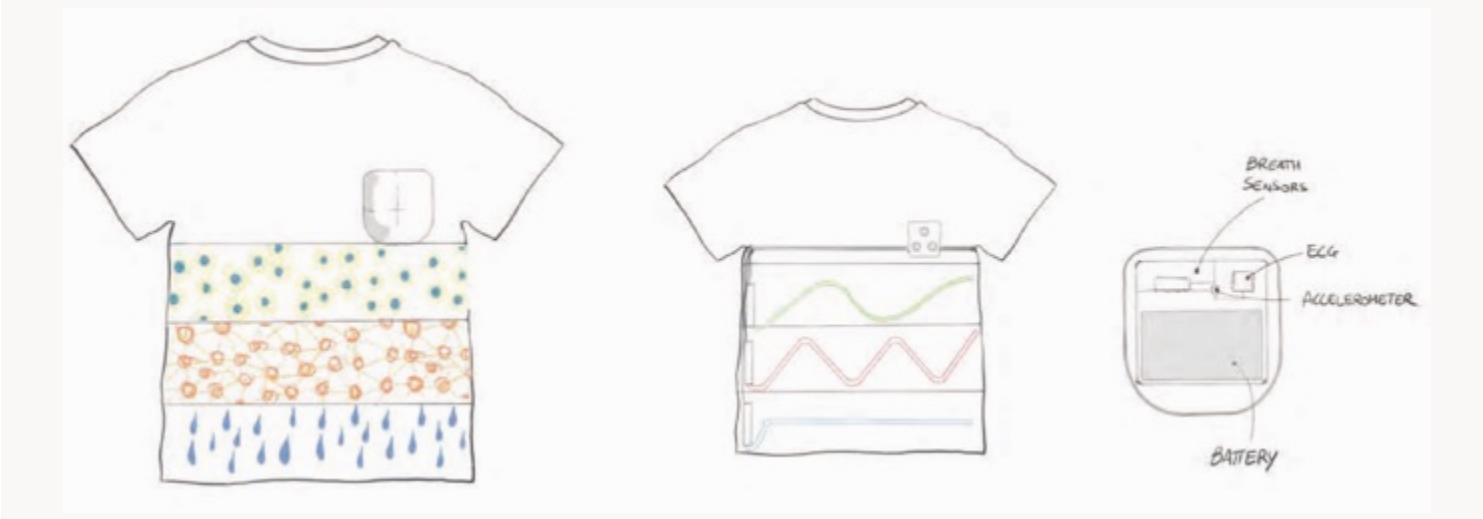
Mikel Lasa
Electronical Engineering, TECNUN

Shonglin Gaekwad
Design for the Fashion System, Polimi

Shuai Liu
Desing & Engineering, Polimi

U-EMOTIONS

Emotional exploration aid for children



A tool for children to communicate, express and understand better their feelings, during development. It also helps parents to understand their kid's emotional growth.

U-Emotions is a well-being system for children, to help them understanding how they feel. Everything is contained in a loncell-F (95%) and Ecolastane (5%) t-shirt.
ComfTech sensors are used to understand the body and collect data about the child's emotional state. Data interpretation is immediately shown by the SCILIF light fibres, to communicate them to others and give feedback in a simple and quick way.

Areas of materials involved.

Feasibility of the idea.

CONCEPTUAL — READY-TO-MARKET

Leonardo Cariga
Desing & Engineering, Polimi

Roxana Tavoosi
Design for the Fashion System, Polimi

Elisa Igoa
Mechanics & Industrial Design, TECNUN

JACKTIVE

Sportive jacket to alert for panic attacks

Jacket for hiking that helps people to calm down during panic attacks, through sensory and visual stimuli, integrated into the garment. It also allows tracking in harsh visual conditions.

More than being a simple garment, this sportive and smart jacket aids people during a panic attack, helping them to calm down using a diaphragmatic movement around their chest to stimulate and guide the breathing rate single-handedly. This response is activated when the sensors located in the wrists identify an abrupt change in the breathing and heart rate. At the same time, the system turns the optic fibre lightings on to make the identification and tracking of people easier in environments with tough visibility in forest or at night in case of disorientation during hiking.

Areas of materials involved.

Feasibility of the idea.

CONCEPTUAL — READY-TO-MARKET

Diego Piracoca
Desing & Engineering, Polimi

Sara Kashfi
Digital and Interaction Design, Polimi

Sonia González
Mechanics & Industrial Design, TECNUN

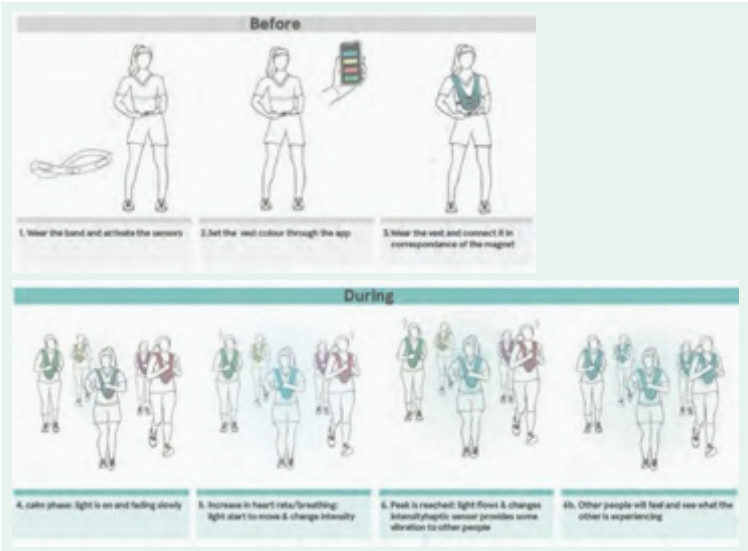
Bianca Muresan
Design & Business, Communication & Media, KEA

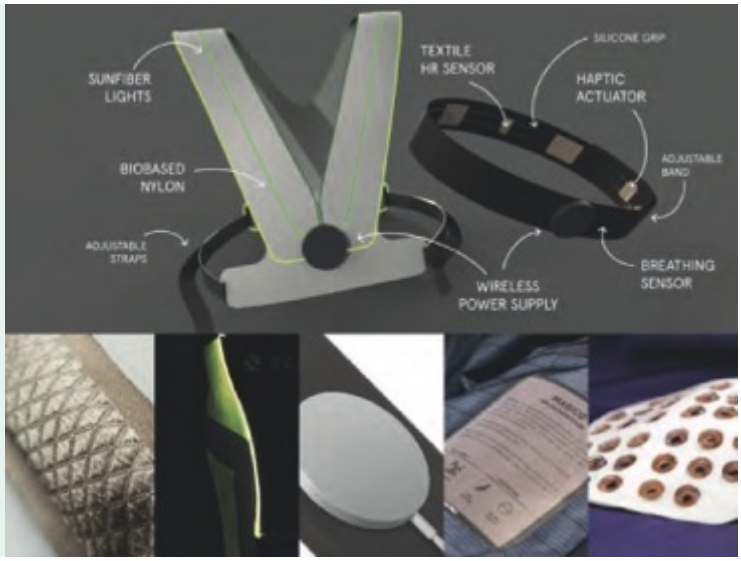
ADRENALIGHT

Smart garment for shared adrenaline experiences

A wearable system that allow to show and share your instant excitement in extreme, adrenaline group experiences, through multi-sensory stimulation.

The concept is thought to be used in any kind of adrenaline group activity to function at its best. The main purpose of this is because the product detects some body parameters (such as heart rate and breathing activity) that analyse the adrenaline experience and replicate all these feelings into a visual feed-back. The goal is to involve all the people into an adrenaline situation and to use one person as a trigger for the others to regulate the level of adrenaline if it's too low for others.





Areas of materials involved.

Feasibility of the idea.

CONCEPTUAL — READY-TO-MARKET

Adriana González
Mechanics & Industrial Design, TECNUN

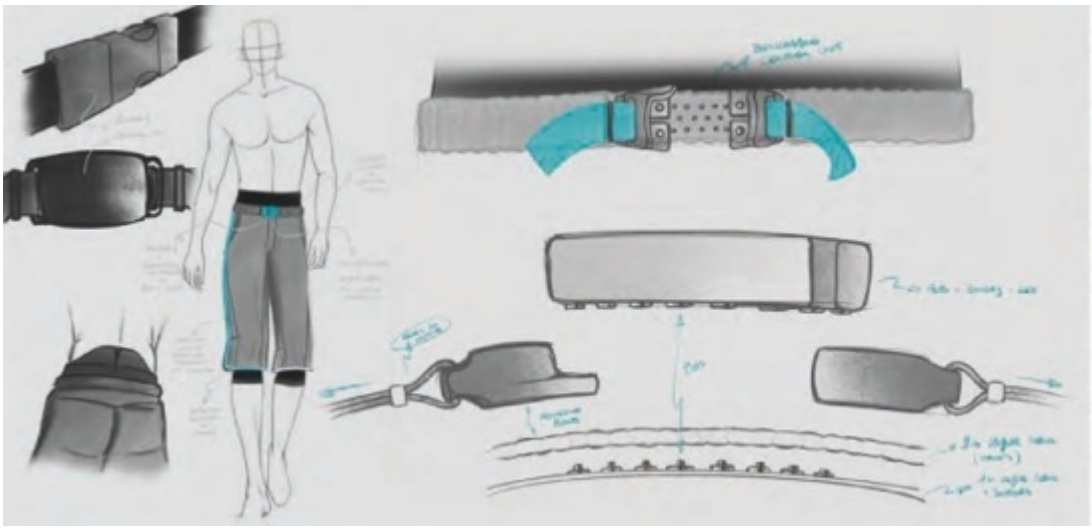
Giuseppe Fazio
Digital and Interaction Design, Polimi

Martina Paramatti
Design & Engineering, Polimi

Andrea Tremari
Digital and Interaction Design, Polimi

SENSE-E WORKPANTS

Tech-wear for repetitive strain injuries prevention



Integrating SunFibre and ComfTech sensors into the fabric of couriers' clothes to detect movement that may trigger Repetitive Strain Injury, while improving their visibility during shifts.

Repetitive Strain Injuries is a broad term to describe the pain felt in muscles, nerves and tendons caused by repetitive movement and overuse. Sense-e Workpants can help prevent RSI through early detection of strains, and anticipate needed therapy or rehabilitation by integrating strain gauge textile sensors in vulnerable areas of the body to measure movement. During the operational time of the device it collects data to share to the employer company. They con elaborate the data through AI systems and optimize the working hours of their staff and give feedback to employees.

Areas of materials involved.

Feasibility of the idea.

CONCEPTUAL — READY-TO-MARKET

Alice Ballestra
Design & Engineering, Polimi

Ludovica Bonaldo
Digital and Interaction Design, Polimi

Francesco Carlucci
Design & Engineering, Polimi

Hanna Selim
Design & Business, Communication & Media, KEA