context

European Network to connect research and innovation efforts on advanced Smart Textiles

Issue n°5

July 2022

IN THIS ISSUE

ABOUT CONTEXT

CONTEXT NEWS

MEMBERS' NEWS

www.context-cost.eu

cost EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

Funded by the European Union

CA17107

ABOUT CONTEXT

CONTEXT brings together European researchers, manufacturers and main relevant stakeholders in order to develop joint ideas and initiatives which can be turned into advanced smart textile products

SMART TEXTILE: functional textile material, which interacts actively with its environment, i.e. it responds or adapts to changes in the environment

CONTEXT network covers 35 European countries, 3 Near Neighbour Countries and 1 International Partner Country.

The Management Committee is formed by 66 experts in advanced textile materials and related fields.

CONTEXT AIMS TO

Promote the development of a joint research roadmap for smart textiles.

Foster the transfer of knowledge among different actors in order to find suitable applications in various multidisciplinary fields.

Act as stakeholder platform to identify needs and requirements from different points of view in a bottom-up approach.

Promote networking activities in order to attract talent, build more and better research projects with more consciousness on the objectives of creating exploitable results.

CONTEXT is funded by the European Cooperation in Science and Technology (COST), which provides funding for the creation of research networks, called COST Actions. These networks offer an open space for collaboration among scientists across Europe (and beyond) and thereby give impetus to research advancements and innovation.

cost EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

Funded by the European Union

CONTEXT NEWS

context

International Smart Textiles Conference
21 - 23 September 2022

How do R&D approaches become smart textile-based products?
At InMotion2022, experts will present new technological developments of smart textiles and concepts for the successful path to series production. The conference in fall 2022 will focus on solutions for the automotive, aviation and personal protective equipment sectors.

Presentations - Discussions - Practical workshops - Exhibition

- 9/21, Day 1: Smart Textiles from R&D project to series production
  Through structured European cooperation to more value creation
- 9/22, Day 2: New solutions for automotive, aerospace, personal protective equipment
  Technical presentations and discussions on new development results and projects in the field of smart textiles
- 9/23, Day 3: Practical workshops
  Develop smart solutions together with experts

There will also be an accompanying exhibition and matchmaking sessions.
Face-to-face and online, in German and English (simultaneous translation).
Organization: SmartTex-Netzwerk Germany, supported by COST Action CONTEXT

More information

context

CONTEXT network met in Paris

On 7th and 8th June, several CONTEXT members gathered in Paris.

WG1: Smart Textiles in Healthcare and Medicine, hold a meeting with the participation of 20 experts. It took place on the 7th, and started with a visit to the Lab by IFTH in La Caserne.

After lunch, 2 invited speakers from Eurasanté and Bursa Technical University presented their smart textiles projects in the field and all the participants discussed on the trends, market needs and bottlenecks.

Finally, they discussed on the update of the state of art and its publication as an open access paper for dissemination.

On the 8th June, CONTEXT core group met to prepare the working plan for the next months.

More information

CONTEXT NEWS

context

CONTEXT network met in Ghent

CONTEXT gathered more than 25 experts from 16 countries in Ghent (Belgium) on March 21st and 22nd to participate at the annual Management Committee meeting and the working groups meetings.

On the 21st in the morning, some members visited the facilities of the technological center Centexbel, located in Ghent.

In the afternoon four of the working groups that integrate the network had their meeting. Those are: WG1: Healthcare & Medicine, WG2: Automotive and Aeronautics, WG3: Personal Protection Equipment and WG4: Building and Living.

Each of the working groups brings together representatives from academia, research, industry and users. The main goal of these meetings was to set specific collaborative activities among the WG members, such as writing articles, prepare joint project proposals, etc.

After the meetings, the attendants participated at a joint dinner.

On the morning of March 22nd, the Management Committee of CONTEXT met to debate about the major work lines of the network, to review the activities organized during the last year and to define main activities for the coming months.

More information

context

Two new articles published as a result of the cooperation among CONTEXT members

Two new articles published as a result of the cooperation among CONTEXT members:

- Electrospun PEO/rGO Scaffolds: The Influence of the Concentration of rGO on Overall Properties and Cytotoxicity, by Aleksandra Ivanoska-Dacikj, Urszula Stachewicz, Jelena Tanasić and Ivan Ristić, among other authors.

- Smart textiles and the indoor environment of buildings, by Georgios Priniotakis, Urszula Stachewicz and Joost van Hoof.

More information

MEMBERS' NEWS

context

AEI TÈXTILS

CIRCULAR.Tèxtils.cat Hackathon: creating new solutions for textile waste

On April 27th and 30th, CIRCULAR.Tèxtils.cat Hackathon took place, coordinated by AEI Tèxtils and FITEX, with the financial support from the Waste Agency of Catalonia.

The objective was to generate potential circularity roads using textile waste from AEI Tèxtils members.

20 design and engineering students had the opportunity to get acquainted with the industrial environment of the textile ecosystem hand in hand with companies and experts in the sector while working on the challenge of generating new opportunities for textile waste.

The winning team was awarded a cash prize and an internship in a company member of the cluster.

More information

iPVEST - inteligent Protective VEST

iP VEST is an innovative R&D project which consisted on the development of new intelligent multi-risk protective PPE solutions that protect, alert and prevent Energy and Telecommunication technicians from multiple hazards. New textile materials with advanced performance and new integrated sensor systems were conceived for these solutions.

With an innovative and ergonomic design, this set of intelligent PPE combines advanced electronics with biometric sensors, electromagnetic radiation, temperatura and humidity measurement and communication system maximizing technicians' protection, comfort, physical performance, and well-being in multiple demanding situations. Thanks to its multilayer structure of advanced performance materials, iP VEST is a high mechanical strength solution that protects against electrical hazards, exposure to liquid chemicals, molten metal splashes, heat and flame, while being weatherproof.

This Project, co-financed by COMPETE 2020 - Operational Programme for Competitiveness and Internationalization and under Portugal 2020 through European Regional Development Fund (ERDF), comprises SCORECODE (project leader), VIATEL, CeNTI and CITEVE.

More information

More information

CITEVE - TECHNOLOGICAL CENTRE FOR THE TEXTILE AND CLOTHING INDUSTRIES OF PORTUGAL

citeve
TEXTILE TECHNOLOGY

iP.VEST

Cofinanciado por:
COMPETE 2020
PORTUGAL 2020
UNIÃO EUROPEIA
Fundo Europeu de Desenvolvimento Regional

MEMBERS' NEWS

context

EGE UNIVERSITY

Co-funded by the Erasmus+ Programme of the European Union

Digital Learning Materials for Sustainable Textile Education

Vir2TEX 2 is a European project co-funded by European Commission and Turkish National Agency (TNA) within the Erasmus+ programme.

The project partnership will develop new learning materials created by digital technologies for delivering high-quality education. The aim of the project is integrating technology into courses to engage students in immersive learning experiences whether teaching in class or remotely.

This project explores the potential of virtual reality (VR) for deepening understanding and enhancing learner engagement by eliminating the screen and placing learners in the middle of real situations through utilizing VR 360 video. New learning materials enhanced for distance education about textile production will be developed for textile production steps from fiber to clothing. The modules will be helpful for both vocational students and the new employers in the textile sector by combining immersive technologies and inspiring pedagogic content for the best learning results.

More information

Internationalisation project EU-Alliance: mission to USA

Are you developing in the Defence or Security markets?
Are you looking to increase your international development?

Access the opportunities generated by EU-ALLIANCE: USA mission is coming soon! From 10 to 13 October 2022 EU-Alliance project will land in USA leading european companies to American market.

The project aims to support SMEs internationalisation of 6 leading European clusters in the fields of Textile, Deep tech, Defence, Security, Maritime, Automatic & Robotic, ICT, Cybersecurity, advanced materials, Smart materials, PPE, Medical sectors willing to expand their business in four targeted countries: The United States, Canada, Japan and Indonesia.

Companies will have the chance to attend AUSA fair and take part to severe networking activities.

More information

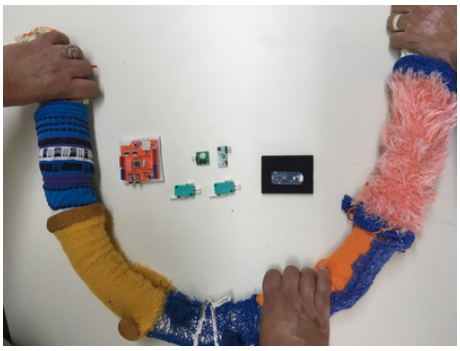
EU-ALLIANCE CONSORTIUM

EU-ALLIANCE

MEMBERS' NEWS

context

UNIVERSITY OF WEST ATTICA



Smart textiles for Dementia Care Home Interiors

In our DIKNIGA Research Laboratory we have embarked on a 3 months project investigatingsmart textiles and multi-textured textiles for embedding in soft furnishings and novel objects used in architecture interior design for dementia care homes and other spaces designed to accommodate people living with dementia.

The study project is a collaboration between the University of West Attica and visiting PhD researcher Loukia Minetou from the University of Stirling supported by the Saltire Emerging Researcher Programme. We are delving in the cross-section between Interior Design, Scenography and Smart Textiles to examine possibilities of smart textiles design that could aid communication between people with dementia, their carers and care home staff.

The research involves a collaboration between psychiatrists, occupational therapists, designers, textile experts, architects, and people living with dementia aiming to produce design prototypes that could contribute to the wellbeing and tackle issues of stigmatisation of people living with dementia.

More information

Ergonomic smart-textile sensor mat for diabetic patients care

Currently a huge number of people including diabetic patients dependent on a wheelchair. Based on the recent figure it is around 50,000 with an increase of more than 50% by 2050 also in developed country like Austria. However, a pressure sensor should now compensate for this loss of pain and enable the decisive early detection of diabetic and decubitus ulcers.

A smart wheelchair seat cushions integrated with smart-textile sensor matrix for pressure and posture management could effectively improve patient's situation.

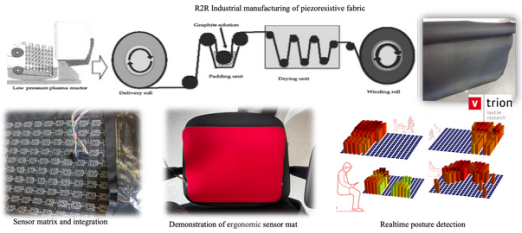
Therefore, the goal of our project MedSens was to produce a piezoresistive sensor matrix containing over 250 sensors and integrated them into wheelchair seat cushions to monitor the pressure mapping while using as depicted in figure below.

The results showed that the e-textile mat could be successfully applied for non-invasive and continuous control of the position of the human body and its position for an early detection and prevention of the diseases.

More information **More information**

V-TRION GMBH TEXTILE RESEARCH BY DR. GAFFAR HOSSAIN

v trion textile research



MEMBERS' NEWS

context

2C2T-CENTRE FOR TEXTILE SCIENCE AND TECHNOLOGY, UNIVERSITY OF MINHO

2C2T
Centre for Textile
Science and Technology

Call for papers in Materials (MDPI) special issue "Carbon-based electronic textiles"

This special issue welcomes original contributions and reviews focused on fundamental results that will help to compile and to highlight the current state-of-the-art concerned with the production and applications of carbon-based e-textiles.

Keywords: triboelectric, piezoelectric, thermoelectric, biofuel cells, solar cells, electrochemical capacitors, self-healing sensors, toxicology and biocompatibility, washability, wearing comfort

More information