context

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

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ABOUT CONTEXT

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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 AIMS TO

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.

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

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

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

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

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EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

Funded by the Horizon 2020
Framework Programme of the
European Union

CONTEXT NEWS

CONTEXT organizes a webinar to present funding opportunities and success stories for the development of smart textiles

CONTEXT organized, on 25th March 2021, the webinar "Funding opportunities and success stories for the development of smart textiles".

The webinar started with an introduction to CONTEXT, by its Action Chair, Ariadna Detrell, Cluster Manager at AEI Tèxtils. The second part of the session was dedicated to present different funding programs to support the development of innovative products

The European projects offering funding cascade mechanisms for SMEs presented were: GALACTICA, ELIIT, INNO4COV-19 and SMARTEES2.

In the second part of the webinar, three companies (Polisilk, SATAB, and ITP GmbH) presented their success stories on the development of smart textiles.

Finally, Judith Bosch, from the European Textile Technology Platform, as project coordinator, presented a summary of SMART-X, that supports the establishment of a smart textiles manufacturing value chain in Europe through acceleration funding & coaching of SME's and Start-Ups.

The event was followed by more than 70 attendants.

More information

CONTEXT NEWS

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CONTEXT presents the state-of-the-art of advanced textile materials

CONTEXT publicly presented, on 25th February 2021, the state-of-the-art reports that have been prepared by the different working groups of the network. These reports, in which the authors have been working on in the last year, are focused to the different applications of advanced textile materials covered by CONTEXT:

- healthcare and medicine
- automotive and aeronautics
- personal protection
- building and living
- sports and wearables

More than 80 people attended the event in which each working group leader presented a summary of the report.

Read the reports

CONTEXT Management Committee met on 3rd February

Representatives from 30 countries participated at the 4th Management Committee Meeting of CONTEXT, held virtually on 3rd February.

During the meeting, the 3rd grant period working plan was updated, main activities foreseen will be postponed until summer/autumn and new activities will be held such as the creation of videos, a new transversal working group dedicated to COVID-19 or a competition to design a CONTEXT facemask.

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CONTEXT at the T&G TEXTECH conference

From November 23rd to December 8th 2020, T&G Textech organized a series of webinars dedicated to technical textiles.

T&G TEXTECH Events were organized within the framework of the project "German-Tunisian Partnership for capacity building in Technical textiles" financed by DAAD, German Academic Exchange Service. The aim of this project is the capacity building on the technical textile expertise of textile engineers in order to improve the employability in Tunisian textile and clothing industry. This is done through the transfer of knowledge from Institute for textile Machinery and High Performance Materials Technology (ITM) of TU Dresden, Germany to National Engineering School of Monastir (ENIM) of Monastir University, Tunisia by establishing academic contacts between the ENIM and ITM.

On November 27th, Dr. Ariadna Detrell, Cluster Manager of AEI Tèxtils, presented CONTEXT as Action Chair within the webinar dedicated to e-textiles & smart materials. The Action MC Observer from Morocco, Prof. Omar Cherkaoui, participated at the same session as keynote speaker, with the conference: Flexible smart textile with excellent energy harvesting toward a novel class of self-powered sensors/actuators.

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AEI TÈXTILS

Five SMEs are developing smart textiles with AEI Tèxtils' support

Smart textiles are a major opportunity for textile SMEs to develop high added value textile products and increase their competitiveness. However, their development requires expertise outside the textile domain, particularly in electronics and data processing.

Thanks to CONTEXT, the cluster facilitates the matchmaking of needs between its members and experts in the network. 5 Cluster members with ambition to enter this domain have identified partners thanks to the support received from the cluster that lead to the development of innovation projects to prototype functional demonstrators. They are: E.CIMA, POLISILK, ARPE, CINPASA and C.P. ALUART.

Today, those companies are starting the market launch and others are continuing the development to increase their added value. The final products will be showcased during Techtextil 2022.

More information

FTAlliance: Weaving Universities & Companies to Co-create Fashion-Tech Future Talents

Centexbel along with partners from industry and higher education covering the entire fashion tech value chain started FTAlliance, an Erasmus+ initiative to help ensure the viability of young graduates in the ever-changing textile industry. To keep up with this emerging field, there is an increasing urgency for organisations to adapt and advance collaborative practices, to find ways to integrate new technologies into fashion and design.

In the long-term, the project aims at increasing the relevance, quality and impact of Fashion-tech innovations and also at enhancing the competitivity of the European Fashion system at a global level revamping the industry through innovative practices. The goal of the project is to understand and predict the current and future needs of the fashion industry, specifically as related to new technologies, and to prepare students for future careers in these up and coming facets of the value chain.

More information

CENTEXBEL

PARTNERS' NEWS

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CENTI- Centre for Nanotechnology and Smart Materials

Centre for Nanotechnology and Smart Materials

WEAR2HEAL

Wear2Heal – Smart Textiles for Muscular Therapy

WEAR2HEAL is an ambitious R&D project aiming to develop novel active solutions, fully integrated into sportswear, to accelerate the recovery process after intense physical activity. The new solutions include four smart systems with different modes of action: compression, massage, heating and electrostimulation. One of the project challenges was achieving a good compromise between the advanced functionalities to be integrated, without compromising the elasticity, tenacity and abrasion resistance of textile structures.

The project revealed to be a great opportunity to explore the application of new smart materials and new processing technologies, stimulating innovation and creativity in a traditional industry such as the textile one.
This project co-financed by Portugal 2020, under the Operational Program for Competitiveness and Internationalization (COMPETE 2020) through the European Regional Development Fund (ERDF), has Tintex Textiles, as project leader, gathered a consortium constituted by four other partners, HATA, LABIOMEP at the FADEUP, CITEVE and CeNTI.

More information

HelpinTex – Multifunctional and intelligent mat solutions

The aim of HelpinTex project is to research and develop multifunctional and intelligent mat solutions. The main purpose of these solutions is to detect and communicate the presence or movement, inside the dwelling, through a fully integrated sensor system in the mat's textile structure, operating as an active remote monitoring system. The Helpintex solutions will allow, for instance, sending wireless alerts through an app to a caregiver, when no movement or anomalous movements are detected, enabling to provide a quick patient care. It can also be used as a remote intrusion detection system.

Additionally, the mat will have anti-slip properties achieved by using non-slip yarns, developed in this project, fully integrated into the textile structure.

This project, co-funded by the European Regional Development Fund (FEDER), have António Salgado (Home Textiles company), as project leader, gathered a consortium constituted by two other partners, CITEVE and CeNTI.

More information

CITEVE - Technological Centre for the Textile and Clothing Industries of Portugal

citeve
TEXTILE TECHNOLOGY

HelpinTex

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ESITH

The 1st edition of the R&D DAY "Career Choice"

The 1st edition february 17, 2021 of the ESITH R&D Day was an opportunity to share and discover the advancements of research on ESITH R&D topics through hands-on experiences, live interventions with international researchers and renowned industrialists.

This first edition was intended for students, researchers and industrialists to get to know ESITH R&D direction, as well as to debate and shape the research and innovation landscape in Morocco and internationally. In addition, the interest of this event was to create links and encourage fruitful exchanges between various innovators, in order to come up with creative and effective advanced research paths.

Through this competition, we were able to identify the best research and innovation ideas in the fields of advanced textiles and logistics, to discover the work of innovative students, to contribute to the valorisation of their work, to reward them as well as to introduce them to R&D direction at ESITH.

More information

Antibacterial nanofibrous membrane for water filtration – prototype

The functional sample of a nanofibrous antifouling membrane with antibacterial properties for the filtration of contaminated water was developed. The filter containing a modified nanofibrous membrane based on (poly(vinylidenfluoride)-co-hexafluoropropylene/monoacylglycerol prepared by electrospinnig.

The presence of monoacylglycerol in nanofibrous membrane improves wettability, permeation flux, antibacterial activity and antifouling properties. Proof of concept was created on the basis of mutual cooperation of the Institute of Hydrodynamics of the CAS, v. v. i. and Tomas Bata University in Zlín.

More information

Institute of Hydrodynamics of the Czech Academy of Sciences

Faculty of Technology, Tomas Bata University in Zlín

PVDF-*co*-HFP nanofibres with monoacylglycerol
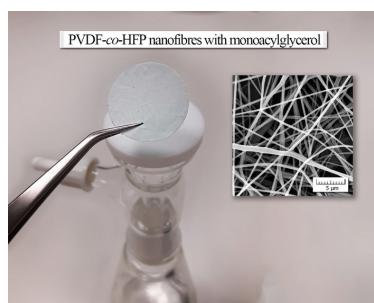
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INCDTP-National Research and Development institute for Textiles adn Leather

INCDTP

October 21-22, 2021 Online — TEX TEH X INTERNATIONAL CONFERENCE ON TEXTILES AND CONNECTED R&D DOMAINS

The 10th International Conference TEXTEH 2021

We invite you to participate to the 10th International Conference TEXTEH 2021 organized online by the National Researchand Development Institute for Textiles and Leather, Bucharest, Romania in collaboration with Hogent University of Applied Sciences and Arts, Belgium, University Of Minho - Tecminho, Portugal, University of Maribor, Faculty of Mechanical Engineering, Slovenia, Yazd University, The Textile Engineering Department, Iran and Magurele Science Park, Romania, during 21-22 October 2021. With a tradition of 15 years, International Conference TEXTEH brings together scientists, researchers, students and stakeholders from all around the world, targeting topics: Advanced Textile Materials and Technologies, Nanomaterials and Electrospinning, Industry, Education and Digitalisation, Biomaterials and Biotechnologies, Circular Economy, Security and Aeronautics and Innovative systems, Technologies and Quality Assurance.

Based on previous scientific achievements, accepted papers will receive unique DOI number and the TEXTEH X proceedings will be submitted for indexing in international databases such as CrossRef, SCOPUS, EBSCO, ProQuest, Index Copernicus etc.

More information

"How to make the digital transition of your company concrete"

On 12th May 2021 NTT, in collaboration with the Municipality of Prato, organised the successful online webinar entitled "How to make the digital transition of your company concrete".

It was focused on the opportunities provided by the Italian Transition Plan 4.0 which was launched as the first brick of the Italian Recovery Fund. During the event, the investment opportunities and the instruments for SMEs were presented.

The event involved the Undersecretary of the Ministry of Economic Development as well as an Officer, plus, at local level, the Mayor of Prato and the municipal Councillor for innovation.

On this occasion, NTT presented the opportunities of the TEXGLOBAL programme to raise awareness about project's activities, objectives and goals in order to include potential participants in the forth-coming international missions planned for the United States, Japan and Vietnam.

**More information**

NTT - Next Technology Tecnotessile

NEXT TECHNOLOGY TECNOTESSILE SOCIETA' NAZIONALE DI RICERCA R. L.

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Bursa Technical University (BTU) and Smart Materials Research (SMR)
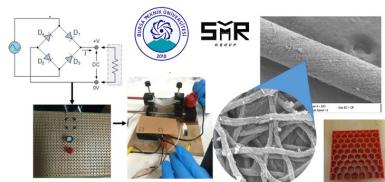
Smart projects from Smart Materials Research Group

In "Development of nanofiber based flexible and hybrid nanogenerators for wearable electronics" project (TUBITAK 219M103), hybrid nanogenerators are being developed to provide mechanical/biomechanical energy conversion using double effects. Hybrid nanogenerators with nanofibers to be produced will be a new alternative in terms of energy supply to wearable electronics, thanks to the flexibility and relatively high efficiency they provide. For this purpose, a hybrid nanofiber structure system is revealed by simultaneous production of novel polymers with triboelectric and piezoelectric effect in an electrospinning device.

In addition, some of our ongoing projects are as follows: Production of thermoplastic composites with electromagnetic shielding feature (BTU-BAP- 210D001), Development of flexible strain sensors, Development of carbon fiber –reinforced PLA honeycomb sandwich composites for unmanned aerial vehicles (TUBITAK 2209-B: 1139B411901075), Development of a nanofiber-based sensors for diabetics (TUBITAK 2209-B: 1139B411901869), Development of fire resistant jute / epoxy composites (TUBITAK 2209-B: 1919B012001280).

More information   **More information**

Two new European interclustering projects: EU-ALLIANCE and REC-N-COMP

Building on the momentum achieved by the latest years' cooperations between European clusters, 2 new interclustering projects carried out by textile clusters involving Techtera received funding by the COSME programme of the European Union: EU-ALLIANCE and REC-N-COMP.

EU-ALLIANCE, led by Techtera, aims to support the internationalisation of SMEs in the fields of technical textiles, connectivity, advanced technologies and advanced materials. The project will target the dual-use security and defence markets in 4 countries: the USA, Canada, Japan and Indonesia.

REC-N-COMP, led by NTT, will support the internationalisation of European SMEs involved in the manufacture of composites from recycled materials. The project will develop and test a common internationalisation strategy for these SMEs towards 3 specific third markets: the US, Japan and Singapore.

Both projects will be kicked off in the following months, for a duration of 2 years, and have a Budget of 500 000 €.

More information

TECHTERA

techtera

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Tyndall National Institute

Smart Wearable Systems delivering next generation wound care

Non-healing chronic wounds affect more than 5% of people globally particularly in the elderly and diabetic populations. Modern care with compression therapy involves squeezing of the limbs using elastomeric bandages to reduce swelling and aid in the recovery wounds.

Treatment currently is a manual process that requires healthcare professionals to visually inspect compression bandages to ensure the correct pressure is maintained and to frequently re-dress bandages.

Researchers from Irelands Tyndall National Institute-UCC; together with researchers from RCSI, University of Medicine and Health Sciences; multinationals "DeRoyal Global Healthcare Solutions" and "Henkel" are working together in a partnership funded by Enterprise Ireland to innovate the next generation of "Smart Textile" based systems to enable compression wound care therapy.

The consortium, supported by Bray design consultancy Design Partners, will advance the treatment of non-healing chronic wounds through their joint ability to research, develop and deliver smart woundcare technology with integrated intelligence and connectivity.

More information

Textile materials to prevent the spread of SARS-CoV2 and other pathogens

The present project is aimed at the design, production and characterization of new textile materials with antiviral properties. The planed researches have a fundamental interdisciplinary nature and a variety of approaches with the synergistic effect will be used to improve the antiviral properties of peptides with which the cotton fabric will be modified. The attachment of an influenza virus to a target cell can be blocked effectively by polyvalent inhibitors as star-shaped polymers (dendrimers) modified with peptides. Metallopeptides and metallodendrimers are expected to show enhanced antivirus activity. A combination of photo-sensitizers (fluorophores and zinc oxide nanoparticles) can prevent the spread of SARS-CoV2 and other pathogens and impart the selfcleaning properties of textiles. The fabric modification with collagen provides suitable functionalization, bioactivity, and pleasant feeling to the skin.

This research is funded by the National Science Fund, Ministry of Education and Science of Bulgaria through Project № КП-06-ДК1/11.

More information

UCTM - University of Chemical Technology and Metallurgy

context

UPT-Politechnic University of Tirana

9th International Textile Conference & 3rd International Conference on Engineering and Entrepreneurship 2021

For the 70th Aniversary of the Politechnic University of Tirana, the Faculty of Mechanical Engineering will organize the joint event: 9th International Textile Conference & 3rd International Conference on Engineering and Entrepreneurship 2021, which will be held 18 – 19 November 2021 in Tirana, Albania. This joint conference will focus on important topics and issues of European and global science in the field of Technologies, Engineering, Management and Production, Entrepreneurship, Materials, Textiles, Fashion, etc.

Topics: Energetics, Constructions & Transport, Materials, Management and Production, Textiles (clothes, footwear and leather). This will be a hybrid multi-event, combining live (On-site) and virtual (On-line) presentations and participation.

*Selected papers will be published in International Journal of Innovative Technology and Interdisciplinary Sciences (IJITIS) indexed by Publon (Clarivate Analytics), CiteFactor, Google Scholar, NSD (Norwegian Scientific Database), etc. (http://www.ijitis.org/index.php/ijitis/indexing).

[**More information**](#)