

SmartX

Innovation Hub

What happened in
2024?

European Community of Smart and High Performance Textile Innovators

In January 2024, together with Titera (SI), Tèxtils.CAT (ES), CeNTi (PT), IVGT (DE), University of Borås's Swedish School of Textiles (SE), Science Park Borås (SE), and Sistema Moda Italia (IT), the Textile ETP has launched the SmartX Innovation Hub **to help e-textile and high-performance textile companies, research organisations and brands to learn, network and collaborate.**

With online and in-person events, the Innovation Hub offers a diverse range of activities addressing a wide spectrum of high-performance textiles and wearables. This ensures that professionals from diverse backgrounds can discover relevant and valuable content tailored to their specific interests and build new projects or working groups towards upcoming legislations.

This brochure summarises the first year of the Innovation Hub, the topics targeted in our different webinars and the physical meet-ups and networking opportunities where Hub members had a chance to meet in person.

The SmartX Innovation Hub is a long-term initiative with a yearly recurring subscription, open for new joiners all year-round.

What happened in **2024?**



Exploring the world of Smart Textiles and Hitech

Road to TechTextil



Assessing the Product Life Cycle and its Sustainability

Innovative and sustainable textiles



Target fields of applications, value chain and key stakeholders

HitechFibres and Textiles in PPE

Textiles in Medical applications and their
functionalities

Automotive Industry

Meet the Expert: Christian Dalsgaard



Key Technologies and their Maturity

Smart Textiles Emerging Technologies

Integration Technologies

Smart Textile Components 1-2

Companies Producing e-textiles

Medical e-textiles

Sport Applications and well-being

Meet the Expert: Steliyan Vasilev

Meet the Expert: Miguel Ridao



Funding Opportunities

Exploring European Defence Fund
Opportunities (DG-DEFIS)



Networking events and visits

LOPEC 2024 - March, Germany

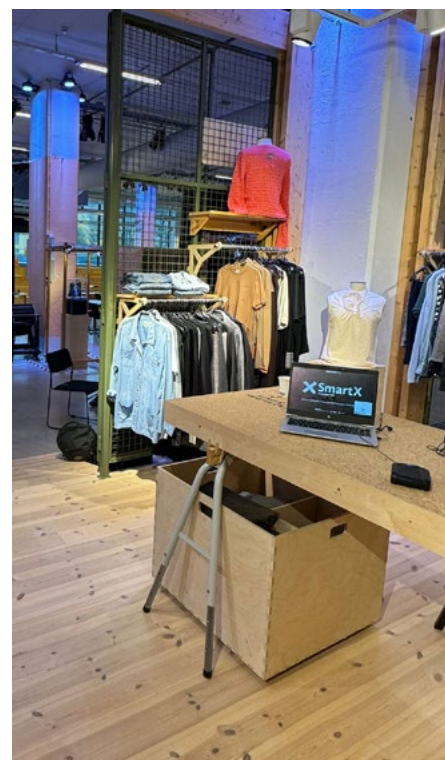
Techtextil 2024 - April, Germany

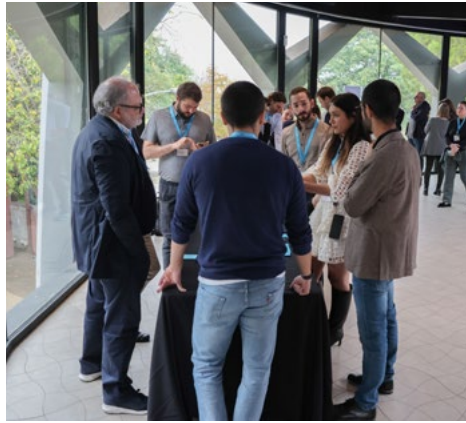
Textile ETP Annual Conference - May, Belgium

In-person Workshop - November, Spain

E-textiles Conference 2024 - November, Germany

Our networking events and visits





Our online activities

Exploring the world of Smart Textiles and Hitech

Road to TechTextil Smart Textiles

The first Road to TechTextil webinar featured three presentations: ADRESYS highlighted ANGEL React for advanced connectivity and quality control, Sefar Group introduced testing opportunities for their PresSense sensor at Techtextil, and Polisilk showcased yarns for various applications, including fluorine-free options. Titera then presented Wiretex, a project focusing on preserving traditional expertise in textile craftsmanship.



Jasmin Simon
Textile Engineer, ADRESYS



Roua Cheffi
Project Manager, SEFAR



Marc Ponsa
CEO, Polisilk



Katja Brencic
Project Manager, Titera

Road to TechTextil Hitech

The second Road to Techtextil webinar focused on high-performance textiles started with YKK previewed their innovations, COATYARN showcased TPU Evolution, and Hilaturas Arnau presented their recycled technical yarns. Co-hosts from national clusters shared updates from their countries, and CeNTI and CITEVE highlighted Techtextil's significance for Portuguese companies, showcasing the industry's commitment to sustainability and innovation.



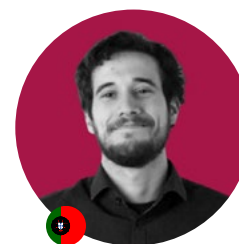
Jan Cees van Baaren
Business Developer Manager, YKK



Josep Casamada
*Project Manager,
Textils.CAT*



Joan Santamaria Arnau
CEO, Hilaturas Arnau



Kevin Rodrigues
*Smart Materials Team
Leader, CeNTI*



Claudia Finazzi
Sales & Marketing, COATYARN



Stefan Schmidt
Department Manager, IVGT



Aldo Tempesti
Head of Technical Textiles, SMI



Cristina Castro
Public Relations, CITEVE

Key Technologies and their Maturity

Smart Textiles Emerging Technologies

This webinar focused on advancements in pressure sensing technologies. Pavel Kulha demonstrated how PROFACTOR is leveraging its Inkjet PrintingHub to develop hybrid integration of electronics and sensors for smart textiles. Roua Cheffi from Sefar Group then showcased their Piezo-Resistive Pressure Sensing Fabric, a cutting-edge material renowned for its remarkable breathability, comfort, and versatility.



Roua Cheffi
Project Manager, SEFAR



Pavel Kulha
Senior Scientist, PROFACTOR

Integration Technologies

The webinar highlighted integration technologies for e-textiles and wearables. It began with 3E Smart Solutions discussing embroidery techniques for smart textile integration, focusing on reliability, scalability, mass production, and design support. Radientum then showcased flexible, wearable antenna systems, merging antenna design with textiles for applications like search and rescue, transportation, and healthcare. Then Sensing Future Technologies explored the potential of pressure sensors in rehabilitation and medical fields, addressing emerging innovations and challenges. The session concluded with the presentation of the Hacktex Project, which promotes smart textiles entrepreneurship and provides valuable training resources.



Steliyan Vasilev
*Co-Founder &
Development Engineer,
3E Solutions*



Christine Nguyen
*Director & Business
Development,
Radientum*



Luís Ferreira
*CTO & Co-Founder,
Sensing Future Technologies*



Luminita Ciobanu
*Gheorghe Asachi Technical
University of Iasi*

Key Technologies and their Maturity

Smart Textiles Components 1

The first webinar focused on advancements in smart textile components, opening with an introduction to the new 'Textiles of the Future' EU Partnership, the first EU research and innovation funding programme dedicated entirely to the textile sector. Next, SUNFIBRE shared their journey toward innovation, highlighting the integration of LED tubes and colors directly into textiles, such as safety jackets, to enhance visibility across various applications. The Swedish School of Textiles from the University of Borås presented their research on developing wearable sensors using textiles, aimed at advancing personalised healthcare solutions. The session concluded with insights from ERT Têxtil Portugal, showcasing their expertise in e-textiles and innovative lamination techniques for creating interactive surfaces, including applications in car interiors and wearables.



Markéta Králová
CEO,
SUNFIBRE



Emanuel Gunnarsson
Senior Lecturer,
University of Borås



David Macário
Innovation Manager,
ERT Têxtil Portugal

Smart Textiles Components 2

The second session focusing on smart textile components covered innovations in smart composites, yarns, and textiles. MCVE Technologie introduced their circuitry-printed composite fabrics for mass production. Bäumlín & Ernst AG highlighted their conductive yarn applications, while MDB TEXINOV showcased advanced warp-knitted and non-woven textiles for medical and industrial use. Datwyler Group concluded with information on their smart wearables featuring bio-signal electrodes for high performance and comfort.



Adrien Hobt
Chief Marketing
Officer,
MCVE Technologie



Raphael Vuillaume
Technical Manager,
MCVE Technologie



Bernd Schäfer
CEO,
Bäumlín & Ernst ag



Bruno Mougin
R&D Director,
MDB Texinov



Mattia Lucchini
Head of Wearable
Sensors Development,
Datwyler Group

Key Technologies and their Maturity

Companies producing e-textiles

This session provided insights into the latest innovations in the e-textiles sector. Dr. Sohail Sarang presented the final results of the STRENTEx Project, Florian Miguët discussed smart textiles in challenging industries, Nishadi Perera focused on sustainable design for e-textiles, and Miguel Ridao explored the field of stretchable electronics and AI. The event ended with a discussion on the differences between the US and EU markets.



Sohail Sarang
*Researcher,
Faculty of Technical
Sciences, University of
Novi Sad*



Florian Miguët
*CEO & Co-founder,
Clim8*



Miguel Ridao
CEO, Sensing Tex



Nishadi Perera
*Operations Engineer,
Bohr Limited*

Medical E-Textiles

The webinar focusing on medical e-textiles opened with a live presentation by Science Park Borås, showcasing four prototypes. These included a versatile haptic technology system, a metal-based arterial dilation device co-developed with healthcare providers, innovative muscle stimulation technology, and an ECG T-shirt designed for enhanced connectivity. upLYFT highlighted the potential of transforming fabrics into functional systems, illustrating how advanced textiles can augment human capabilities and redefine wearables. Haltian then showcased the collaboration between IoT, electronics, and the textile industry, emphasising the transformative potential of cross-industry partnerships in driving smart textile innovations.



Pasi Penttinen
*VP, IoT Business Line
Haltian*



Aalok Rai
*Founder & CEO,
upLYFT*



Nils-Krister Persson
*Senior Lecturer & Researcher,
Science Park Borås*

Key Technologies and their Maturity

Sport Applications and well-being

This webinar it was focused on Sport Application for smart textiles. KARL MAYER and Salzburg Research presented a warp-knitted breathing sensor for monitoring respiratory patterns. Then, Osentec introduced a smart aid to monitor foot temperature and prevent complications from diabetic foot syndrome. Finally SWÖM, joined from the Ispo Munich Fair to present award-winning smart swimwear that inflates automatically to prevent drowning.



Franziska Guth
*Product Developer Textile
Technology,
KARL MAYER*



Severin Bernhart
*Data Engineer,
Salzburg Research*



Lars Eschenburg
*Co-founder and Managing
Director, osentec*



Niclas Ekdahl
CEO, SWÖM

Meet the Expert: Steliyan Vasilev

In this edition of the Meet the Expert podcast, SmartX Innovation Hub Manager Judith Bosch engages in a conversation with Steliyan Vasilev, Co-Founder and Development Engineer at 3E Smart Solutions.

Steliyan shares valuable insights into their groundbreaking work on integrating electronics and textiles using embroidery technology and conductive threads. He highlights the critical role of documentation, training, and sustainability while exploring the exciting possibilities of wearable technology. The discussion also delves into innovative approaches to addressing high resistivity, digitizing embroidery designs, and improving the durability and washability of conductive textiles.



Steliyan Vasilev
*Co-Founder & Development
Engineer, 3E Solutions*

Meet the Expert: Miguel Ridao

In this edition of the 'Meet the Expert' podcast, SmartX Innovation Hub Manager Judith Bosch interviews Miguel Ridao, Co-Founder & CEO at Sensing Tex. Miguel share with Judith insights into the challenges and opportunities in the smart textiles industry, including the development of innovative products, the importance of end-to-end solutions, adapting business models during the pandemic, and navigating data protection and regulatory complexities.



Miguel Ridao
CEO, Sensing Tex

Target fields of applications, value chain and key stakeholders

HitechFibres and Textiles in PPE

This webinar focused on PPE end-markets and flame retardant materials. Judith Bosch opened the session by highlighting key activities and topics from Techtextil. The session continued with four keynote presentations: Technitiger discussed client-focused fabrics for thermal protection in PPE; LunaMicro AB presented their moisture-wicking fabric for thermal comfort and cooling; CeNTI shared their R&D on technological fibres and textiles, including projects like Biomat and Impatex; and Kufner provided insights into interlining technicalities for automotive and medical applications.



Bruno Peliteiro
*R&D in Functional Fibres,
CeNTI*



Anna Rovira
*Operations Manager,
Technitiger, S.L*



Jenny Borg
*Textile Engineer,
LunaMicro AB*



Juliana Oliveira
*Scientific Researcher,
CeNTI*



Steffen Kurz
*Global Sales Medical
Textiles, Kufner*

Textiles in Medical applications and their functionalities

This session, focusing on textiles in medical applications and their functionalities, was moderated by Regina Malgueiro from CeNTI. The first keynote speaker, Pedro Magalhães from Tintex Textiles, shared his company's journey in developing innovative textile coatings and laminated fabrics specifically for the healthcare sector. Prof. Gaetano Guerra from the University of Salerno then presented his research on active molecules embedded within nanocavity polymers.



Pedro Magalhães
*Head of Innovation,
Tintex Textiles*



Gaetano Guerra
*Professor,
University of Salerno*



Regina Malgueiro
*Biomaterials team leader and
scientific researchers, CeNTI*

Target fields of applications, value chain and key stakeholders

Automotive Industry

This session focusing on the automotive industry was moderated by Stefan Schmidt. The first presentation explored the future of coated textiles, discussing how these materials are evolving to meet the challenges of a rapidly changing world. An application of high-performance fibers in Formula Student was then highlighted, showcasing their role in racing and automotive innovation. The session then covered a diverse portfolio of textile products, demonstrating their global use and impact. Finally, the integration of smart textiles and sustainable materials in the automotive sector was discussed, emphasising how they are shaping the future of mobility and driving sustainability in the industry.



Stefan Schmidt
Department Manager
Technical Textiles,
IVGT e.V.



Bettina Gereth
Fundraising & HR,
NUVI



Frederic Nagel
Ecurie Aix - Formula
Student Team
RWTH Aachen e.V.



**Silvia Giovanna
Avataneo**
Global Innovation
Public Funding,
Stellantis



Martin Dinter
Global Sales Medical
Textiles, Kufner

Meet the Expert: Christian Dalsgaard

In this edition of the Meet the Expert podcast, SmartX Innovation Hub Manager Judith Bosch discussed with Christian Dalsgaard, Chair of the Smart Textile Alliance and Senior Consultant at the Danish Technological Institute. Together, they explore the dynamic world of smart textiles, delving into topics such as identifying potential markets, showcasing impressive field demonstrators, and examining the current state of the art. The conversation highlights the challenges and opportunities surrounding the adoption of e-textiles, offering valuable insights into this rapidly evolving field.



Christian Dalsgaard
Senior Consultant,
Smart Textile Alliance
and Danish Technological
Institute

Funding opportunities

Exploring European Defence Fund Opportunities (DG-DEFIS)

In a webinar focusing on opportunities within the European Defence Fund (EDF), Paul Kruis from the European Commission's Directorate-General for Defence Industry and Space (DG-DEFIS) delivered an insightful keynote address providing a comprehensive overview of the EDF, highlighting its role as the EU's flagship research and development program for the defense sector.

Paul Kruis detailed the core principles driving its implementation, outlined its key focus areas, and shared information about upcoming funding opportunities.



Paul Kruis
*Policy Officer, European
Commission (DG DEFIS)*



Assessing the **Product Life Cycle** and its Sustainability

Innovative and sustainable textiles

This webinar explored the blend of high-tech innovation and sustainability starting with Human Material Loop, discussing the use of hair waste for advanced technical applications, showcasing its potential as a sustainable resource. DuPont followed with a presentation on their technology, which sets a new standard for high-performance protection in extreme environments, from Formula 1 fuel bladders to spacecraft shielding. CITEVE wrapped up the presentations with the Waste2BioComp project, which aims to transform organic waste into sustainable bio-based materials, offering scalable, eco-friendly alternatives to fossil-based products.



Helena Vilaça
Researcher, CITEVE



Zsafia Kollar
*Founder,
Human Material Loop*



Lukas Whitcomb
*Market Development Leader,
DuPont*

The Organisers

The European Technology Platform for the Future of Textiles and Clothing, Textile ETP in short, is the largest network for textile research and innovation in Europe. It acts as a think tank, strategic connector and EU funding access facilitator for textile industry, research, education and cluster organisations.

Follow the Innovation
Hub on LinkedIn



SmartX Innovation Hub

The Co-Hosts



TITERA innovative technologies, Slovenia
www.titera.tech



Tèxtils.CAT, Spain
www.textils.cat



CeNTI - Centre for Nanotechnology and Smart Materials, Portugal
www.centi.pt



Industrieverband Veredlung-Garne-Gewebe-Technische Textilien (IVGT), Germany
www.ivgt.de



University of Borås's Swedish School of Textiles, Sweden
www.hb.se/en/the-swedish-school-of-textiles



Science Park Borås, Sweden
www.scienceparkboras.se



Sistema Moda Italia (SMI), Italy
www.sistemamodaitalia.com

The Team



Lutz Walter
Textile ETP



Judith Bosch
Textile ETP



Matteo Mainiero
Textile ETP



Daniela Zavec
Director at Titera



Ariadna Detrell
Cluster Manager
at Tèxtils.CAT



Josep Casamada Ribot
Project Manager
at Tèxtils.CAT



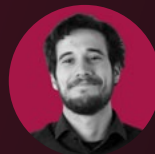
Stefan Schimdt
Technical Textiles
Department
Manager at IVGT



Mauro Sempellegri
Head of the
Research and
Innovation at SMI



Aldo Tempesti
Head of Technical
Textiles section
TexClubTec at SMI



Kevin Rodrigues
Smart Materials
Team Leader
at CeNTI



Nelson Duares
R&D Manager
Functional Fibres
at CeNTI



Caterina Dias Costa
Senior Researcher
at CeNTI



Susanne Nejderås
Textile Strategist
at Science Park
Borås & Swedish
School of Textiles

**European Community of Smart and
High Performance Textile Innovators**