
Call: HORIZON-WIDERA-2021-ACCESS-03/Twinning

Project SustDesignTex (GA No. 101079009), title: „Sustainable Industrial Design of Textile Structures for Composites” funded by the European Union

Deliverable Report

SUSTainable industrial DESIGN of TEXtile structures for composites (SustDesignTex)

Grant Agreement number: 101079009

Project acronym: SustDesignTex

Project title: Sustainable Industrial Design of Textile Structures for Composites

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Author(s):	<i>Marcin Barburski, Tsegaye Lemmi, & Agata Poniecka</i>
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Actual Submission:	<i>30/11/2023</i>
Abstract:	<p><i>The main objective of the deliverable was to maximize the visibility of the Lodz University of Technology's research activities and SustDesignTex work activities by organizing a conference. The InnovaTex2023 conference took place from 22nd to 24th November 2023 in Lodz, Poland. Although the conference was initially planned at a national level in the SustDesignTex grant agreement, after in-depth discussion with consortium partners and the project officer, the conference was organized at an international level to attract participants from different countries and institutions. The conference was organized in collaboration with the GreenTex project, co-funded by the EU and Łukasiewicz Research Network- Lodz Institute of Technology, Poland, under the theme of "Innovative aspects of the textile industry." In total, 117 participants have attended the conference.</i></p>

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1. Introduction

InnovaTex2023 conference was organized at an international level from 22nd to 24th November 2023 in Lodz, Poland, under the theme of "Innovative aspects of the textile industry." The Lodz University of Technology hosted the conference at the university's Sports and Education Centre "Sport Bay" facility. The InnovaTex2023 conference aimed to foster networking, enhance the exploitation of the SustDesignTex project results, and involve new stakeholders in the project follow-up activities through the dissemination of project results.

The organization of the InnovaTex conference was previously planned in a SustDesignTex Grant Agreement No. 101079009 to be organized at a national level in Polish. However, after discussion with the consortium members and consulting the project officer, the conference was organized at the international level to enable researchers and various industries from different countries and project partners to participate in the conference. To do so, SustDesignTex proposed organizing the conference in a joint way with a GreenTex project co-funded by the European Union under Erasmus plus GA no. 2021-1-PL01-KA220-HED-000032201(just like SustDesignTex, Lodz University of Technology is the coordinator of the GreenTex project), and Łukasiewicz Research Network - Lodz Institute of Technology. Thanks to the collaboration, we organized the international conference in English, attracted various participants to participate in the conference, and presented insights related to textiles and textile-reinforced composites from the aspect of sustainability.



Figure 1. InnovaTex2023 conference.

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Project SustDesignTex (GA No. 101079009), title: „Sustainable Industrial Design of Textile Structures for Composites” funded by the European Union

1.1 Registration of Participants for the InnovaTex2023 conference

The InnovaTex2023 conference website (<https://www.innovatex2023.eu/>) was launched and opened for registration to participants on 17th April 2023, and the registration and submission of conference articles by the participants were closed on 31st August 2023. During the registration period, a hundred and seventeen participants from various universities, Small and Medium Enterprises (SMEs), and companies were registered for the conference. On 30th September 2023, the conference committee sent the acceptance letter to all registered participants.

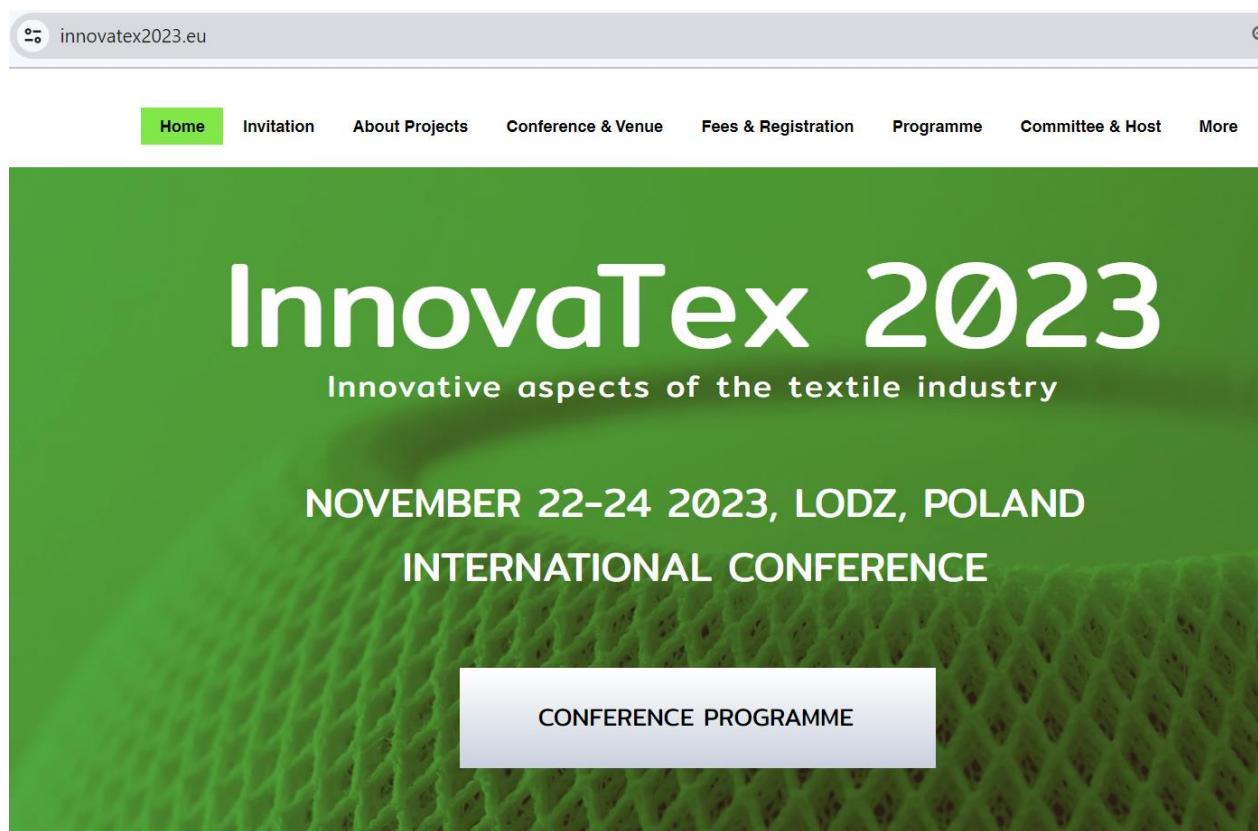


Figure 2. InnovaTex2023 website front page.

1.2 InnovaTex2023 conference events

The conference event was officially opened on 22nd November 2023 by Professor Paweł Strumiłło, the Vice-Rector for Development of Lodz University of Technology (TUL), Professor Katarzyna Grabowska, Dean of Faculty of Material Technologies and Textile Design of TUL, Associate Professor Marcin Barburski, coordinator of SustDesignTex project, Associate Professor Monika Malinowska-Olszowy and Dr. Anna Laska-Leśniewicz, coordinators of the GreenTex project, Professor Łukasz Kaczmarek, director of the

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discipline of Materials Engineering at TUL, and Dr. Maciej Boguń, deputy scientific director on behalf of Dr. Radosław Dziuba, the director of Łukasiewicz Research Network – Lodz Institute of Technology. In their opening speeches, the importance of collaboration to tackle the sustainability issue of the textile industry has been underlined by all the speakers. In addition, the project coordinator highlighted the SustDesignTex project's objective to the conference participants during his welcome speech.



Figure 3. InnovaTex2023 conference welcome opening session.

On the first day of the conference, right after the welcome speech, keynote speakers from Lithuania, Belgium, and Sweden gave a presentation entitled "Sustainability and weave estimation," "XCT imaging and analysis of textiles and textile composites," and "Recent advances in natural fiber composites for use in structural applications – challenges and opportunities," respectively. Keynote speakers highlighted Innovative aspects and sustainability challenges in the textile industry.

Following the keynote speakers' presentations, two parallel sessions were organized, allowing esteemed and young researchers from various countries to present their research works. Researchers shared different findings from their research works related to textiles and textile-reinforced composites based on the schedule posted on the conference website.

(https://www.innovatex2023.eu/_files/ugd/9eb530_318b232fa36f45c9bc2ae2568e256163.pdf)

The second day of the conference also started with keynote speakers from Germany and Poland presenting research works entitled "Unified material parameters for drape simulation: progress and challenges" and "Hybrid composite material for tissue generation," respectively. Following the keynote speakers' presentations, researchers presented their findings in various areas. In addition to

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the research work presentations, an exhibition entitled "GREEN EXHIBITION" focused on Sustainable materials innovations and design for circular textiles was organized on both days. This exhibition displayed various works conducted by the TUL researchers at the University of Boras in Sweden during the short-term staff exchange in the SustDesignTex work package two.



Figure 4. Green Exhibition at InnovaTex2023.

1.3 InnovaTex2023 conference papers and posters

The conference papers and posters submitted by the participants were peer-reviewed by the InnovaTex2023 conference's scientific committee before acceptance. The conference papers were compiled together, presented in an electronic book, and uploaded to the conference's website page. Access to the conference book is available to the public free of charge under the link below.

(https://www.innovatex2023.eu/_files/ugd/9eb530_682ba8a409e3476fb667d0b970d76719.pdf).

The conference posters are also accessible on the conference website free of charge under the below link (<https://www.innovatex2023.eu/postergallery>).

Call: HORIZON-WIDERA-2021-ACCESS-03/Twinning

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1.4 SustDesignTex consortium partners meeting - progress discussions

On the second day of the conference, SustDesignTex consortium partners had a separate meeting where we evaluated the project's progress in the last year and discussed future works. Besides discussing how to realize the work packages, the consortium partners also discussed the possible ways of sustaining and strengthening the collaboration between partner institutions after the SustDesignTex project completion.



Figure 5. SustDesignTex project progress discussion meeting.

2. Conclusion

The InnovaTex2023 conference brought researchers and industry experts to share and discuss various research works and insights on the sustainability of the textile industry. Organizing the InnovaTex2023 conference at the international level in a joint form provided an opportunity to network with researchers, industry experts, and other stakeholders in the field of textiles in a wider range. During the conference, a separate session called "Project Mixer" was organized on the second day. This session enabled participants to discuss possibilities of collaboration in a new project idea with various institutions, joint grant proposal writings, and other opportunities to collaborate and tackle the sustainability issue of textile products and processes. The joint organization of the

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conference with the GreenTex project and Łukasiewicz Research Network - Lodz Institute of Technology enabled us to properly use the resources while providing a high-quality conference session for the bigger audiences. In general, the conference provided many added values, including but not limited to networking opportunities, discussion of diverse perspectives in the textile field, and increased visibility of our project and universities.