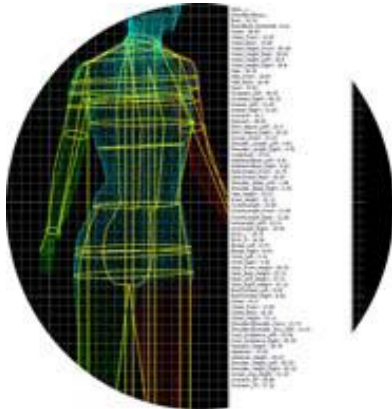





POLISH NATIONAL AGENCY
FOR ACADEMIC EXCHANGE



STER
PROGRAMME

<p>name of the unit:</p> <p>DIVISION OF CLOTHING & TEXTRONICS</p> <p>Institute of Textile Architecture, Lodz University of Technology</p>		<p>symbol:</p> <p>I-41</p> <p>http://www.style.p.lodz.pl</p>
<p>head of the unit:</p> <p>Prof. dr hab. inż. Iwona Frydrych</p>	<p>potential promoters:</p> <p>Prof. dr hab. inż. Iwona Frydrych</p>	<p>contact person:</p> <p>Prof. Iwona Frydrych, Ph.D., D.Sc.</p> <p>tel: 42-631-33-16</p> <p>iwona.frydrych@p.lodz.pl</p>
<p>scope of activities:</p> <p>The main areas of interest and research directions are the following problems falling within the general concept of Material Engineering of Clothing:</p> <ul style="list-style-type: none"> - virtual clothing designing with checking the fit to the human silhouette with the Lectra 3D Fit use, - investigations of the fabric properties, such like drape, bending rigidity, share rigidity, elongation in the aspect od their formability, - research of human being comfort in clothing (sensorical, physiological, psychological), - surface modifications of basalt fabrics for application in the protective clothing, - welding techniques and adhesive inserts. 		<p>graphic material</p> 
<p>present activities:</p> <p>We carry out the thermal comfort measurements using the thermal mannikin. We made the human being silhouette and on their basis we design the virtual patterns of clothing elements, using which we can sew (in the virtual or traditional way) the clothing , which fits to the given body shape.</p> <p>On the basis of Lindberg's relationship we determine the fabric formability, on the basis of which we can predict good or bade appearance of created clothing.</p> <p>We assess the thermal resistance of basalt fabrics (raw or coated) in the aspect of their application in the protective clothing designated for work in the high temperature conditions.</p>		
<p>Future activities:</p> <p>Looking for relationships between mechanical fabric properties, and properties of clothing or the quality of making up processes.</p>		



POLISH NATIONAL AGENCY
FOR ACADEMIC EXCHANGE



STER
PROGRAMME

Publications/patents, awards, projects:

- 1) Miśkiewicz P., Tokarska M., Frydrych I., Makówka M., Evaluation of thermal properties of certain flame retardant fabrics modified with a magnetron sputtering method, Autex Research Journal, No.4/2021.
- 2) Miśkiewicz P., Tokarska M., Frydrych I., Makówka M., Assessment of the coating quality obtained on flame-retardant fabrics by a magnetron sputtering method, Materials, 2021, Vol. 14(6).
- 3) Miśkiewicz P., Frydrych I. Tokarska M., Pawlak W., Effect of metallization of basalt fabric on its surface resistivity, Fibres & Textiles in Eastern Europe, 2021, 29, 1(145), pp. 41-46.
- 4) Balach M., Lesiakowska-Jabłońska M., Frydrych I., Anthropometry and size groups in the clothing industry; Autex Research Journal, ARJ 2020, Vol.20 No.1, 56-62 DOI: 10.2478/aut-2019-0001
- 5) Balach M., Cichocka I., Frydrych I., Kinsella M., Initial Investigation Into Real 3D Body Scanning Versus Avatars for the Virtual Fitting of Garments, ARJ 2020, Vol.20 No.3, 128-132
- 6) Studzińska A, Frydrych I. Transformable Clothing in Children's Fashion, Fibres & Textiles in Eastern Europe 2020; 28, 2(140): 90-95. DOI: 10.5604/01.3001.0013.7321

Utility patterns:

- 1) Studzińska Anna, Iwona Frydrych, Komplet przekształcalnej odzieży dziecięcej, RWU.071774, 25.01.2021
- 2) Frydrych Iwona, Cichocka Agnieszka, Stempień Zbigniew, Odzież ochronna, RWU.071876, 4.06.2021

European Project:

European Digital Readiness Strategy for Clothing Studies, E-Dress, Project number 2021-1-DE01-KA220-HED-000023124, Kick off Meeting, March, 16, 2021, do 31.12.2024

Keywords:

3D scanning of the human being silhouette, patterns of clothing elements, Lectra system, virtual fitting, formability, drape, bending rigidity, fabric handle, basalt fabrics

List of internship proposal in this research team:

Designing and creating the clothing by sewing or welding techniques