

# The International Young Researchers Conference “INDUSTRIAL ENGINEERING 2021”

**Data:** May 13, 2021, Kaunas, Lithuania

**Place:** Online. Join Zoom Meeting

<https://liedm.zoom.us/j/99007078652?pwd=TWVYLzh5SkRaaU93bjdKUnRiOGtQQT09>

**Time:** 10:00 AM (UTC+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius

## PROGRAMME

10:00 – 10:05	<b>Words of Welcome</b> <i>Andrius Vilkauskas, Dean of Mechanical Engineering and Design Faculty</i>
PLENARY SESSION	
10:05 – 10:20	<b>Novel Multifunctional Polymer Nanocomposites with Outstanding Mechanical and Electrical Properties</b> <i>Gediminas Monastyreckis, Daiva Zeleniakienė (KTU)</i>
10:20 – 10:35	<b>DIG-MAN: Integration of Digital Tools into Product Development and Manufacturing Education</b> <i>Antanas Čiuplys, Regita Bendikienė, Ramūnas Česnavičius, Darius Eidukynas, Kazimieras Juzėnas (KTU)</i>
10:35 – 10:50	<b>FESTO – a Step Forward into Digitalisation</b> <i>Mantas Butkus (FESTO)</i>
10:50 – 11:05	<b>Basic Steps from Conventional Laser Welding to 3D Printing</b> <i>Algirdas Rukšėnas (Oriental Technology Solutions)</i>
11:05 – 11:15	<b>DISCUSSIONS</b>
11:15 – 11:30	<b>BREAK</b>

STUDENTS SESSION. STARTS AT 11:30 AM

1.	<b>The Influence of Clay Chemical Composition on Freeze and Thaw Properties of Clay Paving Bricks</b> <i>Rolandas Avizovas, Saulius Baskutis (KTU)</i>
2.	<b>Plant Based Biodegradable Composites for Sustainable Packaging</b> <i>Lina Stabingytė, Laura Gegeckienė (KTU)</i>
3.	<b>Impact of Post-Weld Heat Treatment on the Properties of TIG Welded Joints</b> <i>Manojkumar Ravi, Antanas Čiuplys (KTU)</i>
4.	<b>Conversion of Sunflower Seed Hulls into Valuable Energy Products and Their Analysis</b> <i>Ieva Kiminaitė (KTU), Nerijus Striūgas(LEI)</i>
5.	<b>Extended Producer Responsibility (ERP) as a tool to foster textile circularity in EU</b> <i>John Isaac Alexander Solomon, Inga Gurauskienė (KTU)</i>
6.	<b>Experimental Investigation of the effects of Star-Shaped Additive in Carbon Fibre Reinforced Polymer Composites</b> <i>Rochele Pinto, Prasad Shimpi, Daiva Zeleniakienė (KTU), Vladimír Špaček (SYNPO a.s.)</i>
7.	<b>Structural Insulated Panels for Sustainable Buildings: Literature Review</b> <i>Alexandra Alonso Soto, Daina Kliaugaitė (KTU)</i>

8.	Research on Mechanical Processing Tool Wear <i>Johney Bashith Jawahar Deen Ahamed, Kazimieras Juzėnas (KTU)</i>
9.	Waste Heat Recovery in Cogeneration Plant: Absorption or Compression Heat Pump? <i>Gvidas Laugalis, Algimantas Balėius (KTU)</i>
10.	Investigations of NOx and SO2 Emission Reduction Measures in Biofuel Boilers <i>Adolfas Janėauskas, Kęstutis Buineviėius (KTU), Paulius Alekna (JCC "Enerstena")</i>
11.	Analysis of Pyrolysis of the High Density Polyethylene Packaging Waste from Plant Protection Products <i>Justina Blinstrubienė, Jolita Kruopienė (KTU), Audronė Žukauskaitė (KU)</i>
12.	Complex Calculations of an Outside Mobile Frames for the Shipyard in Klaipėda Seaport <i>Tadas Astrauskas (KU)</i>
<b>13:30 – 14:00</b>	<b>BREAK</b>
13.	Assessment of Film Coater Application for Epoxy Resin Coating on Carbon Steel <i>Akil Perunchithiran Muthulakshmi, Vaidas Bivainis (KTU)</i>
14.	Numerical Investigation of Pin-fin Arrays Hydraulic Performance in Different Arrangements <i>Justina Jaseliūnaitė (LEI)</i>
15.	Progressive Strip Layout Modernization for Increased Material Utilization <i>Simonas Leonaviėius, Lina Kavaliauskienė (KTU)</i>
16.	Effect of Rubber Particles on the Mechanical Properties of Carbon Fibre Composites <i>Thirumuga Karthi Nagarajan, Shimpi Prasad Pravin, Daiva Zeleniakienė (KTU), Vladimír Špaček (SYNPO a.s.)</i>
17.	Industry 4.0: The Main Target of Future Manufacturing <i>Jorge García Obón, Regita Bendikienė (KTU)</i>
18.	Development of a Novel Compression Forearm Sleeves with Improved Comfort Properties <i>Urwa Mahmood, Rashid Masood, Sharjeel Abid, Abdul Zahir, Ahsan Nazir, Tanveer Hussain (Pakistan)</i>
19.	Calculation of a Reinforced Concrete Cross Section by the ZI Method, Comparison with STR and FEM <i>Nedas Stakutis (KU)</i>
20.	Adaptive Control of Special Purpose Robot <i>Dovydas Brazys, Danielius Adomaitis (Kauno kolegija)</i>
21.	The UV stability of thermochromic microcapsules for smart polymer composite structures <i>Olga Bulderberga, Andrey Aniskevich (University of Latvia)</i>
22.	Topology Optimization and Numerical Prediction of the mechanical Properties of a Support Bracket <i>Isaac Samuel Michael Solomon, Gintautas Dundulis (KTU), Marvin Roshan Crompton Ramesh (India)</i>
23.	Simulation and Analysis of Garment Production on the Basis of FlexSim Software <i>Gabrielė Garbaliuskienė, Eugenija Strazdienė (Vilniaus kolegija)</i>
24.	Assessment of Ultrasonic Testing for Flaw Characterization in Jet Turbine Blade with Complex Geometry <i>Gawher Ahmad Bhat, Elena Jasiūnienė (KTU)</i>
<b>16:00 – 16:15</b>	<b>BREAK</b>

POSTER PRESENTATION. STARTS AT 16:15

1.	Marble Cast Stone Products to Form Surfaces for Specific Applications <i>Paulius Nagys, Regita Bendikienė (KTU)</i>
2.	Analysis of Conductive Fabric Bonding Technology and Evaluation of Package Properties <i>Modesta Mitkutė, Jurgita Domskienė (KTU)</i>
3.	The Influence of Fibre Composition on the Dimensional Stability for Weft Knitted Fabrics <i>Urtė Gerulskytė, Ginta Laureckienė (KTU)</i>
4.	Investigation of compressive load impact on 3D printed design elements of footwear <i>Raimonda Cvilikaitė, Edita Gelažienė, Daiva Milašienė (KTU)</i>
5.	Effect of Compatibilizer on the Structure and Properties of Polypropylene / Nanoclay Composites <i>Justė Bukauskytė, Hemanth Raju Sundar, Arūnas Baltušnikas, Virginija Jankauskaitė (KTU), Irena Lukošūtė (LEI)</i>
6.	Influence of Digital Printing on Air Permeability of Knitted Fabrics <i>Ugnė Bukauskaitė, Ginta Laureckienė (KTU)</i>
7.	Investigation of the structure and properties of polypropylene and wheat waste composites <i>Vilija Ročytė, Vinodkumar Madeswaran, Virginija Jankauskaitė (KTU)</i>
8.	Investigation of Shrinkage and Air Permeability of Woollen Fabrics <i>Severina Gegužytė, Eglė Kumpikaitė (KTU)</i>
9.	Investigation of Flexural Properties of Hybrid Polymer Nanocomposites <i>Shriram Vaniyambadi Ravikumar, Prasad Shimpi, Daiva Zeleniakienė (KTU)</i>
10.	Personal and Collective Safety Measures Effect on People and Its Utilization Study <i>Simona Skučaitė, Antanas Čiuplys (KTU)</i>
11.	Wardrobe Study: Consumer Beauvoir in Buying and Disposing of Clothes - Opportunities for Textile and Clothing Industry <i>Monika Norkutė, Asta Švarcaitė, Vaida Jonaitienė (KTU)</i>
12.	Investigation of the Peculiarity of Creation of Design 3D Printed Elements for Footwear <i>Greta Šilėnaitė, Raimonda Cvilikaitė, Edita Gelažienė, Daiva Milašienė (KTU)</i>
13.	Influence of Digital Printing on End-use Properties of Linen Fabrics <i>Armida Valiulytė, Sigitas Stanys (KTU)</i>
14.	Reduction of Ultraviolet Transmission on the Skin through Different Knitting Stitch Combination in Interlock Structures <i>Norina Asfand (KTU), Sikander Abbas Basra (Pakistan)</i>
15.	Innovations of Expanded Polystyrene Products by Implementing the Principles of Circular Economy <i>Jurgita Cvetkovienė (KTU)</i>
16.	Feasibility and Environmental Impact Assessment of Technological Use of Biodegradable Flexible Packaging in the Production to Replace the Usage of Conventional Plastics <i>Zita Markevičiūtė, Arlanda Rilskytė (KTU)</i>
17:00	<b>END OF CONFERENCE</b>