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PROGRAM

«Tools for creating digital twins, programming controllers for Industry 4.0»

Boosting the role of HEIs in the industrial transformation towards the Industry 4.0 paradigm in Georgia and Ukraine – HEIn4 609939-EPP-1-2019-1-BE-EPPKA2-CBHE-JP

Registration form:

https://docs.google.com/forms/d/1PUDm6EjBGoivEAWtzG6JJA_OsZU9chKpSENIB4G3qYE/edit

November 12 — 18, 2023, Ukrainian State University of Science and Technology, Dnipro, Ukraine

Time	Event	Venue	Notes
November 12 – Sunday			
	Arrival in Dnipro		
November 13 – Monday			
The first session 10:00 – 12:30			
10:15-10:30	Registration of participants	Gagarina ave, 4, IIBT USUST, conference hall	
10:30 – 10:45	Welcome session		Yurii Proidak, Vice-rector USUST
10:45-13:30	<ol style="list-style-type: none"> New design solutions for identifying and eliminating unproductive losses of compressed air from pipelines, analysis of typical compressed air supply systems from the compressor to the equipment, and determination of their operating modes based on air pressure indicators and their consumption. Possible measures to reduce compressed air consumption in pneumatic equipment systems. Implementation of new constructive solutions for extracting condensate from the air. Analysis and determination of the resistance of the air distribution system. Recommendations for reducing energy expenditure to overcome resistance. Main quality indicators of compressed air: characteristics of compressed air by the requirements of the ISO system TORO for pneumatic circuits: modern means of technical diagnostics for finding, determining, and evaluating the degree of physical and moral wear of pneumatic elements; visualization schemes of 		Yevhen Ryzhenko, Festo
12:00-12:30	Coffee break		
The second session 13:30 – 16:30			

14:15-15:30	7. Technological novelties of pneumatic drives and their functionality 8. Digital systems for adjusting distributors 9. Technological novelties of implementing the speed of pneumatic working bodies 10. Pneumoislants, evolutionary changes in functional capabilities 11. Structural changes in air preparation systems	Gagarina ave, 4, IIBT USUST, conference hall	Yevhen Ryzhenko, Festo
15:45 -17:00	12. New working bodies with servomotors 13. Features of use and functionality of configured and self-learning sensors 14. Application of the IO-Link network for the implementation of an automated control system		Yevhen Ryzhenko, Festo
15:30-15:45	Coffee break		
November 14 – Tuesday			
The first session 10:00 – 12:30			
10:00-11:00	A brief overview of available solutions for creating digital doubles for Industry 4.0. CIROS Studio capabilities for 3D production simulation CIROS Studio tools for planning and deploying new and upgrading existing equipment.	Gagarina ave, 4, IIBT USUST, conference hall	Mykola Yakimchyk, Festo
11:30-12:30	Methods of implementing technological processes in CIROS Studio virtual reality in real-time. Overview of libraries of production equipment models in CIROS Studio software for 3D simulation of production work.		Mykola Yakimchyk, Festo
11:00-11:30	Coffee break		
The second session 13:30 – 16:30			
13:30-16:30	The method of creating a digital duplicate of the production process of the equipment using CIROS Studio libraries Practical classes in the CIROS Studio software on creating a 3D simulation of the production process for Industry 4.0	Gagarina ave, 4, IIBT USUST, conference hall	Mykola Yakimchyk, Festo
14:45-15:15	Coffee break		
November 15 – Wednesday			
The first session 10:00 – 12:30			
10:00-12:30	Programming of controllers Siemens SIMATIC S7-1200/S7-1500	Gagarina ave, 4, IIBT USUST, conference hall	Yevhen Ryzhenko, Festo
11:00-11:30	Coffee break		
The second session 13:30 – 16:30			
13:30-16:30	Lean production in Industry 4.0	Gagarina ave, 4, IIBT USUST, conference hall	Yevhen Ryzhenko, Festo
14:45-15:15	Coffee break		

November 16 – Thursday			
The first session 10:00 – 12:30			
10:00 – 12:30	Challenges of modern world concepts development of industry in the context of Industry 4.0 and Sustainable Development	Gagarina ave, 4, IIBT USUST, conference hall	Volodymyr Ansimov, USUST
11:00 – 11:30	Coffee break		
The second session 13:30 – 16:30			
13:30 – 16:30	Innovations and new technologies in mechanical engineering. Modern equipment, tools, and technologies. Digital doubles in mechanical engineering.	Gagarina ave, 4, IIBT USUST, conference hall	Volodymyr Ansimov, USUST
14:45-15:15	Coffee break		
November 17 – Friday			
The first session 10:00 – 12:30			
10:00 – 12:30	Engineering education in the context of Industry 4.0 The role and place of the laboratory "Virtual Machine Enterprise" of the Department of Mechanical Engineering Technology for the acquisition of certain competencies and skills in students	Gagarina ave, 4, IIBT USUST, conference hall	Svitlana Negrub, USUST
11:00 – 11:30	Coffee break		
The second session 13:30 – 16:30			
13:30 – 16:30	Interaction of the Department of Mechanical Engineering Technology with industrial partners of the Dnipro region. Work status. Examples of cooperation. New promising directions of interaction and strengthening of cooperation.	Gagarina ave, 4, IIBT USUST, conference hall	Svitlana Negrub, USUST
14:45-15:15	Coffee break		
November 18 – Saturday			
Day of departure			