

Biosystems Engineering 2026, SCHEDULE

Day	Time				
Wednesday 06.05.2026	9.00 – 9.45	Registration and morning coffee (Estonian University of Life Sciences, Tehnikamaja, 56 Kreutzwaldi Str., Tartu) Room A202			
	9.45 – 10.00	OPENING: (Tehnikamaja, room A204) Opening remarks and welcome: Director of Institute of Forestry and Engineering Prof. Marek Metslaid			
		PLENARY SESSION (Tehnikamaja, room A204):			
	10.00 – 10.30	How science can help us produce more biogas at lowest social costs – Dr. Biljana Kulisic , European Commission Directorate, Croatia			
	10.30 – 11.00	Rethinking Working Conditions and Social Sustainability in European Family Farming – Dr. David Meredith , Teagasc, Ireland			
	11.00 – 11.15	Welcome address from three BOVA rectors			
	11.15 – 11.45	AI and robotics in the service of crop health – Prof. Spyros Fontas , Agricultural University of Athens, Greece			
	12.00 – 13.00	LUNCH Tehnikamaja, room B135			
	13.00 – 15.00		BIOREFINING (Room A204) Chair: Prof. Sabarathinam Shanmugam	RENEWABLE ENERGY (Room A202) Chair: Dr. Heino Pihlap	SafeHabitus COMMUNITIES OF PRACTICE Panel discussion (Room B200) Chair: Dr. Jarkko Leppälä
			Design of Bioactive Materials for Therapeutic Applications: Dopamine-Functionalized Hydrogels and Lignin–Peptide Conjugates – Dr. Udayakumar Veerabagu , Estonian University of Life Sciences, Estonia	Exploring a Non-Invasive Hydrokinetic System for Decentralised Energy in Low-Flow Rivers – Dr. Heiki Lill , Estonian University of Life Sciences, Estonia	PANEL:
		Investigation and Production of Renewable Solid Biofuels via Torrefaction of Pellets from Agricultural Waste – Maryna Zhylina ,	Practical Advantages of East–West Oriented Vertical Bifacial Photovoltaic Systems for Enhancing Energy Autonomy in Agricultural Production – Prof. Algirdas Jasinskas , Vitautas Magnus University, Lithuania	Prof. Eda Merisalu (Estonia) Prof. Joanna Makulska (Poland) Prof. John McNamara (Ireland) Prof. Risto Rautiainen (Finland)	
		The energy potential of manure in Polish agriculture – Mateusz Nowak , Poznań University of Life Sciences, Poland	How Household Electricity Consumption Influences the Effective SCOP of Heat Pumps – Dr. Heino Pihlap , Estonian University of Life Sciences, Estonia		
		Life Cycle Assessment of Aspen-Derived Fuel-Grade Bioethanol via Nitrogen Explosive Decompression: Cooling-Water Representation and Energy-Driven Hotspots – Mrs. Damaris Okafor , Estonian University of Life Sciences, Estonia	The Hidden Impact of Household Electricity Use on Residential Energy Labels – Mr. Allan Tooming , Estonian University of Life Sciences, Estonia		
		Towards the modeling of twin-screw extrusion for the biorefinery of lignocellulosic biomass and the production of agromaterials – Guy Della Valle , INRAe Nantes, France	Integration Opportunities of Photovoltaic and Agrivoltaic Systems with the Energy Processes of the Prague Metro: Technical, Environmental and Operational Contexts – Mr. Martin Kozelka , Czech University of Life Sciences Prague, Czech Republic		

	Process lines for paludi-biomass from rewetted peatland – Prof. Thomas Hoffmann , Leibniz Institute of for Agricultural Engineering, Germany	Rapid Pre-Screening Methodology for Small Capacity Lithium-Ion Cells for Subsequent Reuse Experiments – Kristjan Veidenberg , Estonian University of Life Sciences, Estonia	
15.00 – 15.20	<i>Coffee Break</i> (Room B135)		
15.20 – 18.00	BIOREFINING (Room A204) Chair: Prof. Lisandra Da Rocha Meneses	PRECISION AGRICULTURE (Room A202) Chair: Prof. Merrit Shanskiy	SafeHabitus FARM HEALTH AND SAFETY INNOVATION RESEARCH (Room B200) Chair: Dr. Märt Reinvee
	Flowability and Fiber Breakage Behavior of Reed Canary Grass Along a Twin-Screw Extruder – Mr. Shahsharif Mohammadshafi Shaikh , Leibniz Institute of for Agricultural Engineering, Germany	Development and Performance Evaluation of a Deep Learning-Based Autonomous Regional Spraying System in Apple Orchards – Mr. Necati ÇETİN , Ankara University, Turkey	Diana van Doorn , Tiina Mattila, Titta Tapiola & David Meredith (Ireland/Finland) Who Is Protected? Governance patterns and coverage gaps in EU Farm Health and Safety across 11 EU member states
	From Waste to Resource: Torrefaction Condensate as a Feedstock for Microalgal EPS Production – Salini Chandrasekharan Nair , Estonian University of Life Sciences, Estonia	Autonomous Variable-Rate UAV Spot Spraying using CDA Nozzles and Dual Deposition Sensing – Mr. Koppány Horváth , Széchenyi István University, Hungary	Diana van Doorn & David Meredith (Ireland) Applying Appreciative Inquiry in a Transnational Community of Practice: Insights from the SafeHabitus Project on Farm Health and Safety
	Unlocking Lignin for Pharmaceutical Translation: Sustainable Extraction Strategies, Quality Attributes, and Application Pathways – Johannah Mulakal , Estonian University of Life Sciences, Estonia	Bioaccumulation and Translocation of Heavy Metals in Pepper (Capsicum annum) from Two Cultivation Zones in Kosovo - Prof. Agim Rysha , Faculty of Agribusiness, University “Haxhi Zeka”, Kosovo	Joseph Firnhaber (Ireland) Root causes and wider consequences of threats to farmer health and safety: a cross-national socioecological analysis
	Transforming Hop harvest waste into valuable fibers: A study on wet storage and wet processing of the biomass – Saurav Nepal , Leibniz Institute of for Agricultural Engineering, Germany	Non-Destructive Assessment of Physiological Parameters in Common Beans – Ina Alsina , Latvia University of Life Sciences and Technologies, Latvia	Jarkko Leppälä (Finland) Developing a database of farm safety and health risk management tools
	Critical evaluation of 2,5-furandicarboxylic acid (FDCA) production from biomass: perspectives on reaction pathways, catalytic systems, and process optimization – Ms. Chamini Lakshika Wickramarathna Dissanayake , Estonian University of Life Sciences, Estonia	Exploring bee colony weight dynamics during passive wintering period – Aleksejs Zacepins , Latvia University of Life Sciences and Technologies, Latvia	Laura Girdžiūtė & Anastasija Novikova (Lithuania) Working Conditions as Design Constraints in Climate Resilient EU Farming Systems
	The influence of the composting process on changes in the physicochemical parameters of manure and ammonia emissions – Jacek Dach , Poznan University of Life Sciences, Poland	Climate Mitigation and Ecological Co-Benefits of Windbreaks: Carbon Sequestration Potential of Agroforestry Systems in Hungary – Orsolya SZABO , University of Sopron, Hungary	Majda Černič Istenič (Slovenia) Modern agricultural technologies and farmers’ well-being: a systematic review of occupational safety and health impacts
	Upcycled agro-residue polyphenols as sustainable photoprotective UV filters - Rūta Ozola-Davidāne , Latvia University of Life Sciences and Technologies, Latvia	Integrated Management of Nondestructive Sensing of Moisture Content in Grain: A Digital Agriculture Solution – Mr. Necati ÇETİN , Ankara University, Turkey	Eda Merisalu (Estonia) Estonian case study of survivor stories
			Alin Croitoru & Madalina Capraru (Romania) An Analysis of Romanian Mass Media Coverage of Work Accidents in Agriculture

Thursday 07.05.2026	9.00 – 9.30	Morning coffee (Estonian University of Life Sciences, Tehnikamaja, 56 Kreutzwaldi Str., Tartu) Room B135			
	9.30	PLENARY SESSION (Tehnikamaja, room A204):			
	9.30 – 10.00	Climate Intelligence for Renewable Energy Systems: From Forecasting to Resilience – Dr. Latifa Yousef , World Meteorological Organization, Switzerland			
	10.00 – 10.30	Integrating Critical Raw Materials into Life Cycle Assessment of Electric Mobility: Sustainability, Supply-Chain Risk, and Resource Security Beyond Carbon Metrics – Prof. Francesco Romagnoli , Riga Technical University, Latvia			
	10.30 – 11.00	Sustainability crisis and our responsibility as scientific community – Prof. Franz Faupel , Kiel University, Germany			
	11.00 – 12.40	ENGINEERING (Room A204) Chair: Prof. Attila J. Kovacs	FOOD SCIENCE AND TECHNOLOGY (Room A202) Chair: Dr. Sana Ben Othman		
		Using continuously variable feed rate in a CNC milling machine when drilling Hardoks 450 with an HSSCo drill – Maicel Pütt , Estonian University of Life Sciences, Estonia	Microbiological safety and quality of plant-based alternative products – Prof. Mati Roasto , Estonian University of Life Sciences, Estonia		
		Impact of H ₂ O–CH Fuel Technology on Diesel Engine Emission Characteristics – V. Pirs , Riga Technical University, Latvia	Microbial Heritage in Traditional Rye Sourdough: Functional and Safety Insights into Lactiplantibacillus plantarum Strains – Liis Lutter , Estonian University of Life Sciences, Estonia		
Development of naturally ventilated solar energy assisted maize seed store – Dr. Benard Epeh Eyong , University of Buea, Cameroon		Optimisation of Drying Techniques to Preserve Bioactive Compounds in Spruce Sprouts During Storage – Klinta Karklina , Latvia University of Life Sciences and Technologies, Latvia			
Air quality studies in reed- and straw-bale buildings – Jane Raamets , Tallinn Technical University, Estonia		Ultrasound-Assisted Green Extraction of Anthocyanins from Black Elderberry By-products Using Ethanol and Natural Deep Eutectic Solvents – Anita Avena , Latvia University of Life Sciences and Technologies, Latvia			
Impact of Brassicaceae intercrops on fuel consumption, energy and GHG indices in maize cultivation – Prof. Kestutis Romanekas , Vitautas Magnus University, Lithuania		Application of extruded pea hulls in plant-based burger patties: nutritional, textural and sensory profile – Mrs Asnate Kirse-Ozolina , Latvia University of Life Sciences and Technologies, Latvia			
Optimizing Mycelium-Bound BioPCM–Wood Composites for Low-Impact Thermal Building Materials – Yoonhee Cho , Swedish University of Agricultural Sciences, Sweden					

12.40 – 14.40	LUNCH AND POSTER SESSION Estonian University of Life Sciences, Tehnikamaja, 56 Kreutzwaldi Str, Tartu, room B135		
14.40 – 17.20	AGRICULTURE AND ENGINEERING (Room A204) Chair: Dr. Mart Hovi	ERGONOMICS AND ERGODESIGN (Room A219) Chair: Dr. Märt Reinvee	
	Negative effects of heat stress on behaviour and milk traits of Austrian dairy cows – Prof. Eugen Kokin , Estonian University of Life Sciences, Estonia	Jelena Lezdkalne (Latvia) Potentially Fatal Incidents: Identification, Classification and Human Factor Analysis	
	Toward Dependable Communication for Precision Livestock Farming: A Multi Technology Framework Informed by Measurements and 6G Trends – Konstantin Mikhaylov , University of Oulu, Finland	Ilga Cepure & Henrijs Kalkis (Latvia) The improvement of the Occupational health and safety system in the production company in Latvia	
	Physiological Responses of Cucurbita pepo L. to Varying Salinity and Deficit Irrigation Conditions – Mr. Hasan Ali IRIK , Erciyes University, Turkey	Egle Ambo , Getter Kuldmäe, Märt Reinvee, Priit Purge, Kalev Kuklane (Estonia) Predicting Work–Rest Times in Firefighting Simulations by PHS Model: impact on task performance and risks	
	Interpretability of Electricity Consumption in Rural Detached Houses Based on Substation Load Data – Janek Lumi , Estonian University of Life Sciences, Estonia	Kristiina Hovi (Estonia) Design of a modular methodological framework for the assessment of work-related musculoskeletal pain	
	Combinable Energy Storage Solutions for Local Heating Systems – Mati Malm , Estonian University of Life Sciences, Estonia	Häli Allas & Henrijs Kalkis (Latvia) Internal security leadership, resilience, and immersive simulation for transforming training practice: theoretical aspects	
	Water Quality, Climate Risks, and Institutional Barriers: A Comparative Analysis of Integrated Crop-Aquaculture Farming Systems in Bangladesh and Global Case Studies – Masuma Akter , China	Imants Breidaks (Latvia) Socio-Technical Resilience in the NIS2 Era: A Framework for "Important Entities" in the Production Sector	
		Changes in Blood Pressure, Heart Rate, and Grip Strength in Latvian Bank Office Employees: A Pilot Study – Anatolijs Roganovs & Henrijs Kalkis , University of Latvia, Latvia	
	POSTERS (Room B135)		
	Compilation of a dynamic model of a remotely controlled mobile robot chassis and dynamic parameter study of its 18V DC electric motor – Povilas Šaulys , Kaunas College, Lithuania		
	Analysis and synthesis of controlled object motion in fluid via flutter interactions – Vitalijs Beresnevics , Riga Technical University, Latvia		
	Valuation of Ecosystem Services for Climate Smart Agricultural Practices Using the Market Price Method - Mr. Emīls Liepnieks , Latvia University of Life Sciences and Technologies, Latvia		
	Seaweed Value Chain Analysis for Circular Nutrient Cycling in Agriculture – Martins Lastovskis , Latvia		

	The impact of different types of manure on the parameters of the composting process in a bioreactor - Mr Wiktor BOJARSKI , Poznań University of Life Sciences, Poland
	ANN modeling as a tool to determine the influence of physical and chemical parameters on methane yield – Ms. Patrycja POCHWATKA. , University of Life Sciences in Lublin, Poland
	The concept of energy management of sawmill waste – economic and environmental effects – Mrs Alina Kowalczyk-Juško , University of Life Sciences in Lublin, Poland
	Analysis of the Chemical Composition of Biogas Depending on the Organic Substrate Used and Its Impact on Energy Production – Mr. Lucian Georgel UNGUREANU , Stefan cel Mare University of Suceava, Romania
	Optimization of fertilization regimes for maximizing root and inulin yield and root biochemical characteristics in chicory (<i>Cichorium intybus</i> L.) to bioenergy purposes – Mr Bohdan MAZURENKO , National University of Life and Environmental Sciences of Ukraine, Ukraine
	Comprehensive assessment of genotype–environment interaction and trait associations in sugar beet hybrids under short-rotation cropping systems of the Western Forest-Steppe of Ukraine – Mr. Kyselov Dmytro , PE Zahidnyy Ukraine
	Growth and yield response of potted tomatoes to fermented grass-based liquid fertilizer in peat substrate – Andis Karlsons , Latvia University of Life Sciences and Technologies, Latvia
	Biochemical properties and morphological variability of fruits of interspecies hybrids of cucurbita genus – Tetiana Harbovska , Institute of Vegetable and Melon growing, Ukraine
	Changes in Protein Content in Genotypes of Common Beans (<i>Phaseolus vulgaris</i>) Grown in Latvia – Laila Dubova , Latvia University of Life Sciences and Technologies, Latvia
	The effect of nitrogen on productivity of potatoes in different growing systems – Ms Inese Taskova , Institute of Agricultural Resources and Economics, Latvia
	Geotourism in Portugal: Development of a Digital Portfolio – Ms Beatriz SILVA , University of Minho, Portugal
	Use of Sunflower and Hemp Seed Proteins in Protein Bars – Dr. Andres Sats , Estonian University of Life Sciences, Estonia
	Antioxidant and antibacterial activity of tea and mate extracts – Piret Raudsepp , Estonian University of Life Sciences, Estonia
	Hypoxanthine and malondialdehyde as markers of minced pork quality. The effect of plant materials – Mr Alar Sünter , Estonian University of Life Sciences, Estonia
	Fermentation-Based Valorization of Whey for Bioactive Peptides Production and Analysis – Mr. Kareem ABDELMEGUID , University of Latvia, Latvia
	Do phospholipolysis and bacteria primarily regulate linoleic acid oxidation in fresh meats? – Tõnu Püssa , Estonian University of Life Sciences, Estonia
	10-hydroxystearic acid as a potential quantifiable marker of bacterial contamination in meats – Tõnu Püssa , Estonian University of Life Sciences, Estonia
	Maximizing the Nutritional Value of Blackthorn Pomace Powder via Controlled Thermal Treatment and Fractionation – Madalina UNGUREANU-IUGA , "Ștefan cel Mare" University of Suceava, Romania
	Scented candles in vegetable crop protection: first steps in progress – Mrs Eha KRUUS , Estonian University of Life Sciences, Estonia
	Biochemical characterization and cooking behavior of lentils and chickpeas – Guy Della Valle , INRAE Nantes, France
	Evaluation of plant nutrient losses during the drying and granulation of poultry manure with straw and peat amendments – Lauris Plume , Latvia University of Life Sciences and Technologies, Latvia
	Three Years of Literature Review Assignments: Insights on Numerical Methods Education in Chemical and Biological Engineering – Ms Marta RIBEIRO , University of Minho, Portugal
	Analysis of pollen productivity, chemical composition and utilization – Liena Poiša , Latvia University of Life Sciences and Technologies, Latvia
	Safe cattle husbandry – Klaus Klugmann , Social Insurance for Agriculture, Forestry and Horticulture Germany (SVLFG), Germany
	Reaching hard-to-reach farmers: a real-world cardiovascular health intervention – Diana van Doorn, John McNamara & David Meredith , TEAGASC, Ireland
	Empowering Farmers for Safe Work – Laura Girdziute, Anastasija Novikova , Vytautas Magnus University, Lithuania, and Iina Zukauskiene Lithuanian Agricultural Advisory Service
	Medical Rehabilitation for Polish Farmers – Joanna Makulska , University of Agriculture in Krakow, Poland, and Magdalena Szewczyk , The Agricultural Social Insurance Fund, Poland

	The Doctors' Caravan - a good practice from Romania – Alin Croitoru, Lucian Blaga University of Sibiu, Romania, and Vlad Berbecar , Doctors' Caravan, Romania
	Transforming Occupational Health and Safety Awareness through Podcasts – Miriam Ácsová & Dominika Pančáková , Bioeconomy Cluster, Slovakia, and Lenka Pénzešová Švecová , OHSAS, Slovakia
	Free Workplace Consultation for Health, Safety and Labour Relations – Märt Reinvee , Estonian University of Life Sciences, Estonia
	The Farmers' Holiday and Stand-in Scheme – Tiina Mattila , Natural Resources Institute Finland, and Päivi Wallin The Farmers' Social Insurance Institution, Finland
	Stand-in scheme workers' views on farm work safety – Mika Repo & Ardita Hoxha-Jahja , Savonia University of Applied Sciences, Finland
	Potential solutions and ideas to reduce farmers' psychosocial risks – Gwendoline Elluin & Jocelyn Fagon , French Livestock Institute, France
19.00 – 23.00	<p>OFFICIAL CONFERENCE DINNER</p> <p>Restaurant Vilde ja Vine</p> <p>https://vilde.ee/gb/</p> <p>Vallikraavi 4, Tartu</p>
Friday 08.05.2026	<p>EXCURSIONS</p> <p>Guided tour to Estonian National Museum (ERM). Muuseumi tee 2, Tartu https://erm.ee/en 10.00-13.00 Start from Tehnikamaja at 10.00 by bus</p> <p>Guided tour to Science Centre AHHA. https://www.ahha.ee/en Sadama 1, Tartu (city centre, near to bus station) 10.00-13.00</p> <p>Gathering at the museum's main entrance</p>
9.00 – 13.00	