

1st ENFiber International Conference

Extraction Methods for Valorising Fibers in the Circular Economy

4-6 May 2026

Tartu, Estonia

Estonian University of Life Sciences

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Tartu, Estonia

Venue Information

Date	Venue
4-5 May 2026	Tehnikamaja, Estonian University of Life Sciences F. R. Kreutzwaldi tn 56-1, 51006 Tartu, Estonia <i>Room A204</i>
6 May 2026	Metsamaja, Estonian University of Life Sciences F. R. Kreutzwaldi tn 5a, 51006 Tartu, Estonia <i>Room 1A5</i>

Social Events

Conference Dinner

Date & Time	Tuesday, 5 May 2026 at 19:00
Location	Ülikooli Kohvik Ülikooli tn 20, 51005 Tartu

Boat Trip

Date & Time	Wednesday, 6 May 2026 at 17:00 (2-hour trip)
Meeting Point	Starting point and End point (Google maps link)

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Day 1 | Monday 4 May, 2026

Introductions

- 09:00-09:10 **Welcome Speech**
Prof. Marek Metslaid · Director, Institute of Forestry and Engineering, Estonian University of Life Sciences, Estonia
- 09:10-09:30 **Opening Remarks & ENFiber Overview**
Prof. Mecit Halil Öztop · ENFiber COST Action Chair, Middle East Technical University, Türkiye

Session 1 | Waste & By-product Valorization as Fiber Sources

Oral Presentations

- Moderators** *Prof. Zehra Ayhan · Sakarya University, Türkiye | Dr. Leonidas Matsakas · Luleå Tekniska Universitet, Sweden*
- 09:30-09:45 **Advancing Fiber Valorization from Food & Agro-Processing Waste in Kosovo: Scientific, Technological and Industrial Perspectives**
Bytyqi, Hysen et al. - University of Prishtina, Kosovo
- 09:45-10:00 **Dietary Fibers from Food By-products: Up-cycled Cocoa Bean Shells as Functional Ingredient**
Disca, Vincenzo et al. - University of Eastern Piedmont, Italy
- 10:00-10:15 **Valorisation of Fruit Waste to Obtain Microalgae Biomass with High Dietary Fiber Content**
Ergüden, Bengü - Gebze Technical University, Türkiye

- 10:15-10:30 **Waste to Wellness: Green Valorization of Fruit By-products into Bioactive Fibers for Sustainable Food Systems**
Kharbouch, Ikram; Khald, Hajar; Rahim, Souad - University Hassan II Casablanca, Morocco
- 10:30-10:45 **Biochemical Conversion of Vegetable Waste towards Biomass and Biohydrogen Production by E. coli**
Trchounian, Karen - Yerevan State University, Armenia
- 10:45-11:15 **Coffee Break**

Session 2 | Green Extraction & Processing Technologies

Oral Presentations

Moderators *Dr. Jolanta Sereikaite · Vilnius Gediminas Technical University, Lithuania | Prof. Karen Trchounian · Yerevan State University, Armenia*

- 11:30-11:45 **Valorization of Apple Pomace Through Ultrasound and Microwave-Assisted Extraction: Sustainable Technologies for Pectin and Dietary Fiber Recovery**
Ceclu, Liliana - Cahul State University, Moldova
- 11:45-12:00 **Optical Emission Spectroscopy Monitoring of Reactive Oxygen and Nitrogen Species in Plasma-Assisted Extraction**
Pleslic, Sanda et al. - University of Zagreb, Croatia
- 12:00-12:15 **Effect of Microwave-Assisted Hydrolysis and High-Pressure Homogenization on Cellulose Production from Olive Pomace**
Ateş, Elif et al. - Çankırı Karatekin University, Türkiye
- 12:15-12:30 **Recovery of Fibers from Aromatic Plant Residues via Advanced Extraction Technologies**
Turabi Yolaçaner, Elif - Hacettepe University, Türkiye
- 12:30-13:30 **Lunch Break**

Session 3 | Cellulose, Biopolymers & Advanced Materials

Invited Lecturer + Oral Presentations

- Moderators** *Dr. Belen Garcia · Plataforma Tecnológica Española de Envase y Embalaje, Spain | Dr. Frederick Lia · BioKimika Extra Analytica, Malta*
- 13:30-13:50 **(Invited Lecturer) - Tuneable Bio-based Chitosan Hydrogels for Superaerophobic Electrode Coatings**
Prof. Osojnik Črnivec, Ilja Gasan et al. - Kemijski Institut (National Institute of Chemistry), Slovenia
- 13:50-14:05 **Mechanical, Barrier and Photoprotective Properties of PLA Films Reinforced with Maleic Anhydride-Modified Nano/Microfibrillated Cellulose**
İnal, Ezgi; Erdem, Gizem Melissa; Ayhan, Zehra - Sakarya University, Türkiye
- 14:05-14:20 **Structural, Thermal and Morphological Characterization of PLA Composites Incorporated with Chemically Modified Cellulose**
Erdem, Gizem Melissa; İnal, Ezgi; Ayhan, Zehra - Sakarya University, Türkiye
- 14:20-14:35 **Production of a cellulosic fiber from from cocoa bean shells**
Öztop, Mecit Halil - Middle East Technical University, Türkiye
- 14:35-14:50 **Sustainable Multifunctional Hemp-Based Foams via Reversible Citric Acid Crosslinking**
Dr. Platnieks, Oskars - Riga Technical University, Latvia
- 14:50-15:05 **Lignocellulosic Fibres - Quantification of Fibre Morphology and Applications in Thermoformed Products**
Chinga Carrasco, Gary - RISE PFI, Norway
- 15:05-15:35 **Coffee Break**

15:35-16:50

Health Benefits of Dietary Fiber from Macadamia Oil and Brazil Nut Processing By-Products

Nakov, Gjore et al. - Technical University of Sofia, Bulgaria

Understanding Starch Dissolution in Deep Eutectic Solvents: From Water-DES Interactions to Extraction from Potato Peel Waste

Osojnik Črnivec, I.G. et al. - National Institute of Chemistry, Slovenia

Sustainable Micellar Extraction of Curcuminoids from *Curcuma longa*

Bellaadem, Assya et al. - National Institute of Chemistry, Slovenia

Optimisation of Enzymatic and Processing Conditions for Recovery of Bioactive Phenolics from Olive Pomace

Dr. Lia, Frederick - BioKimika Extra Analytica, Malta

Understanding the Effect of Extrusion on Fiber and Phenolic Compounds of Strawberry Pomace in Starch-Based Extrudates

Le Bourvellec, Carine - INRAE, France

Extraction of Soluble Dietary Fiber from Red Beetroot Waste for Encapsulation and Delivery of Antimicrobial Peptide Nisin

Dr. Sereikaitė, Jolanta - Vilnius Gediminas Technical University, Lithuania

Valorization of Bilberry Pomace as a Fiber-Rich Material for Sustainable Paper Production

Todorović, Ana et al. - National Institute of Chemistry, Slovenia

Incorporation of Passion Fruit By-product as Functional Ingredient in Gluten-Free Flours: Effect on Dietary Fiber and Arabinoxylans

Ciudad-Mulero, María et al. - Complutense University of Madrid, Spain

Two Biodegradable Biopolymers from Carbohydrates of *Ulva rigida* Seaweed

Teles, Marco et al. - Instituto Superior Técnico, Portugal

Screening Agro-Industrial By-Products as Promising Feedstocks for Upcycled Antioxidant Dietary Fibre

Ribeiro, Tânia et al. - ESB – Universidade Católica Portuguesa, Portugal

Production of Value-Added Bioactive Fibers from Beverage Industry Diatomite Filtration Wastes via Microbial Fermentation: A Circular Biorefinery Approach

Sakallı Aktürk, Latife - Uludağ Beverage / Bursa Technical University, Turkey

Day 2 | Tuesday 5 May, 2026

Session 4 | Characterization, Analytics & Physical Methods

Invited Lecturer + Oral Presentations

Moderators *Dr. Lubna Ahmed · Dundalk Institute of Technology, Ireland | Dr. Oskars Platnieks · Riga Technical University, Latvia*

09:00-09:20 **(Invited Lecturer) - Magnetic Resonance as a Development and Monitoring Tool for Valorising Fiber**

Prof. Morris, Robert - Nottingham Trent University, United Kingdom

09:20-09:35 **Near-Infrared Spectroscopy Applications for Fiber Quantification and Characterization as a Strategic Tool for Waste Valorization**

Mr. Vega Castellote, Miguel; Pérez-Marín, Dolores - University of Córdoba, Spain

09:35-09:50 **Microcrystalline Cellulose from Olive Pomace: Effect of Bleaching on Structure, Water Interactions, and Caking Behavior**

Tonyali Karsli, Gokcem - Middle East Technical University, Türkiye

09:50-10:05 **Analytics for Characterization of Food Carbohydrates and Dietary Fibers**

Oliveira Pandeirada, Carolina - Nestlé R&D

10:05-10:20 **Water Dynamics in Polymers and Fibres - Insight from NMR Relaxometry**

Kruk, Danuta - University of Warmia and Mazury, Poland

10:20-10:50 **Coffee Break**

Session 5 | Bioactive Properties, Health & Gut Relevance

Invited Lecturer + Oral Presentations

Moderators *Dr. Elisabete Coelho · University of Aveiro, Portugal | Mr. Ahmed Menevseoglu-Agri Ibrahim Cecen University, Türkiye*

10:50-11:10 **(Invited Lecturer) - Nutritional Fibers from Wood Biomass**

Prof. Mikkonen, Kirsi et al. - University of Helsinki, Finland

11:10-11:25 **Engineering a Precise Biocatalyst: Directed Evolution of Inulosucrase for Short-Chain Prebiotic Fibers**

Yadid, Itamar - Tel Hai University, Israel

- 11:25-11:40 **Strategies to Obtain Polysaccharides from Agaricus bisporus By-products for Hypocholesterolemic Food Ingredients**
Arranca, Maria et al. - University of Aveiro, Portugal
- 11:40-11:55 **Chitosan as Natural Biofungicides for the Management of Fungal Diseases of Fresh Fruit and Grapevine**
Moumni, Marwa et al. - Università Politecnica delle Marche, Italy
- 11:55-12:10 **Tomato-Derived Functional Foods with Enhanced Antitumor Activity**
Gorgisen, Gokhan et al. - University of Health Sciences, Türkiye
- 12:10-12:25 **Comparative Functional and Bioactive Characterization of Beetroot and Raspberry By-Product Extracts**
Ramzan, Khadija - Lithuania Research Centre for Agriculture and Forestry, Lithuania
- 12:25-13:25 **Lunch Break**

Session 6 | Fermentation, Single-Cell Proteins & Novel Food Ingredients

Oral Presentations

- Moderators** *Dr. Natasha Ritovsaka · Platforma Za Zelen Razvoj, North Macedonia | Mr. Miguel Vega Castellote · University of Córdoba, Spain*
- 13:25-13:40 **From Bio-Based Polysaccharides to Functional Aerogels for Food Applications**
Güven, Özge; Öztop, Mecit Halil - Middle East Technical University, Türkiye
- 13:40-13:55 **Bioconversion of Fiber-Rich Agro-Food Residues into Yarrowia lipolytica Biomass for Sustainable Food-Grade Production**
Ugur, Suheda et al. - Warsaw University of Life Sciences, Poland
- 13:55-14:10 **Single-Cell Protein Biomass as a Sustainable Source of Protein and Dietary Fiber: Properties of Saccharomyces cerevisiae and Fusarium venenatum**
Araújo-Rodrigues, Helena et al. - Catholic University of Portugal, Portugal
- 14:10-14:25 **Cross-Sector Valorization: Agro-industrial and Sea By-products via Aspergillus oryzae Solid-State Fermentation**
Bautista Hernandez, Israel et al. - Catholic University of Portugal, Portugal
- 14:25-14:55 **Coffee Break**

Session 7 | Scale-Up, Sustainability, Standardization & Policy

Invited Lecturer + Oral Presentations

- Moderators** | *Dr. Liliana Ceclu · Cahul State University "Bogdan Petriceicu Hasdeu", Moldova | Prof. Sony George · NTNU, Norway*
- 14:55-15:15 | **(Invited Lecturer) - New Challenges in the Risk Assessment of Fiber-Rich Ingredients as Food Additives in Europe**
Prof. Morales, Patricia - The Complutense University of Madrid, Spain
- 15:15-15:30 | **From Fiber Products to Platform Chemicals: Scale-Up Perspectives from the University of Hohenheim Biorefinery**
Arauzo Gimeno, Pablo J. - University of Hohenheim, Germany
- 15:30-15:50 | **From Research to Impact: Capitalising and Scaling PRIMA Agrofood Innovations (2018-2025) for Circular Bioeconomy Transformation**
Mohammed, Wageih - PRIMA Foundation
- 15:50-16:05 | **ENFiber COST Action: Network Achievements and Future Outlook**
Prof. Öztop, Mecit Halil - ENFiber COST Action Chair, Middle East Technical University, Türkiye
- 16:05-16:15 | **Closing Remarks & Conference Wrap-Up**

Day 3 | Wednesday 6 May, 2026

MC Meeting

- 09:00-16:00 | **Working Groups Meeting + Management Committee Meeting**