2021 VIRTUAL CONFERENCE TECHNICAL PROGRAM

As of 06/08/21 - Subject to change – please check the conference website for updates.

Tuesday, 15 June, 2021			
11:00 am – 12:00 pm	**Session 1: Welcome & Keynote** **Session Chair: Heli Kangas, VTT and Nano Virtual Conference Chair** **Keynote Speaker: Sean Ireland, FiberLean**		
12:00 pm – 12:15 pm	**BREAK**		
12:15 pm – 1:45 pm	**Session 2:** Renewable Nanomaterials as Films, Coatings and Packaging Substrates **Session Chair:** John Simonsen, Oregon State University	**Session 3:** Next Generation of Colloidal Suspension **Session Chair:** Dr. Gustav Nyström, Empa	**Session 4:** Diverse Applications of Nanocomposite Materials **Session Chair:** Keith Gourlay, Performance Biofilaments
	Biobased Multilayered films based on Cellulose and Chitin nanofibers for Food Packaging - Eva Pasquier, Université Grenoble Alpes, CNRS, Grenoble INP	**Effect Of Preparation Conditions of Pickering Stabilized CNF Wet Foam on Characteristics of CNF Based Porous Materials** - Shin Young Park, Department of Agriculture, Forestry and Bioresources Korea	**Friction behavior of tempo-oxidized nanofibrillated cellulose and its composites**- Sefora Riillo, Empa
	The Influence of CNF and LCNF Quality and Starch Level On Grease Barrier Properties - Ikko Matsusue, Daio Paper Corporation	**Strategies for Next Generation Biomolecular Engineering with Nanopolysaccharides** - Orlando Rojas, University of British Columbia	**Improved Mechanical Tribological Properties of Ultra-High Molecular Weight Polyethylene By the Incorporation of Cellulose Nanofibrils via Melt-Blending** - Hidayah Ariffin, Universiti Putra Malaysia
	Biofabrication of mycelium nanocellulose composites for barrier film applications - Tiffany Abitbol, RISE Research Institutes of Sweden	**Nanocellulose Liquid Crystal Bubbles, Emulsions and Colloidal Glass -** Guang Chu, Aalto University	**Application of Nanocellulose based Composites in Salt Hydrate Phase Change Materials for Thermal Energy Storage** - Zhenghui Shen, Seoul National University

	Multilayer barrier paperboard based on nanocellulose and biodegradable thermoplastics - Rajesh Koppolu, Åbo Akademi University	**Cellulose nanocrystals with residual lignin and zwitter ionic polymer grafts - development of materials for anti-fouling and antibacterial applications** - Dimitrios Georgouvelas, Stockholm University	Open
1:45 pm – 2:00 pm	**BREAK**		
2:00 pm – 3:30 pm	**Session 5:** Standards and Novel Procedures to Characterize Renewable Nanomaterials **Session Chair:** Stephanie Beck	**Session 6:** Sustainable Packaging and Antimicrobial Personal Protective Equipment **Session Chair:** Diego Gomez Moldonado, Auburn University	**Session 7:** Testing Approaches of CNMs from Safety to Properties **Session Chair:** Kimberly Ong, Ph.D., Vireo Advisors, LLC
	How to develop a particle size measurement standard for cellulose Nanofibrils - Cecilia Land Hensdal, Stora Enso	**Developing hydro alcoholic gels - HAGs - for the hand sanitizer market in response to shortages created during the COVID19 pandemic – the science** - Debbie Wu, Celluforce Inc.	**Tuning properties of high consistency enzymatically fibrillated cellulose (HefCel) for various applications** - Aayush Kumar Jaiswal, VTT Technical Research Centre of Finland
	Standardizing Measurements for Cellulose Nanocrystal Particle Size Distributions -Linda Johnston, National Research Council Canada	**Renewable barrier films from synergy of cellulose and chitin nanomaterials** - Carson Meredith, GT/RBI	**Effect of the morphological characteristics and size distribution on the rheological properties of cellulose nanofibril dispersions** - Gregory Albornoz, University of Concepcion
	Benchmarking Cellulose Nanocrystals: New Industrially-Produced Materials, Emily Cranston, University of British Columbia	**Medical mask using a novel antimicrobial / antiviral biofilter material -** Gloria Oporto, West Virginia University	**Safety testing methods for novel cellulose nanomaterials -** Kimberly Ong, Vireo Advisors
	Semi-automated image analysis framework on the morphology analysis of CNCs- Sezen Yucel, Georgia Institute of Technology	**Combining tannins with cellulose nanofibrils towards functional materials** - Bruno Mattos, Aalto University	**Recent Progress in Demonstrating the Environmental Health and Safety of Cellulose Nanocrystals** - James Ede, Vireo Advisors
3:30 pm – 3:45 pm	**BREAK**		
3:45 pm – 5:15 pm	**Session 8:** Scaffolding and Antimicrobial Biomaterials **Session Chair:** Sole Peresin, Auburn University	**Session 9:**Commercialization and Safety Aspects of Cellulose Nanomaterials **Session Chair:** James Ede, Ph.D., Vireo Advisors, LLC	**Session 10**: Renewable Nanomaterials Production I **Session Chair:** Mehdi Tajvidi, University of Maine

	Nanocellulose-based materials functionalized in supercritical carbon dioxide for antimicrobial wound dressing applications - Bruno Jean, Cermav CNRS	**Commercialising MFC Products: Compliance to Ethical Standards and Legislation** - Daniel Hewson, FiberLean	**Multi-functional high consistency nanocellulose for various applications** - Panu Lahtinen, VTT Technical Research Centre of Finland
	Structured Cellulose Nanocrystal – Lysozyme Composite Films - Kevin DeFrance, Empa - Swiss Federal Laboratories for Materials Science and Technology	**Surface chemistry and size affect the toxicity of cellulose nanofibrils** - Julia Catalan, Finnish Institute of Occupational Health	**Production and Applications of Microfibrillated Cellulose and Mineral/ Microfibrillated Cellulose Composite Materials-** David Skuse, FiberLean Technologies Limited
	Interactions between Cells and Bio-based materials: from Quantitative Analysis to 3D printed Scaffolds for Medical Applications - XUE Zhang, Aalto University	**Role of surface chemistry on the in vivo effects of cellulose nanofibrils** - Kukka Aimonen, Finnish Institute of Occupational Health	**A comparison of mechanical Micro- fibrillated Cellulose production with different refiner types** - David Cowles, Valmet
	Open	**Accelerating commercialization of novel bio-based materials and improving safety by design through public private partnerships** - Jo Anne Shatkin, Vireo Advisors	**Dry cellulose powder as a precursor to high quality nanocellulose –** Jonatan Henschen, FineCell Sweden AB
5:15 pm – 6:15 pm	**Happy Hour/Networking**		

Wednesday, 16 June, 2021			
11:00 am – 12:30 pm	**Session 11:** End User Panel **Moderator:** Hamdy Khalil, Woodbridge Foam Corporation		
	Panelist: Dr. Johana Kuncova-Kallio, UPM (Finland) Petter Anderrson, Mirka (Finland) Lewis Tunnicliffe, Birla Cargon (US) Juha Salmela, Spinnova (Finland) Dr. Yano, University of Kyoto (Japan) Danilo Ribeiro de Lima, Suzano (Brazil)		
12:30 pm – 12:45 pm	**BREAK**		
12:45 pm – 2:15 pm	**Session 12:** Novel processing routes of nanocellulose-based composites **Session Chair:** Maria Celeste Iglesias, Auburn University	**Session 13:** Structure and properties of nanocellulose films and composites **Session Chair:** Tiffany Abitbol, RISE Research Institutes of Sweden	**Session 14:** Bio-based Materials for Sustainable Electronics **Session Chair:** Yun Jin, FiberLean
	Full-circle Pilot-scale Nanocellulose-based Composite Product Development - Mehdi Tajvidi, University of Maine	**Drying stresses in cellulose nanocrystal films and coatings: Effect of macromolecular and molecular plasticizers** - Klockars Konrad, Aalto University	**Benchmarking the optical performance of nanocellulose films for smart device applications** - Joice Kaschuk, Aalto University
	Fully bio-based foams from thermomechanical pulp fibers and cellulose nanofibrils produced by microwave radiation -Islam Hafez, University of Maine	**Biomineralization of metalorganic materials on polysaccharides and plants** - JJ Richardson, University of Tokyo	**Photonic pigments from lignin particles -** Bin Zhao, Aalto University
	High impact strength composites based on impact modified acrylic and bacterial cellulose - Natalia Herrera Vargas, Imperial College London	**Structuring Nanocellulose Films for Mechanical Measurements and New Applications -** Emily Cranston, University of British Columbia	Open
	TEMPO-CNF/polymer composites prepared by elastic kneading - Akira Isogai, University of Tokyo	**Thermal Stability Enhancement in Modified Cellulose Nanocrystal Films and Aerogels -** Francesco D'Acierno¸University of British Columbia	**Influence of ultrasonication on CNC photonic films and implications for the origins of CNC chiral self-assembly** – Thomas Parton, University of Cambridge
2:15 pm – 2:30 pm	**BREAK**		
2:30 pm – 4:00 pm	**Session 15: Student Poster Session & Competition**		
	Cellulose nanofibrils and iron oxide-based nanoparticles adsorbent for arsenic removal from drinking water - Md Musfiqur Rahman, University of Maine		

	Development of Barrier Properties of Paper with Increasing Microfibrillated Cellulose Coat Weight – Robyn Hill, University of Birmingham **Improvement of the mechanical and barrier properties of cellulose nanofiber films by a facile thermal compression** - Md. Ikramul Hasan, University of Maine **A strategy of wood-based UV-cross-linkable hydrogel fabrication** – Qingbo Wang, Åbo Akademi University **Novel multi-layer oil-resistant food serving plates using nanocellulose composite** – Rakibul Hossain, University of Maine **Contact-Dewatered Cellulose Nanofibers for Reinforced Bio-Polymer Composites –** Alexander Collins, University of Maine		
4:00 pm – 4:15 pm	**BREAK**		
4:15 pm – 5:45 pm	**Session 16:** Barrier and functional coatings and films **Session Chair:** Ulla Forsström, VTT	**Session 17**: Renewable Nanomaterials Production II **Session Chair:** David Skuse, FiberLean Technologies Ltd.	**Session 18:** Additive manufacturing contribution to nanocellulose development **Session Chair:** Gilberto Siqueira, Empa
	Enzymatic degradation and pilot-scale composting of cellulose-based films with different chemical structures - Ilona Leppänen , VTT	**In situ nanocellulose elaboration and modification using natural deep eutectic solvent** - Loreleï Douard, Univ. Grenoble Alpes, CNRS, Grenoble INP, LGP2	**Superelastic and flexible 3D printed waterborne polyurethane/cellulose nanofibrils structures**- Yuan Chen, Korea
	Microfibrillated cellulose and polyvinyl alcohol based barrier coating for abrasive paper - Vinay Kumar, VTT	**A Comparison of Films from Lignocellulose Microfibrils and Fibers** - Erfan Oliaei, RISE / KTH	**3D printing of cellulose: design strategies for rigid/stiff or superelastic monoliths** - Feng Jiang, University of British Columbia
	TEMPO-CNF Foam Coated Viscose Substrates as Water Filters - Andreas Mautner, University of Vienna	Open	**All-wood-based antimicrobial hydrogel fabricated by digital light processing (DLP) Printing -** Luyao Wang, Abo Akademi University
	Recent advances in the microfibrillated cellulose wet lamination process for the production of all cellulose barrier packaging materials - Fleur Rol, Centre Technique du Papier	Open	**Anisotropic, strong and thermally insulating 3D printed nanocellulose aerogels –**Yannick Nagel, Empa

5:45pm - 6:00pm	**Session 19: Closing Remarks** Session Chair: Heli Kangas, VTT