

Annual Meeting of the Pulp and Paper Technical Association of Canada (PaperWeek Canada 2024)

Online
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PaperWeek Detailed Program

***Please refer to program online for latest updates**

We reserve the right to modify the timing if need be.

MONDAY FEBRUARY 5, 2024

(On-Line)

08:00 - 11:30

BIOFOR : (How) Turning everything green is a gold rush for the millennia.

Session Chair: Orlando Rojas, UBC

We are at a tipping point in terms of global warming and will have to accelerate innovation and commercialization processes to ensure we meet legislations and expectations from the public – but more. We should not only find sustainable materials and products, but also, we must improve tremendously in resource efficiency considering production processes and logistics as a whole. The “green” from cellulose is the land of opportunity and will create gold mines for the right innovations and developed products, when the time is right.

08:00 **KEYNOTE**

“Case Studies of Bioeconomy Successes in Europe and the RISE Vision for the Future”

Tomas Anderson, *RISE*

09:00 **RISE thoughts on “What to do with all this cellulose material?”**

“RISE Bioeconomy Arena”

Per Tomani, *RISE*

“Low Density Materials / cellulose-based foams”

Klas Johansson, *RISE*

“Electrochemistry and Digital Cellulose”

Hjalmar Granberg, *RISE*

10:30 **ROUNDTABLE DISCUSSION**

“Driving forces for Bioeconomy growth in the EU”

“What’s on the horizon for Biomaterials and the EU”

Michael Sturges, *EDGE/RISE*

“New packaging materials and applications and the demand of recyclable barriers”

Peter Rätto, *RISE*

“On the innovation landscape and experiences from SWE-CAN innovation cooperation”

Regina Summer, *Ignite Sweden*

“On the process of moving from cellulose based Innovation to Commercialization”

David Holly, *Hoting Innovations*

09:30 - 10:00

Networking Break

10:00 - 11:30

Innovations in Paper Chemistry

Session Chair: Przem Pruszyński, Pruszyński Paper Chemistry

10:00 “Enzymatic treatments and opportunities for mechanical pulps”, **James Luo & Frank Whitley**, *Solenis*

89

10:20 “Sustainability & Renewable performance technologies”, **Adam Tonzi**, *Kemira*

105

10:40 “Minimizing fresh water consumption by maximizing reuse”, **Pascal Morin**, *Kemira*

95

11:00 "Amphoteric Dry Strength", **Ryo Ito**, *Arakawa Chemical*, and **Przem Pruszyński**, *Pruszyński Paper Chemistry* and **ARAKAWA** 78
11:20 "Waxy potato starch based derivatives for use in barrier films", **Didier Delnoye**, *Industrial Royal Avebe* 66

Environment

Session Chair: Talat Mahmood, FPInnovations

10:00 "Biological Monitoring to Improve Treatment Process Stability", **Greg Maloney**, *BioApplied* and **Mack Pardy**, *SENTRY* 47
10:30 "New Era in P&P WWT", **Mitra Mehrabani**, *Stantec* 57

11:30 - 12:30

Networking and Lunch Break

12:30 - 14:00

Energy

Session Chair: Serge Bedard & Jawad Jeaidi, Natural Resources Canada

12:30 "The LignoForce Process Energy Impacts", **Shadan Mostafavi**, *NORAM* 27
13:00 "Towards Carbon Negative Emissions: Integrating Amine-based CO₂ Capture in a Canadian Kraft Mill", **Pardis Rofouieeraghi**, *CanmetENERGY, Natural Resources Canada* 36
13:30 "High temperature heat pumps for the pulp and paper sector: overview of technologies and applications", **Charles Rand and Etienne Bernier**, *Natural Resources Canada*

Pulping

Session Chair: Rory Ralph, Mercer International

12:30 "Multiline continuous cooking upgrades at high kappa", **Kevin Pollinger**, *Valmet* 138
13:00 "Sulphur Makeup in an Unbleached Kraft Mill", **Mehul Chauhan**, *West Fraser* 116
13:30 "Ozone Oxidation for Brighter Pulp & Blue Water", **Alexis Metais**, *Xylem* 125

BIOFOR Roundtable: Textiles - One Year Later!

Session Chair: **Orlando Rojas, UBC**

In this session we will host two talks followed by a panel discussion dedicated to the topics of **cellulosic textiles and wood-to-wear**. We will put in the spotlight dissolving-grade cellulose and new methods for fiber dissolution and cellulose reactive dopes for advanced textiles. The uniqueness of fibrillated cellulose for fiber spinning will be discussed along with interesting developments in the area, including pilot and commercial deployments, which will be factored in the context of their evolution since our last BIOFOR session held in 2023. We will cover advances to reduce CO2 emissions and textile recycling, important in supporting a cellulose-based bioeconomy that also embraces circularity.

12:30 Introduction, **Orlando Rojas**, *Bioproducts Institute, University of British Columbia*

12:35 Lessons learned in 2023, an introduction, **Orlando Rojas**, *Bioproducts Institute, University of British Columbia*

12:50 Dissolving grade cellulose from alternative fibers, **Mariana Lendewig and Ryan Frazier**, *SAFI Consortium, North Carolina State University, USA*

13:15 Cellulose reactive dopes for advanced textiles, featured talk by **Juan Pablo Calvo**, *Bioproducts Institute, University of British Columbia*

13:40 Panel discussion with **Dr. Julie Willoughby**, Blue Hummingbird (Intertwining science and creativity to accelerate business growth), Sr. Scientific Advisor for CIRC (textile recycling) and Advisor and Acting CEO for Tandem Repeat

14:00 - 14:30

Networking Break

14:30 - 16:00

Tissue - Bamboo Pulp for Tissue Making

Session Chair: **Shaune Hanley, Resolute FP**

14:30 "Market Pulp Trends", **Brian McClay**, *TTO & BMA*
15:00 "Morphology and Key Features of Bamboo Fibres", **Chao Duo**, *Tianjin University of Science & Technology*
15:30 "Bamboo Fibres in Tissue Making - advantages and challenges", **Chaochao Tian**, *Tianjin University of Science & Technology*

Bleaching

Session Chair: Mona Henderson, Valmet

14:30 "ECTFE veil for FRP corrosion barriers in FRP equipment at pulp bleaching plants", **Rafic Moubarac**, *EXPERCO* 16
15:00 "A Journey through the Installation and Impact of our Bleach Plant Wash Press", **Honey Nampac**, *Harmac-Pacific*
15:30 "Ozone Bleaching History", **Alexis Metais**, *Xylem* 1

BIOFOR Panel - First Nations and the Bioeconomy

Session Chair: Virginie Chambost, EnVertis and Heather Trajano, UBC

The objective of the panel is to provide a platform for First Nations representatives to showcase projects developed in the forest industry and more specifically related to the forest bioeconomy and the context of carbo-neutrality in the future. First Nations representatives will share their experiences in developing and implementing these projects, and put forward their vision for the future.

Panelists:

Ms. Tina Rasmussen, *Chief Business Officer, Meadow Lake Tribal Council Industrial Investments - Saskatchewan*

Mr. Constant Awashish, *Grand Chief of the Atikamekw - La Tuque Community*

16:00 - 17:00

Networking

*Please note all schedule is set on Eastern Time

TUESDAY FEBRUARY 6, 2024

(On-Site + On-Line)

08:00 - 11:30

BIOFOR : FlexSNG Session

Session Chair: Paul Stuart, Polytechnique Montréal and EnVertis

Room: St-Denis

08:00 KEYNOTE

"The State-of-the-art in biomass gasification - a long time coming: why now is the right time!"

David Longden, *Strategic Business Development Manager, Biofuels & Gasification, Sumitomo Foster Wheeler, SFW*

09:00 PRESENTATIONS

"Biomass gasification for synthetic fuels and chemicals – FlexSNG process concept" 193

Ilkka Hiltunen, M.Sc., *Research Team Leader of the Thermochemical Conversions Research Team, VTT*

"Flexible and integrated biomass value chains"

Erik Rönnqvist, M.Sc., *Chief Operations Officer, Creative Optimization*

"Syngas: the gateway to sustainable fuels and chemicals"

Dr Andrew Steele, *Principal Scientist, Johnson Matthey*

10:30 ROUNDTABLE DISCUSSION

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Panelists introduction and Discussion Panel – De-Risking FlexSNG

Panelists

Minna Kurkela, *Senior Scientist (FlexSNG coordinator), VTT Technical Research Centre of Finland Ltd*

Francesco Mondì PhD, *DTU – Technical University of Denmark*

Professor Mikael Rönnqvist, *Université Laval (Quebec, QC)*

Karol Witkowski, *Research Engineer, EIFER - European Institute for Energy Research*

Tunet Olivier, *Doctoral student, Polytechnique Montréal*

Kostis Atsonios, *Research Associate, Centre for Research & Technology Hellas (CERTH)*

08:30 - 17:00

Reliability Workshop

Presenter: Tom Carr, Reliability Solutions

Room: Notre-Dame

Reliable Manufacturing – Providing a Better Day at Work

In the dynamic landscape of contemporary manufacturing, the reliable operation of production systems is paramount. Ensuring efficiency and responsiveness to market demands is critical for delivering exceptional products that delight customers at optimal costs, thereby securing equitable returns for stakeholders. This workshop introduces the "Reliable Manufacturing" concept and explores its diverse application areas.

The session delves into the transformative aspects of mindset, culture, and skill sets, scrutinizing how sponsorship and advocacy can instigate essential changes to enhance reliability in manufacturing and yield positive impacts on the bottom line. The workshop meticulously examines the process of pre-planning improvements, achieving post-application results, and the effectiveness of training in delivering immediate on-the-floor outcomes. It contemplates the essence of application success and how strategic actions can propel tangible advancements in asset reliability, maintenance cost reduction, enhanced production, and decreased energy consumption. A proven reliability matrix is presented as a guiding model for sustained success and measurable improvement.

Central to the workshop is an exploration of how Precision Maintenance fosters skill set development. It underscores that planned maintenance improvement is initiated with precise and documented machine assembly, installation, alignment, and balance retention techniques for direct and belt drive systems. The journey from "good enough" to precision is elucidated through presentations and demonstrations, showcasing the value of an alternative maintenance approach characterized by a known, precise, disciplined, and documented methodology.

Furthermore, the workshop addresses the evolving role of the "owner/operator." Attendees gain insights into the significance of machine operators who comprehend equipment functionality, recognize functional failure modes, and discern early signs of potential breakdowns. With the right tools and training, operators become the

first line of defense against machinery breakdowns. A distinction is made between a mere checklist and a comprehensive asset reliability inspection, emphasizing the outcome—a well-crafted, precisely timed work request.

The overarching goal is to stop the surprises in the middle of the night! By positively influencing unscheduled downtime events, the workshop aims to significantly enhance production cost efficiency, reduce the likelihood of safety incidents, and elevate the quality of everyday life for individuals in the manufacturing realm.

08:30 - 10:00

Energy

Session Chair: Serge Bedard, *Natural Resources Canada*
Room: Ste-Catherine

08:30 "Operating an Energy Efficient and Sustainable Pulp Mill", **Kraig Kent**, *Nalco* 227
09:00 "Heat Management: HISS, a Sootblowing System to Increase Black Liquor Boiler Steam Production and MCR", **Andreas Aspell**, *Heat Manage*
09:30 "Decarbonization of Kraft Pulp Mills: Canadian challenges", **Enrique Mateos-Espejel**, *FPInnovations* 216

10:00 - 10:30

Networking Coffee Break in Tradeshow

10:00 - 11:30

Mill Managers Roundtable (virtual closed session, by invitation only)

Session Chair: Sylvain Bricault and Murray Hewitt, *Domtar*

Safety roundtable: How do you develop leaders that support Safety?

10:30 - 12:00

Papermaking: New Product Development Roundtable

Session Chair: Javad-Reza Saberian, Kruger

Room: Ste-Catherine

- 10:30 "Transformation of a Traditional Printing & Writing Paper Business to Specialty and Packaging Paper", **Jouni Martiskainen**, *Paper Excellence*
- 10:50 "Creating Value Through Product Innovation", **Vincent Leon**, *AFRY* 270
- 11:10 "Developing TMP-based Papers for Food Packaging Applications", **Tony Manfred**, *FPIInnovations* 239
- 11:30 "Improvement of Barrier Properties through the Addition of Cellulose Filaments to the Base Sheet", **François Drolet**, *FPIInnovations* 255
- 11:45 Roundtable Discussion
-

12:00 - 13:30

Networking and Lunch Break

13:30 - 15:00

Tissue Safety - Creating a Culture of Safety

Session Chair: Jessica Carette, Cascades

Room: Ste-Catherine

Interactive safety conversation on creating a culture in health and safety to foster dialogues and exchanges that identify safety challenges, collaborative solutions, and share best practices.

Moderated by **Jessica Carette**, *Cascades*, and featuring **Alfredo Sarli**, *Valmet* and **Pascal Perreault**, *Cascades Tissue Group* – come join the conversation!

BIOFOR : Carbon Management - The value of carbon

Session Chair: Virginie Chambost, President & Principal Consultant, EnVertis

Room: St-Denis

The objective of the session is to provide key information on carbon market with the objective to spark discussions within the forestry industry participants on the potential to generate value from carbon over the longer term especially in the context of 2050 NetZero emissions.

Bioenergy CCS (BECCS) and Bioeconomy Opportunities for Carbon Removal 181
Grace Meikle, Director of Technology Impact Alberta, ERA

Overview of the regulatory carbon market in Quebec 165
Pascal Geneviève, Co-founder and General Director - Carbon Consult Group

Suzano and the Carbon Credits Market 203
Michael Rushton, Chief Operating Officer, Suzano Canada

Placing value on low carbon materials
Davis Chiu, Global Director of Carbon Strategy, Paper Excellence

15:00 - 15:30

Networking Coffee Break in Tradeshow

15:30 - 17:00

Advances in Papermaking Technology - I

Session Chair: Frédéric Parent, FPInnovations

Room: Ste-Catherine

15:30 "Data Integration and Analytics for PaperWeb Inspection", **Pete Angle, Valmet** 247

16:00 "New Application of LWR Cameras in Paper Machine Operations", **Slawek Frackowiak, Industrial Video Solutions** 261

16:30 "Utilizing Turbo Exhaust Heat for Energy Recovery in Papermaking Industry", **Don Whybro**, *Enerquin*

BIOFOR : Carbon Management - CCUS in the Forest Products Industry

Session Chair: Virginie Chambost, *President & Principal Consultant, EnVertis*

Room: St-Denis

The objective of the session is to showcase examples of CCUS technologies focusing on carbon capture, utilisation and storage.

Creating Value from CO₂ - An Ecosystem and Innovation Centered Approach
Frédéric Clerc, *Director, Carbon to Value Initiative and Interim Managing Director URBAN FUTURE LAB, NYU Tandon School of Engineering*

Carbon Capute Using Novel Molten Borate Technology 148
Danielle Colson, *Chief Operating Officer, Mantel*

A Novel Carbon Capture Process for Biogenic Pulp and Paper Emissions Using Solid Filters
Claude Letourneau, *President and Chief Operating Officer, Svante*

CCO₂ from paper mills: a carbon opportunity at low cost and with high value 155
Louis Fradette, *Co-founder - CycleCarbone Inc.*

17:00 - 19:00

Welcoming Reception in Tradeshow

*Please note all schedule is set on Eastern Time

WEDNESDAY FEBRUARY 7, 2024

(On-Site + On-Line)

08:00 - 10:00

BIOFOR Keynotes

Session Chair: Paul Stuart, Polytechnique Montréal and EnVertis

Room: St-Denis

08:00 **KEYNOTE**

"Key Enabling Technologies and Translation of Bioinnovation"

Orlando Rojas, *Bioproducts Institute, University of British Columbia*

293

09:00 **KEYNOTE**

"Development and Commercialization of Forest Based Biomaterials - The Resolute Kenogami mill story"

Gurminder Minhas, *Performance BioFilaments* & **Alain Bourdages**, *Resolute FP*

279

08:30 - 10:00

Process Optimization & Reliability - I

Session Chair: TBA

Room: Ste-Catherine

08:30 "Reality Check: You are not ready for Digital Transformation", **Arnaud**

Deziel-Richer, *Spartakus Technologies*

534

09:00 "Multivariate model-driven approach to establish process

514

specifications", **Vincent Béchard**, *Différence GCS*

09:30 "Valve Condition Monitoring for Better Plant Reliability", **Maxime**

Brisson, *Contrôles Laurentide*

523

Energy Workshop

Session Chair: Bruno Poulin, CanmetENERGY

402

Room: Notre-Dame

A multivariate data analysis tool that transforms existing data into valuable information and knowledge to help understand and improve process operation. Improvements can be achieved through process variability reduction, troubleshooting, process monitoring, soft sensors, and enhanced process control.

10:00 - 10:30

Networking Coffee Break in Tradeshow

10:00 - 11:30

Mill Managers Roundtable (virtual closed session, by invitation only)

Session Chair: Sylvain Bricault and Murray Hewitt, Domtar

Best Practices Roundtable: What are you most proud of at your mill and want to share (best practices)?

10:30 - 12:00

Advances in Papermaking Technology - II

Session Chair: Frederic Parent, FPInnovations

Room: Ste-Catherine

10:30 "Closing the Draw between Press & Dryer Section of a Paper Machine", **Petteri Halme, Valmet** 448

10:50 "An Early Felt Runoff Alarming Strategy", **Nick Stabler, Pneu-Logic** 463

11:10 "Increase Fabrics Cleaning Effectiveness with Reduced Water and Energy ", **Alex Mariano & Ludovic Veyre, Kadant** 482

11:30 "Increase Drying Capacity with Steel Dryers and high-pressure Rotary Joints", **Mike Soucy, Kadant** 457

Energy

Session Chair: Serge Bedard, Natural Resources Canada

Room: Notre-Dame

- 10:30 "Innovative Optimization of Condensing Waste Heat Recovery using Heat Pumps and Mechanical Vapor Recompression", **Antoine Hofer, Thermal Energy** 395
- 11:00 "Energy and GHG reduction in Tissue mills", **Francis Fournier, Kruger** 371
- 11:30 "Lime Kiln Decarbonization via Reactor Modeling", **Peter Gogolek, Canmet Ottawa, Natural Resources Canada** 382

BIOFOR Session: Tomorrow's Talent - Student research presentations

Session Chair: Ivan Kantor and Yaser Khojasteh-Salkuyeh, Concordia University

Room: St-Denis

- 10:30 "Assessing Climate Effects on Canada's Forest Resources: Impact of Drought on Lignin Content and Composition", **Daniel Barker-Rothschild, Bioproducts Institute, Department of Chemical & Biological Engineering, The University of British Columbia** 324
- 10:45 "Pyrolysis of biomass residues: Apparent nuances in product composition and characteristics", **Aravind Ganesan, Université du Québec à Trois-Rivières**
- 11:00 "Solvent Fractionation and Nanoparticle Production to Expand Lignin's Application Scope", **Julia Azzi, Bioproducts Institute, Department of Chemical & Biological Engineering, The University of British Columbia**
- 11:15 "Decarbonization of the jet fuel using biowastes; development of a CO₂-neutral process", **Golnoosh Maleki, Concordia University** 341
- 11:30 "Birch Bark Triterpenes: from Skincare and Foam Bioproducts", **Xun Niu, Bioproducts Institute, Department of Chemical & Biological Engineering, The University of British Columbia** 362
- 11:45 "Validation of a kraft mill process simulation for biorefinery design", **Caroline Brucel, Polytechnique Montréal** 333

12:00 - 13:30

Networking and Lunch Break

13:00 - 16:00

BIOFOR - Visit to FPInnovations

Innovation made real -- visit to FPInnovations

13:30 - 15:00

Innovations in Tissue

Session Chair: Daniel Ricard, FPInnovations

Room: Ste-Catherine

13:30 "Alternative Drying Technology to Reduce/Eliminate CO2 Emissions", **George Nowakowski and Vincent Roy, Andritz**

14:00 "Converting Sustainability: the PARAGON case", **Stefano Spinelli and Jonathon Zahn, PCMC** 567

14:30 TBA

Management

Session Chair: TBA

Room: Notre-Dame

13:30 "How Leaders can Create a Real Rather than Espoused Speak-Up Culture", **George Bower, DEKRA** 416

14:00 "Technical problem solving leading to culture change D-MAIC", **Dominic St-Onge, Différence GCS & Jean-Benoit Thibodeau and Stéphanie Morin, DOMTAR Windsor** 433

14:30 "The Operational Excellence Journey of an Operations VP", **Martin Carignan, Différence GCS & François Aubertin, Consultant** 425

15:00 - 15:30

Networking Coffee Break in Tradeshow

15:30 - 17:00

Process Optimization & Reliability - II

Session Chair: TBA

Room: Ste-Catherine

15:30 "Utilizing Advanced Controls for pH Stability and Chemical Cost Reduction in Mill Effluent Treatment Plants", **Valois Parisien & Benoit Janvier**, *Enero Solutions*

558

16:00 "Return-On-Investment Approach to Papermaking Chemistry", **Joanne Palma**, *Pulp Solutions*

548

*Please note all schedule is set on Eastern Time

THURSDAY FEBRUARY 8, 2024

(On-Line)

08:00 - 10:00

BIOFOR : Lignin

Session Chair: **Michael Paleologou**, *FPInnovations*

08:00 **KEYNOTE**

"Repositioning Kraft Mills for High-Value Co-Products"
Dr. Alexander A. Koukoulas, *AFRY Management Consulting*

595

09:00 **BIOFOR Session - Lignin Products**

“Science evidence in lignin value-addition”

Luana Dessbesell, *Aalto University*

“Self-Polymerization of Softwood Kraft Lignin and its Potential for Wood Adhesive Applications” 579

Daniel Beaudoin, *FPInnovations*

“Amallin in PF and Other Applications” 588

Matyas Kosa, *West Fraser*

09:30 - 10:00

Networking Break

10:00 - 11:30

Papermaking AI & Process Control

Session Chair: Shaune Hanley, *Resolute FP*

10:00 “Quality & Cost Optimization with AI-enabled Refiner Operations - an example of a machine learning approach of optimization of the papermaking process”, **Ram** 642

Santhanam, *HABER* & **Przem Pruszynski**, *Pruszynski Paper Chemistry*

10:30 “Process Evaluation & Optimization using TAPPI Tip 0404-47”, **Daniel** 634

Boren, *Valmet*

11:00 “TBA”, **Jalal Habibi**, *FPInnovations*

Sustainability

Session Chair: TBA

10:00 “Mission ZERO Journey MPR”, **Roger Ashfield**, *Mercer* 653

10:30 “BioBased and Compostable Bioplastics for Paper Lamination”, **Sajjad**

Saeidlou, *National Research Council Canada*

11:00 “Valorization of Hard-to-Recycle Paper Waste”, **Minh Tan Ton-That**, *National Research Council Canada*

BIOFOR Session - NRCan sponsored session on Fiber Futures Project

Session Chair: Bruno Gagnon, *Natural Resources Canada*

Summary of the Fibre Futures Project

Virginie Chambost, *Principal Consultant, EnVertis*

How is the bioeconomy imperative different across Canada?

Madina Muratova, *Process Specialist, EnVertis Consulting and Aalto University*

Business and Innovation Ecosystems – Strategies for catalyzing Europe's bioeconomy

Paul Nemes, *Deputy CEO & Process Leader, Paper Province*

Game-changer: The Canadian business and innovation ecosystem

Paul Stuart, *Principal Consultant, EnVertis Consulting and Polytechnique Montreal*

11:30 - 12:30

Networking and Lunch Break

12:30 - 14:30

BIOFOR Workshop - virtual workshop on Decision Support Systems for Forest Bioeconomy

Session Chair: Marzouk Benali, *Natural Resources Canada - CanmetENERGY*

Speaker: Cédric Diffo Téguia - *Natural Resources Canada - CanmetENERGY*

Decision Support Systems (DSS) play a crucial role in navigating the complex landscape of decision-making within the context of an uncertain business environment, particularly when striving for a low-carbon and sustainable industry. Conflicting pathways and evolving strategies in this dynamic environment can pose significant challenges to project stakeholders, necessitating the adoption of a new paradigm that ensures coherence and flexibility throughout the decision-making chain.

Addressing the complexities of decision-making, bioeconomy stakeholders recognize the need for strategic shifts despite the inherent risks involved. Contrary to being inherently risk-prone, these stakeholders often employ hybrid scenario analysis approaches. These approaches integrate both prospective and ad hoc methods, providing a comprehensive strategy to contend with the uncertainties associated with technical, economic, and policy risks. Moreover, these analyses also consider the social acceptability of bioeconomy projects, recognizing the multidimensional nature of challenges in this domain.

Overall, Decision Support Systems become essential tools in this context, aiding decision-makers in navigating conflicting pathways, assessing risks, and ensuring that the chosen strategies align with the goals of a sustainable industry transformation.

The I-BIOREF decision support tool stands as a cutting-edge system designed for the creation, modeling, and analysis of industrial biorefinery and bioeconomy projects. This state-of-the-art tool guides users through a stepwise process allowing for the comprehensive quantification of technical, economic, environmental, socio-economic, policy and sustainability performances associated with these projects.

Attendees: Please consult the I-BIOREF installer and example of biorefinery projects file:at this link: [ACCESS TO I-BIOREF AND RELATED FILES.](#)

14:00 - 14:30

Networking Break

14:30 - 16:00

TISSUE 101 Refresher Course

Session Chair: Jessica Carette, Cascades, & Martin Desrosiers, Kruger Products

14:30 "Introduction", **Jessica Carette**, *Cascades*

14:50 "Physical Properties", **Daniel Ricard**, *FPInnovations*

15:10 "The Creping Process - An Introduction", **David Welsford**, *Solenis*

15:30 "Refining and Effects on Fibre Properties", **Eric Mercier**, *Andritz* 664

Bleaching

Session Chair: Mona Henderson, Valmet

14:30 "DD washers and Compact press optimization", **Alexandre Slusarek**, *Westrock - Lатуque*

15:00 "Ep Caustic Control Trial", **Brooke Fraser and Megan Froats**, *Domtar - Kamloops* 612

15:30 "Sustainability in the Bleach Plant", **Mona Henderson**, *Valmet*

*Please note all schedule is set on Eastern Time

Additional Papers

The Role of Numerical Tools and Modelling on De-risking FlexSNG 191
Kostis Atsonios

Overcoming Operational Inefficiencies - Bleaching Optimizer Implementation 624
Troy Willis, Risto Ikaheimo