

Pulping  
Engineering  
Environmental  
Recycling  
Sustainability



Technical Solutions  
for Today and Beyond

## PROGRAM TRACKS

Career Development ✓	Corrosion & Materials Engineering	Engineering, Power & Recovery, Recast, & Lime Kiln	Environmental
Nonwood	Pulping & Bleaching	Recycling	Sustainability
IBBC Conference			

## PROGRAM

*AS OF 7-05-18 ( SUBJECT TO CHANGE)*

Sunday, October 28, 2018	
7:30AM – 4:00PM	Bleach Plant Operations Workshop**
8:00 AM – 4:00PM	Brown Stock Washing Workshop**
9:00AM – 2:00PM	Process & Mechanical Overview Workshop of Lime Kiln and Recast Operations**
TBA	Process Simulation Workshop**
12:00PM – 1:00PM	Joint Team Review of Conference Logistics*
1:00PM - 4:30PM	Engineering Division & Pulp Manufacture Division Councils*
4:00PM - 5:00PM	Nonwood Fiber Committee Meeting
4:00PM - 5:00PM	Alkaline Pulping & Bleaching /Fiber Raw Materials Committee Meeting
5:00PM – 7:00PM	Welcome Reception
7:00PM -9:30PM	Awards Dinner

\*Members Only

\*\* Additional registration fee required

## Monday, October 29, 2018

<b>7:00AM – 8:15AM</b>	<b>Speaker Breakfast</b>
<b>8:30AM – 10:00AM</b>	<b>Session 1: Opening Session &amp; Keynote ✓</b> <b>Session Chair:</b> <b>John Carpenter, President, Nippon Dynawave Packaging</b>
<b>10:00AM– 10:30AM</b>	<b>Break</b>
<b>10:30AM-12:30PM</b>	<b>Session 2: Alkaline Pulp/Career Development (Research)✓</b> <b>Session Chair: <i>Brian Brogdon, Future Bridge Consulting Services, LLC</i></b>
	<p>Catalytic Oxidation of Wood Using Cobalt Schiff Base Compounds - <i>Alan Rudie, Forest Products Laboratory</i></p> <p>Technological Evaluation of Pinus Maximinoi Wood for Industrial Use in Kraft Pulp Production - <i>Marina Coêlho, University of São Paulo</i></p> <p>Validation of a Modified Bertly Reactor for Studying the Intrinsic Kinetics and Selectivity of Oxygen Delignification of Southern Pine Kraft Pulp - <i>Azadh Pahlevanza, University of Maine</i></p>
<b>10:30AM-12:30PM</b>	<b>Session 3: State of the Industry ✓</b> <b>Session Chair:</b>
	<p>State of the Industry – <i>David Turpin, APPTI</i></p> <p>Managing Investing Decisions in Pulp and Paper Industry - <i>Gagandeep Issar, Enerflex</i></p>
<b>10:30AM-12:00PM</b>	<b>Engineering Division Committee of Chairs Meeting*</b> <b>Energy, Recovery and Recaust Steering Committee Meeting*</b>
<b>12:00PM – 1:30PM</b>	<b>Lunch</b>
<b>1:30PM – 3:00PM</b>	<b>Energy, Recovery and Recaust Main Committee Meeting</b>
<b>1:30PM – 3:00PM</b>	<b>Session 4: New Technology Showcase</b> <b>Session Chair:</b>
	<p>NeuroDIC Software for Quantification of the Volume of Stacked Wood - <i>Harliany Matias, HaDa Tecnologiz</i></p>
<b>1:30PM – 3:30PM</b>	<b>Session 5: Brownstock Washing</b> <b>Session Chair: <i>Mathias Lindström, International Paper</i></b>
	<p>How to Use TDS Measurements for Evaluating the Performance of Diffuser Washers-Mill Study - <i>Riku Kopra, South-Eastern Finland University of Applied Sciences, Fiber Laboratory</i></p> <p>Fast and Accurate Online Measurement of Differentiated Lignin and HexA Kappa Numbers Leads to Improved Fiberline Control - <i>Niclas Andersson, BTG Instruments</i></p>


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	Novel Chemistries Enable Pulp Mills to Recover Lost Washing Efficiency - <i>Harold Petke, Solenis</i>
<b>1:30PM – 3:30PM</b>	<b>Session 6: Young Professionals Panel ✓</b> <b>Session Chair:</b>
<b>1:30PM – 3:30PM</b>	<b>Session 7 Recycling for Tissue Production Panel</b> <b>Session Chair:</b>
<b>3:00PM – 3:30PM</b>	<b>Break</b>
<b>3:30PM – 5:00PM</b>	<b>Session 8: Bleaching Optimization ✓</b> <b>Session Chair: Tom Mullen, Process Innovations</b>
	pH in the Bleach Plant-Why It's Important and What to Do About It-Part I: ClO <sub>2</sub> Stages - <i>Doug Reid, AkzoNobel Pulp and Performance Chemicals</i>  Evaluating Washer Carryover on the Optimization of Elemental Chlorine-Free (ECF) Bleaching Sequences by Using Steady-State Models - <i>Brian Brogdon, Future Bridge Consulting Services, LLC</i>  Mill Implementation of the Near-Neutral Chlorine Dioxide Brightening Technology at Domtar Johnsonburg – <i>Michael J. Subilia II, Domtar</i>
<b>3:30PM - 5:00PM</b>	<b>Committee Meetings:</b> Energy Subcommittee (ERR) Lime Kilns & Recaust Subcommittee (ERR) Recovery & Power Boilers Subcommittee (ERR) Water Treatment Subcommittee (ERR) Environmental & Sustainability Working Group Plant Engineering & Project Management
<b>3:30PM - 5:00PM</b>	<b>Session 9: Recycling</b> <b>Session Chair:</b>
	Disc Filter Total Care-Keeping Your Filter from Becoming a Money Pit - <i>Mick Wert &amp; Nicolas Reinke, Voith</i>  Cleaner Efficiency Determination via Sequential Extraction in OCC Pulp - <i>Ashok Ghosh, WestRock</i>  Using Intelligent Cameras in Pulp Production - <i>Petri Karhula, Procemex, Inc.</i>

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<b>3:30PM - 5:00PM</b>	<b>Session 10: Nonwood</b> <b>Session Chair:</b>
	Pulping and Bleaching of Wheat Straw and Oat Straw - <i>Robert (Bob) Hurter, HurterConsult, Inc.</i>  Characteristics and potential of sulfur-free nonwood lignin, <i>Sabrina Burkhardt, Sustainable Fiber Technologies</i>  TBA, <i>Mark Lewis, Sustainable Fiber Technologies</i>
<b>5:00PM-6:30PM</b>	<b>Reception</b>
<b>7:00PM-9:00PM</b>	<b>PEERS Conference Networking Dinner**</b> Sponsored by: 
<b>Tuesday, October 30, 2018</b>	
<b>6:45AM - 8:30AM</b>	<b>Hot Topic Breakfast</b>
<b>7:00AM – 8:00AM</b>	<b>Paper Chase</b>
<b>7:00AM – 8:15AM</b>	<b>Speaker Breakfast</b>
<b>8:30AM – 10:00AM</b>	<b>Session 1: IBBC Keynote</b> <b>Session Chair: R. Daniel Haynes, AkzoNobel Specialty Chemicals</b>
<b>8:30AM – 10:00AM</b>	<b>Corrosion &amp; Materials Engineering Main Committee</b>
<b>8:30AM – 10:00AM</b>	<b>Session 11: Lime Kiln Refractories</b> <b>Session Chair: Ray Leary, Houghton Cascade Holdings LLC</b>
	Refractory Brick Installation Guidelines for Increased Kiln Reliability - <i>Christopher Hersh, Harbison Walker International</i>  Selection of Refractories in Lime Sludge Kilns to Balance Cost and Efficiency - <i>Chris Macey, RESCO Products, Inc.</i>  Energy Saving Refractory Products to Reduce Your Carbon Footprint - <i>Garret Pair, Refratechnik North America, Inc.</i>

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<b>8:30AM – 10:00AM</b>	<b>Session 12: Waste Water Treatment Advances</b> <b>Session Chair:</b>
	Odor Control Using Aeration Technologies in Water Treatment - <i>Mike Spillner, Mazzei Injector Company</i>  A Review of Phosphorus Removal Technologies for Pulp and Paper Wastewater Treatment Plants - <i>Heather Jennings, Probiotic Solutions</i>  TBA, <i>presentation by NCASI</i>
<b>8:30AM – 10:00AM</b>	<b>Session 13: Liquor Chemistry &amp; Control ✓</b> <b>Session Chair:</b>
	Soap Separation-A New Option for Removal of NPEs - <i>Karin Lindgren, RISE Bioeconomy</i>  The solubility of Calcium Carbonate in Green Liquor Handling Systems - <i>Alisha Giglio, University of Toronto</i>  Use of Direct Steam Injection to Control Black Liquor Temperature and Ensure Optimal Drop Size - <i>Shawn Berg, Hydro-Thermal Corporation</i>
<b>10:00AM – 10:30AM</b>	Break
<b>10:30AM – 12:30PM</b>	<b>Session 14: Bleaching Chemical</b> <b>Session Chair: Ashok Ghosh, WestRock</b>
	Are There Advantages to Using 50% versus 10% Strength Peroxide in Pulp Bleach Plants? - <i>Peter Hart, WestRock</i>  Advances in the ERCO Smarts APC - <i>Faizi Roy Ramjohn, ERCO Worldwide</i>  Singlet Oxygen Generated Onsite for Safely Augmenting or Replacing Existing Chlorine Bleaching Stages - <i>Wayne Buschmann, Clean Chemistry, Inc.</i>  Economic Fundamentals of Ozone Bleaching - <i>Alexis Metais, Xylem</i>
<b>10:30AM – 12:00PM</b>	<b>Session 15: Combustion &amp; Emission</b> <b>Session Chair: John LaFond, Jansen Combustion &amp; Boiler Tech. Inc.</b>
	Impact of Wood species on Biomass Combustion - <i>Naz Orang, University of Toronto</i>  Reduction of Particulate and NOX Emissions from Kraft Recovery Boilers Using Catalytic Filtration Technology - <i>Jim Wearing, Noram Engineering &amp; Construction Ltd.</i>  Factors Impacting CO and NOX Emissions on Biomass-Fired Stoker Boilers - <i>Marcel D. Berz, Jansen Combustion and Boiler Techn., Inc.</i>
<b>10:30AM – 12:00PM</b>	<b>Session 16: Project Management Panel Discussion</b> <b>Session Chair: Qiang Han, International Paper</b>

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10:30AM – 12:00PM	<b>Session 17: Refractory Installation Panel Discussion</b> <b>Session Chair: J. Peter Grogg, Houghton Cascade Holdings, LLC</b>
10:30AM – 12:00PM	<b>Session 18: Optical Properties, Stickies, and Strength Tutorial</b> <b>Session Chair: Carl Houtman, US Forest Products Laboratory</b>
10:30AM – 12:00PM	<b>Session 2: Thermoconversion</b> <b>Session Chair: Sudhagar Mani, University of Georgia</b>
	Torrefied Biomass-Technology Status, Supply chain Evaluation and Comparison - <i>Michael Wild, International Biomass Torrefaction Council</i>  Licensing Torrefaction and Densification Technologies - <i>Hiroshi Morihara, HM3 Energy</i>
12:00PM – 1:00PM	<b>Biorefinery Committee</b>
12:00 PM – 1:20 PM	2019 PEERS Tech Program Planning Meeting
12:00PM – 1:30PM	<b>Lunch</b>
1:30PM – 2:30PM	<b>Fiber Recycling Committee</b> <b>Environmental &amp; Sustainability Working Group</b>
1:30PM – 3:00PM	<b>Session 19: Managing Mill Processes ✓</b> <b>Session Chair: Chris Jackson, Nautilus Loss Control, LLC</b>
	The Sticky Behavior of Pulp and Paper Biosludge - <i>Geanna Hovey, University of Toronto</i>  Most Typical Failures in Kraft Recovery Boilers-A Statistical Approach - <i>Keijo Salmenoja, ANDRITZ, Oy</i>  Managing Evaporator Fouling for Operational Efficiency - <i>Andrew Anacker, Lundberg, LLC; Jarmo Kaila, Andritz</i>
1:30PM – 3:00PM	<b>Session 20: Oxygen Delignification</b> <b>Session Chair: Hasan Jameel, North Carolina State University</b>
	More Efficient Oxygen Delignification - <i>Philip Hoekstra, Buckman Laboratories</i>  Oxygen Delignification Performance, Caustic Soda vs. Unoxidized White Liquor-A Mill Study - <i>Bruno Goncalves, Spark Consultoria</i>  Gas Dispersion in the Oxygen Delignification Process - <i>Jari Käyhkö, XAMK/Fiber Laboratory</i>
1:30PM – 4:00PM	<b>Session 21: Improved Kiln Operation &amp; Efficiency I ✓</b> <b>Session Chair: Wei Ren, FPInnovations</b>
	From Physical Modelling to CFD:-20 Years of Development in Kiln Modelling Techniques - <i>Martin Beddows, KFS</i>  Influence of CFD on Lime Sludge Kiln Burner Design - <i>Adriano Greco, FCT Combustion</i>  Using Wood Powder as Fuel in Lime Kilns - <i>Suzanne Wind, Valmet</i>  Kiln Axis Survey “Alignment Methodology to Increase Accuracy” - <i>Glenn Hanson, Industrial Kiln &amp; Dryer Group</i>

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<b>1:30PM – 3:00PM</b>	<b>IBBC Session 3: Biorefinery Infrastructure</b> <b>Session Chair:</b>
	Failure Analysis of Wood Gasifier Vessels - <i>James Keiser, Oak Ridge National Laboratory</i>  TBA – <i>Jean-Pierre Bousquet, Valmet</i>  Techno-Economic Assessment of Pulp Mill Infrastructure Integration with the Alcohol-to-Jet Pathway for Aviation Fuel Production - <i>Scott Geleyense, Washington State University</i>
<b>3:00PM – 3:30 PM</b>	<b>Break</b>
<b>3:30PM – 5:00PM</b>	<b>Session 22: Pacific Northwest TAPPI Local Section Panel Discussion</b> <b>Session Chair: Alistair Twaddle, International Paper</b>
	Chip Supply Issues-Quality and Quantity in Pacific Northwest (Hosted by NW TAPPI)
<b>3:30PM – 5:00PM</b>	<b>Session 23: Automation Panel Discussion</b> <b>Session Chair: Ben Bunner, Andritz</b>
	<b>Panelists:</b> Chris Sousa, Andritz TBA, Valmet
<b>3:30PM – 5:00PM</b>	<b>Session 24: Detrashing Panel Session ✓</b> <b>Session Chair:</b>
<b>3:30PM – 5:00PM</b>	<b>Session 25: Environmental ✓</b> <b>Session Chair:</b>
	Carbon Tax Legislation Oregon Air Toxics Challenges in Power Generation Unachievable Permitting Requirements
<b>3:30PM – 5:30PM</b>	<b>Session 26:</b> <b>Session Chair:</b>
	<i>Corrosion and Scale Problems in Recovery and Power Boilers in Pulp and Paper Operations - Chad Frierson, ChemTreat</i>  <i>RoHS: 10 Years Later-Process Control Equipment corrosion Issues Remain - Christopher Muller, Purafil, Inc.</i>  <i>Corrosion Resistant FRP Equipment for Pulp and Paper - Kevin Lambrych, Ashland</i>  <i>In-Service Nonmetallic Inspections and Reliability - Michael Yee, RTConsults, LLC</i>

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<b>3:30PM – 5:00PM</b>	<b>IBBC Session 4: Rapid Fire Showcase</b> <b>Session Chair: Jean-Pierre (JP) Bousquet, Valmet</b>
<b>5:00PM - 6:30PM</b>	Reception & IBBC Poster Session
<b>6:30PM -7:30PM</b>	Young Professionals Mixer
<b>Wednesday, October 31, 2018</b>	
<b>6:45AM - 8:30AM</b>	<b>Hot Topic Breakfast</b>
<b>7:00AM – 8:15AM</b>	<b>Speaker Breakfast</b>
<b>8:30AM-10:00AM</b>	<b>Session 27: Material Handling Panel ✓</b> <b>Session Chair:</b>
<b>8:30AM-10:00AM</b>	<b>Session 28: Stainless Steels and Specialty Alloys for Pulp, Paper and Biomass Conversion-18 Years Later Panel Discussion ✓</b> <b>Session Chair:</b>
<b>8:30AM-10:00AM</b>	<b>Session 29: TAPPI- TIPS Panel/Discussion</b> <b>Session Chair: Tom Mullen, Process Innovations</b>
<b>8:30AM-10:00AM</b>	<b>Session 30: Bi-Product Sustainability</b> <b>Session Chair: Jack Porter, FITNIR Analyzers, Inc.</b>
	Reuse of CO2 in Pulp Mills - <i>Katja Kuparinen, Lapeenranta University of Technology</i>  Methanol, From Waste Byproduct to Valuable Fuel - <i>Olle Wennberg, Valmet</i>  What Happens When the Fiber Disappears? - <i>Bill Nichols, KBR</i>
<b>8:30AM – 10:00AM</b>	<b>Session 31: Improved Kiln Operation &amp; Efficiency II</b> <b>Session Chair: Subra Arasakesari, International Paper</b>
	The Mechanical Effects on the Rotary Kiln When Increasing the Production Cycle from 12 Months to 18 Months in the Pulp and Paper Industry - <i>Andrew Wisner, Andritz</i>  Proactive Ring Removal in the Lime Recovery Kilns - <i>Jim Conover, Mole Master Services Corporation</i>  Lime Kiln Control Design for Perpetual Performance and Profit - <i>Michael Simpson, Emerson</i>
<b>8:30AM – 10:00AM</b>	<b>IBBC Session 5: Lignin to Whatever</b> <b>Session Chair</b>
	Unlocking the Potential of Industrial Grade Lignin for Enhancing Sustainability and Performance of the Polyurethane Insulation Foam – <i>Pratheep Kumar Annamalai, The University of Queensland</i>  Fractionation of Lignin Recovered from Hot-Water Extracts of Angiosperms and its Applications in Synthesis of Lignin-Based Products – <i>Aditi Nagardeolekar, SUNY-ESF</i>

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	Selecting Solvents for Lignin Value Prior to Pulping - <i>Thomas T. Kwok, Georgia Institute of Technology</i>
<b>10:00AM – 10:30AM</b>	<b>Break</b>
<b>10:30AM – 12:00PM</b>	<b>Session 32: Improving Operations Through Simulations</b> <b>Session Chair: Andy Jones, International Paper</b>
	Dynamic Modelling of a Kraft Pulp Mill-Batch Wise Purging of Recovery Boiler Dust - <i>Johan Wallinder, RISE Bioeconomy</i>  Controlling Mill Power Plant Parasitic Costs While Optimizing Productivity, Safety & Environmental Compliance via Tramp Air control - <i>Patrick Fitzgerald, High Temperature Technologies</i>  Development and Application of an Object-Oriented Simulation Tool for Kraft Recovery Processes - <i>Michael Erbes, Enginomix</i>
<b>10:30AM – 12:00PM</b>	<b>Session 33: Pulping Non-Process Elements</b> <b>Session Chair: Sabrina Burkhardt, Sustainable Fiber Technologies</b>
	Chemical and NPE Balances when using Oxidized White Liquor in the Bleach Plant Extraction Stage - <i>Tom Mullen, Process Innovations</i>  Digester Scale Control: Fundamentals and Best Practices for Responding to Process Variations - <i>Michael Wang, Solenis, LLC</i>  Green Liquor Scaling - <i>Peter Hart, WestRock</i>
<b>10:30AM – 12:00PM</b>	<b>Session 34: Evaporator Panel Discussion</b> <b>Session Chair: Pasi Miikkulainen, Andritz Inc.</b>
<b>10:30AM – 12:00PM</b>	<b>Session 35: Reliability Panel Discussion</b> <b>Session Chair:</b>
<b>10:30AM – 12:00PM</b>	<b>Session 36: Energy Optimization ✓</b> <b>Session Chair: Danny Tandra, Clyde Bergemann Power Group</b>
	Paper Mill Power Plant Optimization-Realizing the Value of Low Pressure Steam - <i>Ricardo Santos, WestRock</i>  Kraft Pulping Warm and Hot Water System Strategies - <i>James Cantrell, Jacobs Engineering</i>  Optimization of Turbine Governors Performance for Improved Plant Operation - <i>Ben Janvier, Enero Solutions</i>
<b>10:30AM – 12:00PM</b>	<b>IBBC Session 6: Value Added Products Part I</b> <b>Session Chair:</b>
	Turning Bio-Sludge into Bio-Carbon Through Zero-Energy Hydrothermal Carbonization - <i>Peter Axegård, C-Green AB</i>  Alternative Pulping Process for Paper and High Value-Added Biochemical Production - <i>Ali Manesh, American Science &amp; Technology Co.</i>

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	Mechanical Pulp with Added Value Products and Lower COD - <i>Oleg Shagaev, Andritz AG</i>
<b>12:00PM – 1:00PM</b>	<b>18 PEERS Conference Critique Committee Meeting*</b>
<b>12:00PM</b>	<b>PEERS Concludes</b>
<b>1:30PM - 3:00PM</b>	Corrosion & Materials Engineering Steering Committee Meeting*
<b>1:30PM – 3:00PM</b>	<b>IBBC Session 7: Value Added Products Part 2</b> <b>Session Chair:</b>
	TBA  Imagine Chemistry-An Open Innovation Approach to Sustainability Across the Manufacturing Process - <i>Danny Haynes, AkzoNobel Specialty Chemicals</i>  Production of Sulfuric Acid from the Incineration of Pulp Mill Non-Condensable Gases-A biorefinery Concept - <i>Naveen Chenna, Valmet Technologies, OY</i>
<b>3:00PM – 3:30PM</b>	<b>Break</b>
<b>3:30PM – 5:00PM</b>	<b>IBBC Session 8: Nano Technology</b> <b>Session Chair:</b>
	Transparent and Homogenous Cellulose Nanocrystal-Lignin UV Protection Films - <i>Mahesh Parit, Auburn University</i>  Towards Standardization of Laboratory Preparation Procedure for Uniform Cellulose Nanopapers - <i>Mahesh Parit, Auburn University</i>  Effects of Fiber Morphological Characteristics on Selected Properties of Fiberboard - <i>Babak Mirzaei, Collins Company</i>
<b>5:00</b>	<b>IBBC Concludes</b>

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