

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 10-24-18 ( SUBJECT TO CHANGE)*

Sunday, October 28, 2018	
7:30AM – 4:00PM	Bleach Plant Operations Workshop**
8:00AM – 4:00PM	Brown Stock Washing Workshop**
8:00AM – 4:00PM	Process Simulation Workshop**
9:00AM – 2:00PM	Lime Kiln & Recast: Process & Mechanical Overview 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 Committee Meeting
5:00PM – 7:00PM	Welcome Reception & Exhibit
7:00PM -9:30PM	Awards Dinner*

\* Invitation Only

\*\* Additional registration fee required

\*\*\* Pre-registration 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: <i>Mark P. LeBel, Andritz</i></b> <b>Nippon Paper Industries – Shaping the Future with Trees</b> <b>Keynote: <i>John Carpenter, President, Nippon Dynawave Packaging</i></b>
<b>10:00AM – 10:30AM</b>	<b>Break</b>
<b>10:30AM – 12:00PM</b>	<b>Session 2: Bleaching Optimization ✓</b> <b>Session Chair: <i>Tom Mullen, Process Innovations</i></b>
	<p>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></p> <p>Using Multistage Models to Evaluate How Pulp Washing after the First Extraction Stage Impacts Elemental Chlorine-Free Bleach Demand - <i>Brian N. Brogdon, Future Bridge Consulting Services, LLC</i></p> <p>Implementation of the Near-Neutral Chlorine Dioxide Brightening Technology at Domtar Johnsonburg Mill – <i>Michael J. Subilia II, Domtar</i></p>
<b>10:30AM – 12:00PM</b>	<b>Session 3: State of the Industry ✓</b> <b>Session Chair: <i>Daniel A. Curry, TRC Environmental Corporation</i></b>
	Partnerships for Technology Challenges Panel Discussion Moderator: <i>David Turpin, APPTI</i>  <b>Panelists:</b> <i>Peter W. Hart, WestRock</i> <i>Fritz Paulsen, KapStone Paper &amp; Packaging Company</i> <i>Anthony Murray, Kadant</i> <i>Alan Rudie, USDA Forest Products Laboratory</i> <i>Scott Sinquefield, Georgia Institute of Technology</i> <i>Adriaan van Heiningen, University of Maine</i>
<b>10:30AM – 12:00PM</b>	<b>Energy, Recovery and Reconst Steering Committee Meeting*</b>
<b>12:00PM – 1:30PM</b>	<b>Lunch &amp; Exhibit</b>
<b>12:00PM – 1:20PM</b>	<b>Engineering Division Committee of Chairs Meeting*</b>
<b>1:30PM – 3:00PM</b>	<b>Energy, Recovery and Reconst Main Committee Meeting</b>
<b>1:30PM – 3:00PM</b>	<b>Session 4: New Technology Showcase</b> <b>Session Chair: <i>Randy Stern, Valmet</i></b>

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	<p>NeuroDIC Software for Quantification of the Volume of Stacked Wood - <i>Harliany Matias, HaDa Tecnologiz</i></p> <p>Old Drum Washer Updating and Consumption Reduction – <i>Henry Chen, Wenrui Machinery (Shandong) Co., Ltd.</i></p> <p>NORAM’s TurboScrubber® - Bleach Plant Scrubber - <i>Rohan Bandekar, Noram Engineering and Constructors Limited</i></p> <p>Residual Compressive Stress as a Crack Arrest Method - <i>Diana Echols, Fatigue Technology</i></p> <p>High Speed Centrifugal Separator Technology for Upgrading Soap Recovery at Kraft Mills - <i>Marc Sabourin, HEAD Engineering AB</i></p> <p>ECHOWISE - Listening to Your System - <i>Tom Holm, Buckman International</i></p> <p>Clyde Bergemann’s Certified Lance &amp; Feed Tubes - <i>Ishaq Jameel, Clyde Bergemann Power Group Americas Inc.</i></p> <p>Drones for Internal Inspections - <i>Christian Smith, Interactive Aerial, Inc.</i></p> <p>FT-NIR Measurement Of Solids and Lignin for Next Generation Digester Control – <i>Cheryl Sewell, FITNIR Analyzers, Inc.</i></p> <p>Development and Application of an Object-Oriented Simulation Tool for Kraft Recovery Processes - <i>Michael Erbes, Enginomix, LLC</i></p>
<b>1:30PM – 3:00PM</b>	<p><b>Session 5: Brownstock Washing</b>  <b>Session Chair: <i>Mathias Lindström, International Paper</i></b></p>
	<p>How to Use TDS Measurements to Evaluate 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> <p>Novel Chemistries Enable Pulp Mills to Recover Lost Washing Efficiency - <i>Harold Petke, Solenis, LLC</i></p>

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<b>1:30PM – 3:00PM</b>	<b>Session 6: Subject to Debate ✓</b>
	<p><b>Moderators:</b>  <i>Kimberly Cowan, PULMAC Systems</i>  <i>Heather Jennings, Probiotic Solutions</i>  <i>Thomas T. Kwok, Georgia Institute of Technology</i>  <i>Michael J. Subilia II, Domtar</i></p>
<b>1:30PM – 3:00PM</b>	<b>Session 7: TBA</b>
<b>3:00PM – 3:30PM</b>	<b>Break &amp; Exhibit</b>
<b>3:30PM – 5:00PM</b>	<b>Session 8: Advances in Pulping and Bleaching ✓</b> <b>Session Chair: <i>Brian N. Brogdon, Future Bridge Consulting Services, LLC</i></b>
	<p>Catalyzed Pulping Using Cobalt Salcomine - <i>Alan Rudie, USDA Forest Products Laboratory</i></p> <p>Technological Evaluation of <i>Pinus Maximinoi</i> Wood for Industrial Use in Kraft Pulp Production- <i>Flaviana Reis Milagres, Klabin S.A.</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>3:30PM – 5:00PM</b>	<p><b>Committee Meetings:</b>  <b>Energy Subcommittee (ERR)</b>  <b>Lime Kilns &amp; Reaust Subcommittee (ERR)</b>  <b>Recovery &amp; Power Boilers Subcommittee (ERR)</b>  <b>Water Treatment Subcommittee (ERR)</b>  <b>Corrosion &amp; Materials Engineering Main Committee</b>  <b>Environmental &amp; Sustainability Working Group</b></p>
<b>3:30PM – 5:00PM</b>	<b>Session 9: Recycling</b> <b>Session Chair: <i>Cesar I. Basilio, Thiele Kaolin Company</i></b>
	<p>Disc Filter Total Care-Keeping Your Filter from Becoming a Money Pit - <i>Mick Wert &amp; Nicolas Reinke, Voith</i></p> <p>Cleaner Efficiency Determination via Sequential Extraction in OCC Pulp - <i>Ashok Ghosh, WestRock</i></p> <p>Using Intelligent Cameras in Pulp Production - <i>Petri Karhula, Procemex Ltd.</i></p>

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<b>3:30PM – 5:00PM</b>	<b>Session 10: Nonwood</b> <b>Session Chair: Gary Breaux, Solvay</b>
	Pulping and TCF Bleaching of Canadian Wheat Straw and Oat Straw - <i>Robert (Bob) Hurter, HurterConsult, Inc.</i>
	Characteristics and Potential of Sulfur-Free Nonwood Lignin – <i>Sabrina J. Burkhardt, Sustainable Fiber Technologies</i>
	Cannabis, a Higher Style of Pulping - <i>Mark Lewis, Sustainable Fiber Technologies</i>
<b>5:00PM – 6:30PM</b>	<b>Reception &amp; Exhibit</b>
<b>7:00PM – 9:00PM</b>	<b>PEERS Conference Networking Dinner**</b> <b>Sponsored by:</b> 
<b>Tuesday, October 30, 2018</b>	
<b>6:45AM – 8:30AM</b>	<b>Hot Topics Breakfast I ***</b>
	Bleach Plant Scale Control Moderator: <i>Peter W. Hart, WestRock</i>
	Nonwood Moderator: <i>Mark Lewis, Sustainable Fiber Technologies</i>
	Bleach Plant Optimization: Where to Use the Various Bleaching Chemicals in Bleaching Sequence Moderator: <i>Brian N. Brogdon, Future Bridge Consulting Services LLC</i>
	Black Liquor Firing Techniques Moderator: <i>Pasi H. Miikkulainen, Andritz</i>
	Overview of APPTI Alliance Moderator: <i>David Turpin, APPTI</i>
	Tariff Impacts to the Paper Industry Moderator: <i>Meg Murphy, Felker Brothers</i>
<b>6:45AM – 8:00AM</b>	<b>PaperChase Fun Run/Walk**</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>The Pulp and Paper Industry - What Do You See?</b> <b>Martin Pudlas, VP Operations and Innovation - Canfor Pulp</b>
<b>8:30AM – 10:00AM</b>	<b>Plant Engineering &amp; Project Management Committee</b>

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<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>Chris Hersh, HarbisonWalker International</i>  Best Practices and Guidelines for Selection of Refractories in Lime Recovery Kilns - <i>Chris Macey, RESCO Products, Inc.</i>  An Energy Saving Basic Lining Concept For Rotary Kilns - <i>Kevin Regan, Refratechnik North America, Inc.</i>
<b>8:30AM – 10:00AM</b>	<b>Session 12: Waste Water Treatment Advances</b> <b>Session Chair: Barry Malmberg, NCASI</b>
	A Review of Phosphorus Removal Technologies for Pulp-and-Paper Wastewater Treatment Plants – <i>Heather Jennings, Probiotic Solutions</i>  Venturi Injection in Pulp Mills - <i>Mike Spillner, Mazzei Injector Company, LLC</i>  Membrane BioReactor Treatment – Kraft Pulping Wastewater Experience - <i>Andrew Hodgkinson, Jacobs Consultancy</i>
<b>8:30AM – 10:00AM</b>	<b>Session 13: Liquor Chemistry &amp; Control ✓</b> <b>Session Chair: Pasi H. Miikkulainen, Andritz</b>
	Soap Separation - A New Option for Removal of NPEs - <i>Karin Lindgren, RISE Bioeconomy (Former Innventia)</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 W. Hart, WestRock</i>  Comparing Advanced Process Control Techniques For Control Of Chlorine Dioxide Plants In The Pulp And Paper Industry - <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 Métais, Xylem Inc.</i>

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<b>10:30AM – 12:00PM</b>	<b>Session 15: Combustion &amp; Emission</b> <b>Session Chair: <i>John LaFond, Jansen Combustion &amp; Boiler Tech. Inc.</i></b>
Joint Session: Engineering, Power & Recovery, Recaust, & Lime Kiln / Environmental	The Density Change of Biomass During Combustion – <i>Honghi Tran, University of Toronto</i>  Reduction of Particulate and NO <sub>x</sub> Emissions from Kraft Recovery Boilers Using Catalytic Filtration Technology - <i>Jim Wearing, Noram Engineering &amp; Construction Ltd.</i>  Factors Impacting CO and NO <sub>x</sub> Emissions on Biomass-Fired Stoker Boilers - <i>Marcel D. Berz, Jansen Combustion and Boiler Technologies, Inc.</i>
<b>10:30AM – 12:00PM</b>	<b>Session 16: Project Management Panel Discussion</b> <b>Moderator: <i>Qiang Han, International Paper</i></b>
	<b>Panelists:</b> <i>David Mead, Independent Project Analysis (IPA)</i> <i>Scott Curry, CQ Strategy Ltd.</i> <i>Ryan Mangan, MEGI Engineering Inc.</i> <i>Billy Ours, Kiewit</i>
<b>10:30AM – 12:00PM</b>	<b>Session 17: Refractory Installation Panel Discussion</b> <b>Moderator: <i>J. Peter Gorog, Houghton Cascade Holdings, LLC</i></b>
	<b>Panelists:</b> <i>Tim Baker, JT Thorpe and Son</i> <i>Len Demos, Thorpe Canada Construction and Refractory</i> <i>Cody Riezorek, Thorpe Canada Construction and Refractory</i> <i>David Hampton, Thorpe Plant Services</i>
<b>10:30AM – 12:00PM</b>	<b>Session 18: Optical Properties, Stickies, and Strength Tutorial</b> <b>Session Chair: <i>Carl J. Houtman, USDA Forest Products Laboratory</i></b>
<b>10:30AM – 12:30PM</b>	<b>Session 2: Torrefaction and Densification Technologies</b> <b>Session Chair: <i>Sudhagar Mani, University of Georgia</i></b>
	Torrefied Biomass - Status of Development, Market Requirements, Supply Chain Evaluation and Comparison - <i>Michael Wild, Wild &amp; Partner, LLC</i>  Integrated Biomass Torrefaction and Densification Plant: Process Modeling and Plant Economics - <i>Sudhagar Mani, University of Georgia</i>  Licensing Patented TorrB <sup>®</sup> Technology - <i>Hiroshi Morihara, HM<sup>3</sup> Energy</i>  High Moisture Pelleting Studies in a Pilot Scale Ring Die Pellet Mill with 1 ton/h Throughput - <i>Jayashankar Tumuluru, Idaho National Laboratory (INL)</i>
<b>12:00PM – 1:20PM</b>	<b>2019 PEERS Tech Program Planning Meeting</b>
<b>12:00PM – 1:30PM</b>	<b>Lunch</b>
<b>12:30PM – 1:30PM</b>	<b>Biorefinery Committee</b>

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<b>1:30PM – 2:30PM</b>	<b>Fiber Recycling Committee</b>
<b>1:30PM – 3:00PM</b>	<b>Session 19: Managing Mill Processes ✓</b> <b>Session Chair: Christopher E. Jackson, Nautilus Loss Control, LLC</b>
	The Sticky Behavior of Pulp and Paper Biosludge During Drying - <i>Geanna Hovey, University of Toronto</i>  Most Typical Failures in Kraft Recovery Boilers-A Statistical Approach - <i>Keijo Salmenoja, ANDRITZ, Oy</i>  Drones for Internal Inspections & Beyond - <i>Christian Smith, Interactive Aerial, Inc.</i>
<b>1:30PM – 3:00PM</b>	<b>Session 20: Oxygen Delignification</b> <b>Session Chair: John DeJarnette, WestRock</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, South-Eastern Finland University of Applied Sciences, Fiber Laboratory</i>
<b>1:30PM – 3:30PM</b>	<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>  Wood Powder as Fuel in Lime Kilns – <i>Carsten Jensen, Valmet</i>  Alignment Methodology to Increase Accuracy – <i>Tom Zhang, Industrial Kiln &amp; Dryer Group</i>
<b>1:30PM – 3:00PM</b>	<b>IBBC Session 3: Biorefinery Infrastructure</b> <b>Session Chair: Scott Curry, CQ Strategy Ltd.</b>
	Failure Analysis of Wood Gasifier Vessels - <i>James Keiser, Oak Ridge National Laboratory</i>  Valmet's "BIO" Efforts – <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>

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<b>3:30PM – 5:00PM</b>	<b>Session 22: Chip Supply/Chip Quality Panel Discussion</b> <b>Moderator: <i>Alastair Twaddle, International Paper</i></b>
	<b>Panelists:</b> <i>William S. Fuller, FRM Consulting</i> <i>Steve Jones, Peterson Pacific</i> <i>Joel Swanton, F2M</i> <i>James Erickson, Kapstone</i>
<b>3:30PM – 5:00PM</b>	<b>Session 23: Automation Panel Discussion</b> <b>Moderator: <i>Ben Bunner, Andritz</i></b>
	<b>Panelists:</b> <i>Chris Sousa, Andritz</i> <i>Ben Janvier, Enero Solutions</i>
<b>3:30PM – 5:00PM</b>	<b>Session 24: Detrashing Panel Discussion ✓</b> <b>Moderator: <i>Ryan P. Henry, Green Bay Packaging</i></b>
	<b>Panelists:</b> <i>Neale W. Fetterly, Kadant Black Clawson</i> <i>Ryan P. Henry, Green Bay Packaging</i> <i>Nolan Seelye, Voith</i>
<b>3:30PM – 5:00PM</b>	<b>Session 25: Environmental Regulatory Developments Impacting the Industry ✓</b> <b>Session Chair: <i>Daniel A. Curry, TRC Environmental Corporation</i></b>
	Carbon Activity in the Northwest – Implications for the Forest Products Industry - <i>Barry Malmberg, NCASI</i>  Oregon Air Toxics Program “Cleaner Air Oregon” - <i>Katheryn VanNatta, NorthWest Pulp and Paper Association</i>  Effluent and the Environment: Patterns from an Integrated, Long-term Study in Effluent Receiving Waters - <i>Camille Flinders, NCASI</i>
<b>3:30PM – 5:30PM</b>	<b>Session 26: Processing Conditions and How They Affect Materials in Pulp &amp; Paper</b> <b>Session Chair: <i>Katie Day, Sandvik</i></b>
	Corrosion and Scale Problems in Recovery and Power Boilers in Pulp and Paper Operations - <i>Edward (Ted) Beardwood, Consultant at Solenis LLC</i>  RoHS: 10 Years Later – Process Control Equipment Corrosion Issues Remain - <i>Christopher Muller, Purafil, Inc.</i>  Corrosion Resistant FRP Equipment for Pulp and Paper - <i>Kevin Lambrych, Ashland</i>  In-Service Nonmetallic Inspections and Reliability - <i>Michael Yee, RTConsults, PLLC</i>
<b>3:30PM – 5:00PM</b>	<b>IBBC Session 4: Rapid Fire Showcase</b> <b>Session Chair: <i>Jean-Pierre Bousquet, Valmet</i></b>
	A New Process for Catalytic Fractionation of Organo-solv Lignin to Biofuels and High-Value Added Chemicals - <i>Joseph Molle, University of Wisconsin-Stevens Point</i>

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	<p>Wood Quality and Pulpability of Eucalyptus Woods Affected by Physiological Disturbance - <i>Juliana Marangon Jardim, North Carolina State University</i></p> <p>Fractionation of Lignin Recovered from Hot-Water Extracts of Angiosperms and its Application in Synthesis of Lignin-Based Products - <i>Aditi Nagardeolekar, SUNY-ESF</i></p>
<b>5:00PM – 6:30PM</b>	<b>Reception &amp; IBBC Student Poster Session &amp; Competition</b>
	<p>A New Process for Catalytic Fractionation of Organo-solv Lignin to Biofuels and High-Value Added Chemicals - <i>Joseph Molle, University of Wisconsin-Stevens Point</i></p> <p>Wood Quality and Pulpability of Eucalyptus Woods Affected by Physiological Disturbance - <i>Juliana Marangon Jardim, North Carolina State University</i></p> <p>Fractionation of Lignin Recovered from Hot-Water Extracts of Angiosperms and its Application in Synthesis of Lignin-Based Products - <i>Aditi Nagardeolekar, SUNY-ESF</i></p>
<b>6:30PM – 7:30PM</b>	Young Professionals Mixer
<b>7:00PM – 9:00PM</b>	IBBC Conference Dinner**
<b>Wednesday, October 31, 2018</b>	
<b>6:45AM – 8:30AM</b>	<p><b>Hot Topics Breakfast II ***</b></p> <p>Increasing Kiln Reliability Moderator: <i>Glenn M. Hanson III, Industrial Kiln &amp; Dryer Group</i></p> <p>Reduction Efficiency Measurements Moderator: <i>Thanh Trung, FITNIR Analyzers Inc.</i></p> <p>Improving Kraft Pulping/Pulp Yield Moderator: <i>Humphrey Moynihan, WestRock</i></p> <p>O<sub>2</sub> Delignification Optimization/Benchmarking Moderator: <i>Tom Mullen, Process Innovations</i></p> <p>Keeping Composure in Difficult Situations Moderator: <i>Heather Jennings, Probiotic Solutions</i></p> <p>Value Add Products From lignin Moderator: <i>R. Daniel Haynes, AkzoNobel Specialty Chemicals</i></p> <p>Water Handling (Non-Boiler) Corrosion. It's Not Always MIC Moderator: <i>Sandy Sharp, SharpConsultant</i></p>

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7:00AM – 8:15AM	Speaker Breakfast
8:30AM – 10:00AM	<b>Session 27: Material Handling Panel Discussion ✓</b> Moderator:
8:30AM – 10:00AM	<b>Session 28: Stainless Steels and Specialty Alloys for Pulp, Paper and Biomass Conversion -18 Years Later Panel Discussion✓</b> Moderator: <i>Matthew L. Tunncliffe, FPInnovations</i>
	<b>Panelists:</b> <i>Andy Garner, Consultant</i> <i>David C. Bennett, Consultant</i> <i>Doug L. Singbeil, FPInnovations</i>
8:30AM – 10:00AM	<b>Session 29: TAPPI TIPS Panel Discussion</b> Moderator: <i>Tom Mullen, Process Innovations</i>
	<b>Panelist:</b> <i>Priscila Briggs, TAPPI</i> <i>Ashok Ghosh, WestRock</i> <i>Margaret Gorog, International Paper</i>
8:30AM – 10:00AM	<b>Session 30: Bi-Product Sustainability</b> Session Chair: <i>Jack Porter, FITNIR Analyzers, Inc.</i>
Joint Session: Engineering, Power & Recovery, Recaust, & Lime Kiln / Sustainability	Reuse of CO <sub>2</sub> in Pulp Mills - <i>Katja Kuparinen, Lappeenranta University of Technology</i>  Methanol, From Waste Byproduct to Valuable Fuel – <i>Randy Stern, Valmet</i>  What Happens When the Fiber Disappears? - <i>Bill Nichols, KBR</i>
8:30AM – 10:00AM	<b>Session 31: Improved Kiln Operation &amp; Efficiency II</b> Session Chair: <i>Subra Arasakesari, International Paper</i>
	Increasing Kiln Reliability Utilizing Modern Measurement Tools & Analysis - <i>Glenn M. Hanson III, Industrial Kiln &amp; Dryer Group</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>
8:30AM – 10:00AM	<b>IBBC Session 5: Lignin to Whatever</b> Session Chair <i>Peter Axegård, C-Green Technology AB</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: <i>Andrew K. Jones, International Paper</i></b>
	Dynamic Modelling - Production of Softwood and Hardwood Pulp in Campaigns - <i>Johan Wallinder, RISE Bioeconomy (former Innventia)</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, LLC</i>
<b>10:30AM – 12:00PM</b>	<b>Session 33: Pulping Non-Process Elements</b> <b>Session Chair: <i>Sabrina J. Burkhardt, Sustainable Fiber Technologies</i></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>  A Review of Green Liquor Scale Formation - <i>Peter W. Hart, WestRock</i>
<b>10:30AM – 12:00PM</b>	<b>Session 34: Current Evaporator Issues and Technology Panel Discussion</b> <b>Moderator: <i>Christopher L. Verrill, International Paper</i></b>
	<b>Panelists:</b> <i>Niko DiMartini, University of Toronto</i> <i>Andrew Anacker, Lundberg</i> <i>Randy Stern, Valmet</i> <i>Jarmo Kaila, Andritz</i>
<b>10:30AM – 12:00PM</b>	<b>Session 35: Reliability Panel Discussion</b> <b>Moderator: <i>Ron Lansing, M&amp;M Engineering Associates</i></b>
	<b>Panelists:</b> <i>Carson Blocker, Nippon DynaWave Packaging</i> <i>Alex Fillo, International Paper</i> <i>Cassie Nail, Resolute</i> <i>KC Pyle, Georgia Pacific</i>
<b>10:30AM – 12:00PM</b>	<b>Session 36: Energy Optimization ✓</b> <b>Session Chair: <i>Danny S. Tandra, Clyde Bergemann Power Group</i></b>

\* Invitation Only

\*\* Additional registration fee required

\*\*\* Pre-registration required

	<p>Paper Mill Power Plant Optimization-Realizing the Value of Low Pressure Steam - <i>Ricardo Santos, WestRock</i></p> <p>Kraft Pulping Warm and Hot Water System Strategies - <i>James Cantrell, Jacobs Engineering</i></p> <p>Optimization of Turbine Governors Performance for Improved Plant Operation - <i>Ben Janvier, Enero Solutions</i></p>
<b>10:30AM – 12:00PM</b>	<b>IBBC Session 6: Value Added Products Part I</b> <b>Session Chair: <i>Adriaan van Heiningen, University of Maine</i></b>
	<p>Turning Bio-Sludge into Bio-Carbon Through Zero-Energy Hydrothermal Carbonization - <i>Peter Axegård, C-Green AB</i></p> <p>Alternative Pulping Process for Paper and High Value-Added Biochemical Production - <i>Ali Manesh, American Science &amp; Technology Co.</i></p> <p>Mechanical Pulp with Added Value Products and Lower COD - <i>Oleg Shagaev, Andritz AG</i></p>
<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>	<b>Corrosion &amp; Materials Engineering Steering Committee Meeting</b>
<b>1:30PM – 3:00PM</b>	<b>IBBC Session 7: Value Added Products Part 2</b> <b>Session Chair: <i>Jean-Pierre Bousquet, Valmet</i></b>
	<p>Electrochemical Salt Split for Mill Sodium Sulfur Balance Control – <i>Kalle Pelin, AkzoNobel Pulp and Performance Chemicals</i></p> <p>Imagine Chemistry-An Open Innovation Approach to Sustainability Across the Manufacturing Process - <i>R. Daniel Haynes, AkzoNobel Specialty Chemicals</i></p> <p>Production of Sulfuric Acid from the Incineration of Pulp Mill Non-Condensable Gases-A Biorefinery Concept - <i>Naveen Chenna, Valmet Technologies, OY</i></p>
<b>3:00PM – 3:30PM</b>	<b>Break</b>
<b>3:30PM – 5:00PM</b>	<b>IBBC Session 8: NanoTechnology</b> <b>Session Chair: <i>R. Daniel Haynes, AkzoNobel Specialty Chemicals</i></b>
	<p>Nanocellulose: A Breakthrough Technology for the Bioeconomy - <i>Mikhail Iakovlev, American Process</i></p> <p>Effects of Fiber Morphological Characteristics on Selected Properties of Fiberboard - <i>Babak Mirzaei, Collins Company</i></p>
<b>5:00</b>	<b>IBBC Concludes</b>

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