

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 6-18-18 (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

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** Additional registration fee required

Monday, October 29, 2018

7:00AM – 8:15AM	Speaker Breakfast
8:30AM – 10:00AM	Session 1: Opening Session & Keynote ✓ Session Chair: John Carpenter, President, Nippon Dynawave Packaging
10:00AM– 10:30AM	Break
10:30AM-12:30PM	Session 2: Alkaline Pulp/Career Development (Research)✓ Session Chair: <i>Brian Brogdon, Future Bridge Consulting Services, LLC</i>
	Catalytic Oxidation of Wood Using Cobalt Schiff Base Compounds - <i>Alan Rudie, Forest Products Laboratory</i>
	Technological Evaluation of Pinus Maximinoi Wood for Industrial Use in Kraft Pulp Production - <i>Marina Coêlho, University of São Paulo</i>
	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>
	Session 3: State of the Industry ✓ Session Chair:
	State of the Industry – <i>David Turpin, APPTI</i>
	Managing Investing Decisions in Pulp and Paper Industry - <i>Gagandeep Issar, Enerflex</i>
10:30AM-12:00PM	Engineering Division Committee of Chairs Meeting* Energy, Recovery and Recaust Steering Committee Meeting*
12:00PM – 1:30PM	Lunch
1:30PM – 3:00PM	Energy, Recovery and Recaust Main Committee Meeting
1:30PM – 3:00PM	Session 4: New Technology Showcase Session Chair:
	NeuroDIC Software for Quantification of the Volume of Stacked Wood - <i>Harliany Matias, HaDa Tecnologiz</i>
1:30PM – 3:30PM	Session 5: Brownstock Washing Session Chair: <i>Mathias Lindström, International Paper</i>
	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>
	Fast and Accurate Online Measurement of Differentiated Lignin and HexA Kappa Numbers Leads to Improved Fiberline Control - <i>Niclas Andersson, BTG Instruments</i>


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	Novel Chemistries Enable Pulp Mills to Recover Lost Washing Efficiency - <i>Harold Petke, Solenis</i>
	Session 6: Young Professionals Panel ✓ Session Chair:
	Session 7 Recycling for Tissue Production Panel Session Chair:
3:00PM – 3:30PM	Break
3:30PM – 5:00PM	Session 8: Bleaching Optimization ✓ Session Chair: Tom Mullen, Process Innovations
	pH in the Bleach Plant-Why It's Important and What to Do About It-Part I: ClO ₂ 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>
3:30PM - 5:00PM	Committee Meetings: 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
	Session 9: Recycling Session Chair:
	Disc Filter Total Care-Keeping Your Filter from Becoming a Money Pit - <i>Alex Gommel, 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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	Session 10: Nonwood Session Chair:
	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>
5:00PM-6:30PM	Reception
7:00PM-9:00PM	PEERS Conference Networking Dinner** Sponsored by: 
Tuesday, October 30, 2018	
6:45AM - 8:30AM	Hot Topic Breakfast
7:00AM – 8:00AM	Paper Chase
7:00AM – 8:15AM	Speaker Breakfast
8:30AM – 10:00AM	Session 1: IBBC Keynote Session Chair: R. Daniel Haynes, AkzoNobel Specialty Chemicals
8:30AM – 10:00AM	Corrosion & Materials Engineering Main Committee
8:30AM – 10:00AM	Session 11: Lime Kiln Refractories Session Chair:
	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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	Session 12: Waste Water Treatment Advances Session Chair:
	<p>Odor Control Using Aeration Technologies in Water Treatment - <i>Mike Spillner, Mazzei Injector Company</i></p> <p>A Review of Phosphorus Removal Technologies for Pulp and Paper Wastewater Treatment Plants - <i>Heather Jennings, Probiotic Solutions</i></p> <p>TBA, <i>presentation by NCASI</i></p>
	Session 13: Liquor Chemistry & Control ✓ Session Chair:
	<p>Soap Separation-A New Option for Removal of NPEs - <i>Karin Lindgren, RISE Bioeconomy</i></p> <p>The solubility of Calcium Carbonate in Green Liquor Handling Systems - <i>Alisha Giglio, University of Toronto</i></p> <p>Use of Direct Steam Injection to Control Black Liquor Temperature and Ensure Optimal Drop Size - <i>Shawn Berg, Hydro-Thermal Corporation</i></p>
10:00AM – 10:30AM	Break
10:30AM – 12:30PM	Session 14: Bleaching Chemical Session Chair: Ashok Ghosh, WestRock
	<p>Are There Advantages to Using 50% versus 10% Strength Peroxide in Pulp Bleach Plants? - <i>Peter Hart, WestRock</i></p> <p>Advances in the ERCO Smarts APC - <i>Faizi Roay Ramjohn, ERCO Worldwide</i></p> <p>Singlet Oxygen Generated Onsite for Safely Augmenting or Replacing Existing Chlorine Bleaching Stages - <i>Wayne Buschmann, Clean Chemistry, Inc.</i></p> <p>Economic Fundamentals of Ozone Bleaching - <i>Alexis Metais, Xylem</i></p>
	Session 15: Combustion & Emission Session Chair:
	<p>Impact of Wood species on Biomass Combustion - <i>Naz Orang, University of Toronto</i></p> <p>Reduction of Particulate and NOX Emissions from Kraft Recovery Boilers Using Catalytic Filtration Technology - <i>Jim Wearing, Noram Engineering & Construction Ltd.</i></p> <p>Factors Impacting CO and NOX Emissions on Biomass-Fired Stoker Boilers - <i>Marcel D. Berz, Jansen Combustion and Boiler Techn., Inc.</i></p>
	Session 16: Project Management Panel Discussion Session Chair:

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10:30AM – 12:00PM	Session 17: Refractory Installation Panel Discussion Session Chair:
	Session 18: Optical Properties, Stickies, and Strength Tutorial Session Chair: Carl Houtman, US Forest Products Laboratory
	Session 2: Thermoconversion Session Chair: Sudhagar Mani, University of Georgia
	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	Biorefinery Committee
12:00 PM – 1:20 PM	2019 PEERS Tech Program Planning Meeting
12:00PM – 1:30PM	Lunch
1:30PM – 2:30PM	Fiber Recycling Committee Environmental & Sustainability Working Group
1:30PM – 3:00PM	Session 19: Managing Mill Processes ✓ Session Chair:
	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</i>
	Session 20: Oxygen Delignification Session Chair: Hasan Jameel, North Carolina State University
	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	Session 21: Improved Kiln Operation & Efficiency I ✓ Session Chair:
	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 & Dryer Group</i>

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	IBBC Session 3: Biorefinery Infrastructure Session Chair:
	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 Geleynse, Washington State University</i>
3:00PM – 3:30 PM	Break
3:30PM – 5:00PM	Session 22: Pacific Northwest TAPPI Local Section Panel Discussion Session Chair: Alistair Twaddle, International Paper
	Chip Supply Issues-Quality and Quantity in Pacific Northwest (Hosted by NW TAPPI)
	Session 23: Automation Panel Discussion Session Chair:
	Using Automation to Improve Mills' Bottom Line
	Session 24: Detrashing Panel Session ✓ Session Chair:
	Session 25: Environmental ✓ Session Chair:
	Carbon Tax Legislation Oregon Air Toxics Challenges in Power Generation Unachievable Permitting Requirements
3:30PM – 5:30PM	Session 26: Session Chair:
	<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, PLLC</i>

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	IBBC Session 4: Rapid Fire Showcase Session Chair: Jean-Pierre (JP) Bousquet, Valmet
5:00PM - 6:30PM	Reception & IBBC Poster Session
6:30PM -7:30PM	Young Professionals Mixer
Wednesday, October 31, 2018	
6:45AM - 8:30AM	Hot Topic Breakfast
7:00AM – 8:15AM	Speaker Breakfast
8:30AM-10:00AM	Session 27: Material Handling Panel ✓ Session Chair:
	Session 28: Stainless Steels and Specialty Alloys for Pulp, Paper and Biomass Conversion-18 Years Later Panel Discussion ✓ Session Chair:
	Session 29: TAPPI- TIPS Panel/Discussion Session Chair: Tom Mullen, Process Innovations
	Session 30: Bi-Product Sustainability Session Chair:
	Reuse of CO2 in Pulp Mills - <i>Katja Kuparinen, Lappeenranta 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>
8:30AM – 10:00AM	Session 31: Improved Kiln Operation & Efficiency II Session Chair:
	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>
	IBBC Session 5: Lignin to Whatever Session Chair
	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>
10:00AM – 10:30AM	Break
10:30AM – 12:00PM	Session 32: Improving Operations Through Simulations Session Chair:
	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>
	Session 33: Pulping Non-Process Elements Session Chair: Sabrina Burkhardt, Sustainable Fiber Technologies
	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>
	Session 34: Evaporator Panel Discussion Session Chair:
	Session 35: Reliability Panel Discussion Session Chair:
	Session 36: Energy Optimization ✓ Session Chair:
	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>
	IBBC Session 6: Value Added Products Part I Session Chair:
	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 & Technology Co.</i>

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	Mechanical Pulp with Added Value Products and Lower COD - <i>Oleg Shagaev, Andritz AG</i>
12:00PM – 1:00PM	18 PEERS Conference Critique Committee Meeting*
12:00PM	PEERS Concludes
1:30PM - 3:00PM	Corrosion & Materials Engineering Steering Committee Meeting*
1:30PM – 3:00PM	IBBC Session 7: Value Added Products Part 2 Session Chair:
	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>
3:00PM – 3:30PM	Break
3:30PM – 5:00PM	IBBC Session 8: Nano Technology Session Chair:
	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>
5:00	IBBC Concludes

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