

**WE'RE GOING VIRTUAL IN 2020!**

**TWO high-powered conferences in ONE virtual event!**



Co-located with  
**IBBC 2020**  
International Bioenergy & Bioproducts Conference



**November 2-4, 2020**

[tappipeers.org](http://tappipeers.org) • [tappi-ibbc.org](http://tappi-ibbc.org)

## PROGRAM TRACKS

Career Development ✓	Engineering, Reliability, Corrosion & Materials	Energy, Recovery, Lime Kiln and Recaust	Environmental
Nonwood	Pulping & Bleaching	Recycling Forum	Sustainability
IBBC Conference			

## PROGRAM

**AS OF 10/31/20 ( SUBJECT TO CHANGE)**

Monday, November 2	
<b>10:00am – 5:00pm</b>	Virtual Exhibit Hall Open
<b>11:00am - 11:30am</b>	Welcome & Awards
<b>11:30am - 12:15pm</b>	<p><b>Session 1: Opening Session &amp; Keynote ✓</b>  <b>Session Chair: <i>Danny Tandra, Clyde Industries, Inc.</i></b></p> <p>Imagining and Delivering on the Promise of a Sustainable Future  <b>Keynote Speaker: <i>Steve Voorhees, CEO, WestRock</i></b></p>

*The bolded speakers will be the presenters of the presentation.*

<p><b>12:15pm - 1:15pm</b></p>	<p><b>Hot Topic Breakfast I</b></p> <p>Practical Strategies for Reducing Pulp and Paper Mill Energy Use <b>Richard Reese</b>, <i>CleanTech Partners</i></p> <p>Bleach Plant Materials and How Selection has Changed With Process Improvements and Material Availability <b>Margaret Gorog</b>, <i>International Paper</i></p> <p>The Environmental Impact of a Changing Climate For The Pulp and Paper Industry <b>Heather Jennings</b>, <i>Probiotic Solutions</i></p> <p>Brown Stock Washing <b>Dan Nicholson</b>, <i>Solenis, LLC</i></p> <p>Modeling Oxygen Delignification <b>Tom Mullen</b>, <i>Process Innovations</i></p>
<p><b>1:15pm - 2:45pm</b></p> <p>Session sponsored by <b>John Crane</b></p> 	<p><b>Session 2: Reliability Case Studies (Session sponsored by John Crane)</b> Session Chair: <b>Qiang Han</b>, <i>International Paper</i></p> <p>Applications of Infrared Thermography in Industrial Facilities <b>James Brady</b>, <i>Brady Infrared Inspections, Inc.</i></p> <p>Hydraulic Root Cause Failure Analysis <b>Jack Weeks</b>, <i>Magenta-Technologies, LLC</i></p> <p>Increasing MTBF for ClO<sub>2</sub> Applications in the Pulp &amp; Paper Industry <b>Pearley LaChance</b>, <i>John Crane</i></p>
<p><b>1:15pm - 2:15pm</b></p>	<p><b>Session 3: CANCELLED</b></p>
<p><b>2:45pm - 3:00pm</b></p>	<p><b>Sponsor &amp; Exhibit Break</b></p>
<p><b>3:00pm - 4:00pm</b></p>	<p><b>Session 4: Mill Sustainability</b> Session Chair: <b>Heather Jennings</b>, <i>Probiotic Solutions</i></p> <p>Vision 2020: Into the Future of Pulp and Paper Mill Sustainability <b>Steve Birtch</b>, <i>Aggreko</i></p> <p>New Revenue Opportunities for Pulp and Paper Sector from Carbon Capture <b>Katja Kuparinen</b>, <i>Satu Kähkönen, Esa Vakkilainen, Lappeenranta-Lahti University of Technology LUT</i></p>
<p><b>3:00pm – 4:30pm</b></p>	<p><b>Session 5: Methods to Improve Operations and Capital Projects</b> Session Chair: <b>Scott Curry</b>, <i>CQ Strategy Ltd.</i></p> <p>FEL 1 and 2 – The Beginnings of Successful Paper Machine Conversions <b>Dale Midyette</b>, <i>Jacobs Engineering</i></p>

*The bolded speakers will be the presenters of the presentation.*

	<p>Bridging the Knowledge Gap <b>Chris Flynn</b>, <i>Andritz</i></p> <p>When there are too many choices - Monte Carlo is the right choice <b>Bill Nichols</b>, <i>KBR</i></p>
<b>3:00pm - 4:00pm</b>	<p><b>Session 6: Best Cooking and Washing</b> Session Chair: <b>Adam Ropp</b>, <i>Buckman</i></p> <p>Down Flow Cooking Process Optimization – A Case Study At A Southern US Mill <b>Marcio Andre de Lima Silveira</b>, <i>Guy Normandeau, BTG</i></p> <p>No Cost Solution for Woodchip Handling <b>Amy Duncan</b>, <i>Dos Santos International, LLC</i></p> <p>Energy Saving Potential of Screen Fractionation for Production of BCTMP <b>Quanqing Zha</b>, <i>Reza Amiri and Zhirun Yuan, FPInnovations</i></p>
<b>4:30pm – 4:45pm</b>	<b>Sponsor &amp; Exhibit Break</b>
<b>4:45pm - 6:15pm</b>	<p><b>Session 7: New Technology Showcase</b> ✓ Session Chair: <b>Andrew (Andy) Jones</b>, <i>International Paper</i></p> <p>Development of Novel Acoustic Sensors With Learning Algorithm to Forecast Dissolving Tank Anomalies <b>Zachary Payne</b>, <i>Kari Aura, Jarmo Kaila, Pasi Miikkulainen, Lauri Salminen, Andritz</i></p> <p>APC Projects - The Road for Sustainability <b>Ben Janvier</b>, <i>Enero Solutions</i></p> <p><b>Application of Refined Water-Soluble Lignin for Surface Sizing</b> <b>Robert Narron</b>, <i>Borregaard</i></p> <p>Kappa Prediction in Kraft Process <b>Danilo Nunes Soares</b>, <i>IndustriALL</i></p> <p>Weak Black Liquor Concentration by Reverse Osmosis <b>Brent Keller</b>, <i>Via Separations</i></p> <p>Isoflo™ White &amp; Black Liquor Oxidation System <b>Jon Foan</b>, <i>NORAM Engineering &amp; Constructors Limited</i></p> <p>Intelligent Robotic Inspection: Contact-Based Inspection Services Using Flying Tethered Robots <b>Reza Tavakoli</b>, <i>Avestec Technologies, Inc.</i></p>

*The bolded speakers will be the presenters of the presentation.*

4:45pm - 6:15pm	<p><b>Session 8: Environmental Operations</b>  Session Chair: <b>Dan Curry</b>, <i>Evergreen Packaging</i></p> <p>Advances in Online Monitoring Applications for Pulp and Paper Wastewater Treatment  <b>David Spencer</b>, <i>Environmental Business Specialists, LLC</i></p> <p>A Case History of Paper-Mill Sludge Pond Closure Using Engineered Turf Final Cover  <b>Ming Zhu</b>, <i>Watershed Geosynthetics</i></p> <p>New Learnings and Strategies for Meeting Future Recovery Boiler Particulate Emission Limits with Existing Electrostatic Precipitators  <b>Ivan Sretenovic</b>, <i>Southern Field EEC</i></p>
4:45pm – 5:45pm	Session 9: Cancelled
<b>Tuesday, November 3</b>	
10:00am – 5:00pm	Virtual Exhibit Hall Open
11:00am - 11:45am	<p><b>IBBC Session 1: Opening Session &amp; Keynote</b>  Session Chair: <b>Jean-Pierre Bousquet</b>, <i>Valmet</i></p> <p>Turning Raw Resources into Feedstocks; Challenges and Opportunities  <b>Richard Hess</b>, <i>Idaho National Laboratory</i></p>
11:45am - 12:30pm	<p><b>Session 10: State of the Industry</b> ✓  Session Chair: <b>Heather Jennings</b>, <i>Probiotic Solutions</i></p> <p><b>A 50-year Perspective</b>  <b>Stan Parton</b>, <i>Fisher International</i></p>
12:30pm-1:30pm	<p><b>Hot Topic Breakfast II</b></p> <p>Data Management Tools Best Practices  <b>Qiang Han</b>, <i>International Paper</i></p> <p>Hard Scale Formation in Causticizing Plants  <b>Honghi Tran</b>, <i>University of Toronto</i></p> <p>Bleach Plant  <b>Tom Mullen</b>, <i>Process Innovations</i></p> <p>Personnel and Process Safety in Pine Chemicals Recovery  <b>Mathias Lindström</b>, <i>International Paper</i></p>

*The bolded speakers will be the presenters of the presentation.*

<p><b>1:30pm – 2:30pm</b></p>	<p><b>Session 11: Black Liquor Processing: Evaporators to Boilers</b>  <b>Session Chair: Eric Jin, Babcock &amp; Wilcox</b></p> <p>Black Liquor Evaporators Upgrade - Life Cycle Cost Analysis  <b>James Cantrell, Jacobs Engineering</b></p> <p>The Impact of Utilizing the Leading Edge Sootblower Nozzle on Recovery Boiler Superheater Platens  <b>Danny Tandra, Clyde Industries, Inc.;</b> Markku Pääkkönen, Pasi Miikkulainen, <i>Andritz Inc.;</i> Shenglong You, Markus Bussmann, <i>University of Toronto</i></p>
<p><b>1:30pm – 2:30pm</b></p>	<p><b>Session 12: Improving Processability of Green Liquor</b>  <b>Session Chair: Thanh Trung, FITNIR Analyzers Inc.</b></p> <p>Settling and Filtering Properties of Green Liquor Dregs  <b>Elizabeth Maggs,</b> Xiaosong Mao, Torsten Meyer, Honghi Tran, <i>University of Toronto;</i> Andrew Jones, <i>International Paper</i></p> <p>CleanFlow Microfiltration Technology for Green and White Liquor  <b>Rohan Bandekar,</b> Jon Foan, Jim Wearing, <i>NORAM Engineering;</i> Anna Oldmark, Lennart Kallen, <i>Cleanflow AB;</i> Mikael Lindstrom, <i>KTH Royal Institute of Technology;</i> Jakob Liedberg, <i>NORAM International AB</i></p>
<p><b>1:30pm – 3:00pm</b></p>	<p><b>Session 13: Recycling</b>  <b>Session Chair: Marty Daniel, Thiele Kaolin Company</b></p> <p>The Usefulness of Two-Side ERIC Buchner Handsheets for Deinking Agent Development  <b>Robert (Danny) Haynes</b></p> <p><b>Determination of Vegetable Oil in Recycled Paper</b>  <b>Yao Ntifafa,</b> Maria Szajda-Lam, Ashok Ghosh, Peter Hart, <i>WestRock</i></p> <p>Incorporation of Post-Consumer Pizza Boxes in the Recovered Fiber Stream: Impacts of Grease on Finished Product Quality  <b>Ashok Ghosh,</b> Peter W. Hart, Adele Panek, <i>WestRock;</i> Tran Nguyen, <i>North Carolina State University;</i> Meredith Dooley, <i>Virginia Commonwealth University</i></p>
<p><b>1:30pm – 2:30pm</b></p>	<p><b>Session 14: Optimizing Non-Metallic Performance and Repair in Challenging Industrial Settings</b>  <b>Session Chair: Josh Lauer, WestRock</b></p> <p>Rehabilitating Aging Plant Pipelines with Minimal Operational Downtime  <b>Steve Soldati, Aegion/Insituform</b></p> <p>Lessons Learned for FRP and CRM and Piping in Harsh Chemical Services  <b>Michael Yee,</b> Nasim Reza, <i>RTCONSULTS</i></p>

*The bolded speakers will be the presenters of the presentation.*

<p><b>1:30pm - 3:00pm</b></p>	<p><b>Session 15: Managing Natural Disasters Panel Discussion</b>  <b>Session Chair: <i>Dan Curry, Evergreen Packaging</i></b></p> <p>Natural Disaster Planning and Response – A Mill Perspective  <b>Kimberly Fail, International Paper</b></p> <p>“There’s a Bad Moon on the Rise” - Readyng the Mill for a Storm  <b>Diane Hardison, Domtar Paper Company</b></p> <p>Managing a Facility During a Pandemic  <b>Todd Woletz, TRC Environmental Corporation</b></p>
<p><b>1:30pm - 3:00pm</b></p>	<p><b>IBBC Session 2: Supporting the Sustainable Bioeconomy</b>  <b>Session Chair: <i>Jaya Shankar Tumuluru, Idaho National Laboratory</i></b></p> <p>Canada's Pulp, Paper and Bioproducts Industry: Innovation Driven  <b>Stéphan Larivière, FPInnovations</b></p> <p>Using the Stage Gate Process in Biorefinery Project Development  <b>Jim Riley, Jeff Katz, Jacobs Engineering</b></p> <p>A Path to New Biobased Materials from Cellulose  <b>Julien Bley, Innofibre; Dan Belosinschi, Trois-Rivieres College</b></p>
<p><b>3:00pm - 3:15pm</b></p>	<p><b>Sponsor &amp; Exhibit Break</b></p>
<p><b>3:15pm - 4:45pm</b></p>	<p><b>Session 16: Managing Dissolving Tank Operation and Safety</b>  <b>Session Chair: <i>Danny Tandra, Clyde Industries, Inc.</i></b></p> <p>Development of Converging-Diverging Multi-Jet Nozzles for Molten Smelt Shattering  <b>Eric Jin, Tony Habib, Simon Youssef, and Steve Osborne, Babcock and Wilcox; Honghi Tran, University of Toronto</b></p> <p>Can Jellyroll Smelt be Effectively Shattered?  <b>Markus Bussmann, Taoxin Jiang, Honghi Tran, University of Toronto</b></p> <p>Scale Formation in Recovery Boiler Smelt Dissolving Tanks  <b>Honghi Tran, University of Toronto; Heather Munn, Irving Pulp &amp; Paper; Andrew (Andy) Jones, International Paper; Peter Hart, Westrock</b></p>

*The bolded speakers will be the presenters of the presentation.*

<p><b>3:15pm - 4:45pm</b></p>	<p><b>Session 17: Key Maintenance Issues for Rotary Kilns Panel Discussion</b>  <b>Session Chair:</b> <i>Peter Gorog, Houghton Cascade Holdings, LLC; Glenn Hanson, Metso Outotec</i></p> <p><b>Panelists:</b></p> <p><b>Josh Brant - Andritz</b></p> <ul style="list-style-type: none"> <li>• Roller/Tire Surface Condition and Contact</li> <li>• Kiln Alignment and Trust Management</li> <li>• Adjustment Bolt Condition</li> </ul> <p><b>Palle Hansen - Valmet</b></p> <ul style="list-style-type: none"> <li>• Main Priorities in a Mechanical Inspection Connected to Developing a Long-Term Maintenance Plan</li> <li>• Chain System Maintenance</li> </ul> <p><b>Justin Bready - Kiln Technology</b></p> <ul style="list-style-type: none"> <li>• Shell Replacement</li> <li>• Filler Bars</li> </ul>
<p><b>3:15pm - 4:45pm</b></p> <p><b>Session sponsored by Andritz</b></p> 	<p><b>Session 18: Effective Bleaching Strategies</b>  <b>Session Chair:</b> <i>Mathias Lindström, International Paper</i></p> <p>Impact of Ozone Bleaching on Effluent Discharge  <b>Alexis Métais, Xylem</b> and Hannu Råmark, <i>Andritz Oy</i></p> <p>Extension of a Steady-State Chlorine Dioxide Brightening Model for Z-ECF Bleaching of Softwood Kraft Pulps  <b>Brian N. Brogdon, Future Bridge Consulting Services, LLC;</b> Lucian A Lucia, North Carolina State University</p> <p>Pulp Bleaching, ClO<sub>2</sub> Technology &amp; Related Challenges  <b>J. Barry Billett, Nouryon</b></p>

*The bolded speakers will be the presenters of the presentation.*

<p><b>3:15pm - 4:45pm</b></p>	<p><b>IBBC Session 3: Biomass Processing and Conversion Pathways</b>  <b>Session Chair: <i>Jean-Pierre Bousquet, Valmet</i></b></p> <p>The Relationships Between the Forest Biomass Compositions and Pyrolysis Performances  <b>Sudhagar Mani, University of Georgia</b></p> <p>Sandwich Belt High Angle Conveyors in Harmony with the Environment  <b>Joseph Dos Santos, Dos Santos International</b></p> <p>Pellets Production Using Sludge From Pulp Mill  <b>Bruna Virgínia Cunha Rodrigues, Cláudio Mudadu Silva, Angélica de Cássia Oliveira Carneiro, Caio Moreira Miquelino Eleto Torres, Mateus Alves de Magalhães, Universidade Federal de Viçosa</b></p>
<p><b>3:15pm – 4:45pm</b></p>	<p><b>Session 19: Maintenance Alternatives for Asset Life Cycle Extension</b>  <b>Panel Discussion</b>  <b>Session Chair: <i>John Grocki, Advantage Resources Consulting, L.L.C.</i></b></p> <p>Wallpaper  <b>Matthew L. Tunnicliffe, FPInnovations</b></p> <p>Composite Tubes  <b>Angela Philipp, Sandvik</b></p> <p>Metal Spray  <b>Kevin Phillips, Integrated Global Services</b></p> <p>Weld Overlay  <b>Martin Denault, ESAB</b></p>
<p><b>4:45pm - 5:00pm</b></p>	<p><b>Sponsor &amp; Exhibit Break</b></p>
<p><b>5:00pm – 6:30pm</b></p>	<p><b>Session 20: State of Recycling Market</b>  <b>Session Chair: <i>Cesar Basilio, Thiele Kaolin Company</i></b></p> <p>How the US Paperboard Industry Will Solve the Country's Recycling Crisis  <b>Bill Moore, Moore &amp; Associates</b></p>
<p><b>5:00pm - 6:00pm</b></p>	<p><b>Session 21: The Bleaching Environment</b>  <b>Session Chair: <i>Ashok Ghosh, WestRock</i></b></p> <p><i>Peracetate/Singlet Oxygen Chemistry Used in Post-Bleaching of Kraft Pulp is a Practical Oxidant for Paper Machines</i>  <b>Howard Kaplan, Kaplan Consulting, LLC; Wayne Buschmann, Clean Chemistry Inc.</b></p> <p><i>Xylan Adsorption on Cellulose: A Fundamental Thermodynamics Study</i></p>

*The bolded speakers will be the presenters of the presentation.*



	<i>Christopher Albert, <b>Thomas Schwartz</b>, University of Maine; M. Sefik Tunc, Gary Craig, Darrell Waite, Sappi North America</i>
<b>5:00pm - 6:30pm</b>	<p><b>Session 22: Alloy Performance in Thermochemical Processes</b>  <b>Session Chair: <i>Matthew L. Tunnicliffe, FPIInnovations</i></b></p> <p>Compatibility of Polymeric and Metallic Materials in Fossil Fuel, Bio-Oil and Their Blends  <b>Jiheon (Jay) Jun</b>, James Keiser, Michael Kass, Christopher Janke, <i>Oak Ridge National Laboratory</i></p> <p>Long-Term Corrosion Studies Of Pine Derived Bio-Oil And Blends With Heavy Fuel Oil  <b>Jim Keiser</b>, Jiheon Jun, Dino Sulejmanovic, Michael Brady, Michael Kass, <i>Oak Ridge National Laboratory</i>; Gavin Warrington, <i>University of Tennessee-Knoxville</i>; Kristin Smith, <i>National Renewable Energy Laboratory (NREL)</i></p> <p>Quality Control in Stainless and High Alloy Castings  <b>Shankar Venkataraman</b>, <i>Schmidt + Clemens GmbH + Co. KG</i></p>
<b>5:00pm - 6:30pm</b>	<p><b>IBBC Session 4: Advances in Bioenergy Research</b>  <b>Session Chair: <i>Sudhagar Mani, University of Georgia</i></b></p> <p>Impact of C5-Hydrolysis as Pretreatment on Carbon Products Produced From Lignocellulosic  <b>Jagannadh Satyavolu</b>, <i>University of Louisville</i></p> <p>Improving Forest Residue Quality Through Air Classification and Specific Gravity Separation  <b>Neal Yancey</b>, <i>Idaho National Laboratory</i></p> <p>Corn Stover Pellet Particle Morphology: Impact of Feedstock Properties and Pelleting Process Conditions  <b>Jaya Shanka Tumuluru</b>, Eric Fillerup, Josh Kane, Daniel Murray, <i>Idaho National Laboratory</i></p>
<b>Wednesday, November 4</b>	
<b>10:00am – 11:00am</b>	<p><b>Morning Coffee with Women in Industry</b></p> <p><b>Future of Leadership</b> - <i>presented by the Women in Industry Division</i></p> <p>Please join us for presentations from a diverse group of leaders on the Future of Leadership. Topics will include models for developing future leaders, how the nature of developing leadership capabilities is shifting, how to equip employees with the right tools, the myth of work / life</p>

*The bolded speakers will be the presenters of the presentation.*

	<p>balance, and role of ego as it pertains to leadership and multigenerational work force cohesion.</p> <p>Moderator: <b>Paula Hajakian, USG</b></p> <p><b>Panelists:</b></p> <p><b>Mike Farrell, Graphic Packaging</b>  <b>Brianah Stamp, Georgia Pacific</b>  <b>Michael Subilia, II, Domtar Paper Company</b>  <b>Rebecca Boyd, Jedson Engineering</b></p>
<b>10:00am – 2:00pm</b>	<b>Virtual Exhibit Hall Open</b>
<p><b>11:00am – 12:30pm</b></p> <p>Session sponsored by  <b>Andritz</b></p> 	<p><b>Session 23: Strategies to Improve Energy Usage in Mills</b>  <b>Session Chair: Pasi Miikkulainen, Andritz Inc.</b></p> <p>Boiler Retrofit Improves Efficiency and Increases Biomass Firing Rates  <b>Samit Pethe, Paul Cloninger, Jansen Combustion and Boiler Technologies Inc.</b> and Ryan Shortreed, Ken Hardison, <i>Domtar Paper Company LLC</i></p> <p>Total Pulp and Paper Mill Energy Evaluations  <b>Richard Reese, Ken Gilbreath, Jeff Fochs, CleanTech Partners</b></p> <p>Has the Time Come for Industrial Scale Energy Storage Systems in the PPT&amp;P Industry?  <b>Mike Voll, Stantec Consulting</b></p>
<b>11:00am – 12:30pm</b>	<p><b>Session 24: Reliability Centered Maintenance</b>  <b>Session Chair: Rebecca Knecht, Evergreen Engineering Inc.</b></p> <p>MRO Spares Management with RCM...Reliability Leadership  <b>Jay Shellogg, Strategic Maintenance Reliability</b></p> <p>Where RCM fits in the Maintenance Function  <b>Jay Shellogg, Strategic Maintenance Reliability</b></p> <p>Understanding Epoxy Coating Options for Mill Asset Protection and Rehabilitation  <b>Max Silva, A&amp;W Maintenance</b></p>

*The bolded speakers will be the presenters of the presentation.*

<p><b>11:00am – 12:30pm</b></p>	<p><b>Session 25: Lime Kiln Design to Increase Productivity</b>  <b>Session Chair: <i>Ray Leary, Houghton Cascade Holdings, LLC</i></b></p> <p>Successful Conversion to Gas Firing - How to Avoid the Downsides and Have Increased Productivity and Lower Emissions  <b>Pedro Ladeira, FCT Combustion Inc.</b></p> <p>Impact of Burner Design on Combustion Efficiency  <b>Eduardo Tater, Fives Pillard</b></p> <p>Kiln Lining Installations a “Contractor’s Perspective”  <b>Tim Baker, JT Thorpe and Sons Engineering and Refractory Services</b></p>
<p><b>11:00am – 12:00pm</b></p>	<p><b>IBBC Session 5 - Wood Based Foams and Packaging Films</b>  <b>Session Chair: <i>Sudhagar Mani, University of Georgia</i></b></p> <p>Life Cycle Assessment (LCA) of Chitosan – CNF Composite Packaging Film Manufacturing Process  <b>Prabaharan Ponnusamy, Sudhagar Mani, University of Georgia</b></p> <p>Strong, Lightweight Lignin-based Foams  <b>Ramakrishna Trovagunta, Stephen S. Kelley, Nathalie Lavoine, North Carolina State University</b></p>
<p><b>12:30pm – 1:30pm</b></p>	<p><b>Session 26: Effects of Process Conditions on Lime Kiln Operation</b>  <b>Session Chair: <i>Wei Ren, FPIInnovations</i></b></p> <p>Effects of Rings on Flow and Temperature in Lime Kilns  <b>Patrick Gareau, Markus Bussmann, Nikolai DeMartini, Honghi Tran, University of Toronto</b></p> <p>How Process &amp; Mechanical Conditions Affect Lime Recovery Kiln Thrust Positions - A Review of Operations and Mechanics for this Phenomenon  <b>Andrew Wisner, Metso</b></p>
<p><b>12:30pm – 1:30pm</b></p>	<p><b>IBBC Session 6: Biocomposites and Bioproducts</b>  <b>Session Chair: <i>Jaya Shankar Tumuluru, Idaho National Laboratory</i></b></p> <p>Bio-Based Transparent Wood Composites: A New Approach and its Potentials Applications  <b>Van Hai Le, Ruth M. Muthoka, HyunChan Kim, Jaehwan Kim, Dickens O. Agumba, Inha University</b></p> <p>Development of a Sustainable Packaging Using Agricultural Residues Such as Rice Straw and Coffee Pulp in Peru  <b>Elizabeth Palomino Nolasco, Pulpacking Peru</b></p>

*The bolded speakers will be the presenters of the presentation.*