Paper Conference and Trade Show
(PaperCon 2014)

Nashville, Tennessee, USA
26-30 April 2014

Volume 1 of 3

ISBN: 978-1-5108-0128-8
### PIMA Management Program

#### M01: Opening Session and Keynote Address
Moderators: **Keith Kemp**, AstenJohnson; **Anitra Collins**, International Paper

**Jim Abbott**, Former MLB Pitcher

#### M02: Executive Panel Discussion
Moderator: **Roger Hagan**, Port Townsend Paper

1. **Suzanne Blanchet**, Cascades
2. **Bruce Hoffman**, KapStone
3. **Jukka Tiitinen**, Valmet

#### M03: Leveraging IT Tools to Improve Operational Efficiency
Moderator: **Fredric Karlsson**, Enterprise Performance Solutions

1. **Alistair Skey**, Zellstoff Celgar, div. of Mercer International  
   - *Changing the Status Quo - The New Look of IT in Manufacturing*
2. **Christophe Deslandes**, KapStone; **David Pawelke**, MAIQ, Inc.  
   - *Pulp and Paper IT Solutions - Reduce Your Costs and Compromises*

#### M04: Different Generation Gaps - Management & Relationships
Moderator: **John VanDerKolk**, Kemira

1. **Sabrina Burkhardt**, Econotech
2. **Matt Elhardt**, Fisher
M05: In Tune for Safety
Moderator: Steve Tremont, BASF

1 Tess Ventress, TAPPISAFE

2 Steve Smith, Domtar

M06: World Class Reliability
Moderator: Roger Smith, Domtar

1 Robert Matthews, Royal Purple

World Class Reliability isn't as Much About Eliminating Failures, as it is About Creating Successes

M07: Mill Workforce Development - Sustaining Agility and Profitability through Developing Employees
Moderator: Steve Farmer, Genesis Performance Partners

1 James Stockard, Poyry

2 Michael von Grumbkow, Voith

3 Bruce Warrick, KapStone

Replenishing Our Workforce

4 Don DeFreese, Humeng

M08: Lean Manufacturing at Graphic Packaging
Moderator: Jaydn Bonifas, Ashland Water Technologies

1 Fraser Cameron, Bradley Willis, Graphic Packaging

Using the T-Card System to Raise the Operational Performance of a Board Mill

2 Mike Benton, Paperchime

M09: Managing Contractor and Vendor Relationships
Moderator: Matt Elhardt, Fisher

1 Dan Gross, Kuttner

2 Mike Deprey, Green Bay Packaging

M10: Superintendent Roundtable
Moderator: Jeff Levensailor, Domtar

M11: Papermakers & Superintendent Roundtable
Moderators: John Neun, Albany International; Jeff Levensailor, Domtar; Paul Fredrickson, Boise
M12: State of the Industry
Moderator: Anitra Collins, International Paper

1 Kurt Schaefer, RISI
2 John Dixon, Deloitte Consulting LLP

M13: Mill Managers Roundtable
Moderator: Matt Szymanski, Green Bay Packaging, Arkansas Kraft Division

1 Steve Myers, Expera Specialty Papers
2 Jeff Walch, Green Bay Packaging

Papermaking Program

PU01: Paper Machine Upgrades Track Kick-Off
Moderator: Jeff Reese, International Paper

1 Rodney N. Fisher, Fisher International The Capital Landscape and Where It is Going

PU02: Keys to Successful Paper Machine Upgrades
Moderator: Jeff Reese, International Paper

1 Daniel L. Soderberg, KTH Royal Institute of Technology Resource Efficiency Through Top-Down Development

PU03: Paper Machine Vacuum System Upgrades
Moderator: Doug Sweet, Doug Sweet & Associates

1 Juha Karvinen, Runtech Systems Vacuum System and Dewatering Optimization
2 Manfred Dobler, MAN TURBAIR® Vacuum Systems
3 Chuck Wunner, Vooner Liquid Ring Vacuum Pumps
4 Gerhard Goeller, Nash Energy Savings in Vacuum Systems

PU04: Success Stories
Moderator: Martti Tuomisto, RTS Alliance LLC

2 Janie Lasik, Allen Bowdler, Crystaltek Pratt Ind. - Conyers Stickies Removal Cleaning at Pratt Industries, Conyers, Georgia, Recycled Linerboard Mill
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<tr>
<td>3</td>
<td>Chuck Doupe</td>
<td>Voith Paper</td>
<td>Upgrade of Fiber Line at Newark in Fitchburg, MA, Mill</td>
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<td>4</td>
<td>Kari Lamminmäki; David Moore</td>
<td>Valmet; Sappi - Somerset</td>
<td>Case Study - Better Formation and Significant Cost Savings After a Forming Section Rebuild at Sappi Somerset Mill PM3</td>
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<td>6</td>
<td>Philip Wells</td>
<td>Wells Enterprises Inc.</td>
<td>Non-turbulent Steam Shower in Bi-Nip 'Tunnel' of Hood Container, New Johnsonville, TN</td>
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**PU05: Drying Energy and Ventilation Upgrades**
Moderator: **Gary Nyman, International Paper**

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<tr>
<td>1</td>
<td>Dick Reese</td>
<td>Dick Reese &amp; Associates</td>
<td>Paper Machine Upgrades to Reduce Energy Consumption</td>
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<td>2</td>
<td>Kenneth C. Hill</td>
<td>Kadant Johnson Systems</td>
<td>Evaluating Dryer Steam and Condensate Rebuild Opportunities</td>
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<td>3</td>
<td>David Young</td>
<td>Enerquin Air</td>
<td>Is Your Wet End Really Wet</td>
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**PU06: Papermaking Roundtable**
Moderator: **John Neun, Albany International**

**PU07: Chemical Injections Systems**
Moderator: **David Dyer, International Paper**

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<td>1</td>
<td>Ken Matthews</td>
<td>Akzo Nobel</td>
<td>Silica and Paper Chemicals</td>
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<td>2</td>
<td>Brian Altherr</td>
<td>Ashland</td>
<td>PerForm™ VMax 1000 Mixing Technology</td>
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<tr>
<td>3</td>
<td>Ruben Manzanares</td>
<td>Nalco</td>
<td>PARETO™ Mixing Technology - Enhancing Chemical PERFORMANCE</td>
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<td>4</td>
<td>Thomas Jaschinski</td>
<td>Voith Paper</td>
<td>FlowJec™ Increase in Efficiency Due to New Dosing Technology</td>
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<tr>
<td>5</td>
<td>Jouni Matula</td>
<td>WetEnd Technologies</td>
<td>Good Mixing Makes The Difference</td>
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</table>
### PU08: Quality Control Upgrades
**Moderator:** Shin-Chin Chen, ABB

1. **Thomas Brown, Honeywell Inc.**  
   *The Quality Control System Upgrade Decision*

2. **Per Sandstrom, ABB**  
   *An Evolutionary Approach to QCS Upgrades*

3. **Seyhan Nuyan, Metso Automation Business Line**  
   *An Upgraded QCS Becomes Operators' New Friend*

### PU09: Upgrades to Improve Machine Efficiency
**Moderator:** Philip Wells, Wells Enterprises Inc.

1. **Donald Carpenter, Voith Paper**  
   *Focus on Tail Threading to Increase Operator Safety while Improving Machine Efficiency*

2. **Tim Rye, Ryeco, Inc.**  
   *Reliable Edge Crack Detection can be a Cost-effective Productivity Upgrade for Many Paper Machines*

3. **Gregory M. Jones, GL&V Beloit Lenox**  
   *Slitter Section Automation for Improved Safety and Efficiency*

### PU10: Paper Machine Upgrades Wrap-Up
**Moderator:** Jeff Reese, International Paper

### PD1: Focusing on the Future - Emerging Markets
**Moderator:** Sandeep Kulkarni, Pepsi

1. **Frank Perkowski, Business Development Advisory**  
   *What's Next for the North American Paper and Board Industry?*

2. **Helena Stahle, Sodra**  
   *DuraPulp - Sustainable Solutions for the Future*

3. **Kim Nelson, American Process Inc.**  
   *Low Cost Production of Nanocellulose with the AVAP® Biorefinery Technology*
**PD2: Flash Points Powered by Pecha Kucha**
Moderator: **Sarah Dawkins, O’Neal Inc.**

1. **Jonathan Rivin**, *UW Extension, Solid & Hazardous Waste Education Center*  
   *Safer Chemicals - Assessing Alternatives*

**PD3: Advanced Fiber Development and their Applications**
Moderator: **Frank Sutman, Ashland Water Technologies**

1. **Tea Toplisek**, *Pulp and Paper Institute*  
   *Effect of Different Pre-treatments to a Novel Method for Cellulose Fibers Treatment*

2. **Katariina Torvinen**, *VTT Technical Research Centre of Finland*  
   *Microfibrillated Cellulose as a Binding Material for High Filler Content Papers*

3. **Panu J. Lahtinen**, *VTT Technical Research Centre of Finland*  
   *Effect of Fibrillated Additives on Paper Strength Properties*

4. **Eemeli Siitonen**, *Ashland Water Technologies*  
   *Innovative Approach to Increase Filler or Reduce Long Fiber Without Compromising on Quality or Productivity*

**PD4: IT Advances for Increased Profitability**
Moderator: **Jim Pigott, MAJIQ, Inc.**

1. **Ben Whitaker**, *Mohawk*  
   *Cost & Profitability Management Solution - Project Approach & Benefits*

2. **James H. Black, Ph.D.**, *OSIsoft*  
   *Mill Analytics - A New Era*

3. **Timo Arra**, *Eurocon MOPSsys Inc.*  
   *Stora Enso goes Mobile! Efficiencies Delivered to the Operations at Pulp and Paper Mills Using Mobile Technology*

**PD5: Process and Quality Improvements**
Moderator: **Rosy Covarrubias, Buckman**

1. **Robert Cooper**, *Buckman*  
   *Optimizing Packaging with Enzymes*
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<td><strong>Robert Grace</strong>, Ponderay Newsprint Company</td>
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<td><strong>TMP White Water Clarification Leads to Improved Sheet Strength and Reduced Deposition on Papermachine</strong></td>
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<td><strong>PD6: Process Chemical Optimization</strong></td>
<td>Moderator: <strong>Steve Boone</strong>, Bercen</td>
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<td><strong>Paul Krochak</strong>, Innventia AB</td>
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<td><strong>Techniques for Assessing Mixing Quality</strong></td>
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<td><strong>Jari Kayhko</strong>, MUAS FiberLaboratory</td>
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<td><strong>Karin Athley</strong>, Innventia AB</td>
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<td><strong>Optimize the Benefit of the Retention Chemicals</strong></td>
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<td><strong>PD7: Strength Additives for Packaging Producers</strong></td>
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<td><strong>Rob Lowe</strong>, Nalco</td>
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<td><strong>Multifunctional Dry Strength Additives for Improved Production Efficiency</strong></td>
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<td>3</td>
<td><strong>Joonas Hokka</strong>, Kemira Oyj</td>
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<td><strong>A Novel Polyvinylamine Drainage and Strength Technology for Packaging Grades</strong></td>
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<td><strong>Yuping Luo</strong>, Kemira Chemicals</td>
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1  Bill Martin, RockTenn

PF1: Improving Paper Machine Profitability with Agile Controls
Moderator: Johan Backstrom, Honeywell Inc.

1  Kerry D. Figiel, International Paper  The Need for CD Mapping Standards

2  Michael G. Forbes, Honeywell Inc.  QCS Control Capabilities for Changing Process Conditions

3  Seyhan Nuyan, Metso Automation Business Line  Robust CD Fiber Orientation Control with Adaptive Modeling and Feed-Forward Compensation

PF2: Improving Pressing Efficiency
Moderator: Bandaru Ramaro, SUNY

1  Frederic Parent, FPInnovations  Re-visiting PM Efficiency - Practical Applications of the Impact of Web Instability at the Open Draw in Mill Case Studies

2  Bob Carney, Xerium Technologies  Using Press Nip Impulse to Increase Machine Efficiency

3  Daniel Hedou, AstenJohnson  Optimizing Press Performance Through Nip Dewatering

PF3: CFD Applications in Papermaking
Moderator: Paul Krochak, Innventia AB

1  Stefan Thilo Probst-Schendzielorz, Voith Paper Fabrics GmbH & Co. KG  Flow Analysis of Paper Machine Clothing

2  Brett Brotherson, Nalco  Use and Validation of Computational Fluid Dynamics for Mixing Evaluation in Chemical Additive Application Systems

3  Jordan A. MacKenzie, University of British Columbia  An Investigation of Turbulent Drag Reducing Additives on a Hydrocyclone Flow Field
PF4: Flexible Applications of Sheet Quality Measurements
Moderator: David Maddux, Technology Service Professionals

1 Mark D. Crable, Crable Engineering LLC
   Online Color Measurement

2 Paul Krochak, Innventia AB
   Monitoring Tools for Efficient Papermaking

3 Eric Reber, Mahlo
   Very Low Maintenance Non-Contacting Laser Caliper Measurement for Paperboard

PF5: Paper Machine Clothing in Papermaking
Moderator: John Xu, AstenJohnson

1 Daniel Hedou, AstenJohnson
   The Effect of Press Felt on Press Section Vibration

2 Chad A. Martin, AstenJohnson
   Improving Wet End Efficiency with Latest in Forming Fabric Technology

3 Ronald Jurek, Voith Paper Inc.
   On-Line Press Felt Monitoring - Safe and Reliable

PF6: Innovations in Web Imaging Systems
Moderator: Kerry D. Figiel, International Paper

1 Kari K. Hilden, Papertech Inc.
   How Web Imaging Improves Papermaking Efficiency and Paper Quality

2 Ari Niinisto, ABB
   Advances in High Quality Web Imaging

3 Petri Karhula, Procemex Ltd
   RTS-Alliance LLC
   Creating a New Web Inspection Beam
PF7: Wet End Optimization
Moderator: Jay Shands, Johnson Foils Paperchine

1. Fernando Cabrera Caram, FCPAPEL
   New Forming Concept in Wet End Optimization

2. Andy Forester, IBS North America
   Unleashing the Beast

3. Ken Stager, Paperchine
   The Science Behind the Art of a Wet End Rebuild

4. Doug Sweet, Doug Sweet & Associates
   Wet End Optimization - Maximizing Dewatering and Controlling the Former Vacuum System

PF8: Fundamentals of Refining, Headbox and Forming
Moderator: Jimmy Jong, FPInnovations

1. Kristian Erik Salminen, VTT Technical Research Centre of Finland
   Foam Forming - The Effects of Surfactant Type on Characteristics of Fiber-Foam Suspension and Properties of Formed Fiber Network

2. Frank Cunnane, Cristini North America
   Sheet Formation Control and Cost Savings Using Agile Controls

3. Scott Grillo, Paperchine Inc.
   The Effect of Refining on Yield Stress of Kraft Pulps

PF9: Improving Sustainability with QCS Lifecycle Management
Moderator: David Moore, SAPPi

1. Kevin Dale Starr, ABB
   QCS Automation Service Solutions for the 21st Century

2. David Jackson Maddux, Technology Service Professionals
   Improving Sustainability with QCS Life Cycle Management

3. Greg Parsons, ABB
   Parts Programs to Manage and Extend Control System Life Cycles
Coating & Graphic Arts Program

C1: Coating Opening & Keynote

Dan Malenke, PKGPro LLC

Fiber Based Packaging - Collaborative Solutions for Packaging Sustainability

C2: Coating Best Papers I
Moderator: Tim Bradley, Omya

1. Elliott Echt, DuPont Pkg. & Ind. Polymers
   New Ionomer Dispersion Technology for Grease Barrier Coatings

2. Finley Richmond, University of Maine
   The Use of Cellulose Nanofibers in Paper Coating Formulations (Best Student Paper Candidate)

3. Thomas Boyle, Styron
   Influence of Topcoat Applicator Technology on Starch Migration from Precoat to Topcoat

C3: Coating Best Papers II
Moderator: Amy Anttila, Intertape Polymer Group

1. Daniel Gerard, Omya
   On the Stabilization of Calcium Carbonate Slurries for High pH and Ion Content Coating Colours

2. Harrison Gates, University of Maine
   Force Measurements for Coating and Printing of Webs (Best Student Paper Candidate)

3. Martti Toivakka, Abo Akademi University
   Molecular and Microscopic Level Understanding of Coating Strength

C4: Advances in Materials to Improve Paper & Board Quality
Moderator: Femi Kotoye, Styron

1. Pablo Garcia, Kuraray
   Enhanced Polyvinyl Alcohol as a Barrier Paper Coating for Food Packaging
2 Hak-lae Lee, Seoul National University  
Effect of Coating Binder on Fold Cracking of Coated Paper

3 John A. Roper, Dow Chemical  
Advanced Materials Enabling New Specialty Paper Concepts - Acrylic Bead Technology

4 John A. Roper, Dow Chemical  
Advanced Materials Enabling New Specialty Paperboard Concepts - Hollow Sphere Pigment Technology

C5: New Developments in Print Technology  
Moderator: Prakash Malla, Thiele Koalin Company

1 Peter Dahlvik, Omya  
Optimizing the Flexo Print Quality of Single Coated Board

2 Christophe Bastien, Bekaert  
Coated Paper Quality as Innovative Approach to Understanding and Optimizing Drying Strategy

3 Gaurav Pranami, Dow Chemical  
Opaque Polymers as Alternatives to TiO2 Pigment for Making White Aqueous Graphic Arts Inks

C6: Printing Technology Update - Coatings, Inks and Curing  
Moderator: Jim Niemiec, NewPage

1 Matt Barlow, Coatings and Adhesives Corporation  
Aqueos and Varnish Coatings

2 Rosalyn Waldo, Allnex  
Energy Curing Coatings and Inks

3 Erich A. Midlik, Prime UV-IR  
Drying and Curing Hardware Systems

4 Nancy Plowman, Nancy Plowman Associates  
Printer Perspectives of Overprinting and Coating

C8: Coating Process Industry Trends for Paper, Packaging Board & Specialty Paper Manufacturing  
Moderator: Greg Welsch, Styron
1. Pam Hynnek, Valmet

2. Mark Sorenson, Andritz

3. Andy Broomfield, ABB

4. Ilkka Mustonen, ACA Systems Oy

**C9: New Developments in Coating Operations Technology**

*Moderator: Manoj Dixit, Domtar*

1. **Per Emilsson, UMV Coating Systems AB**  
   Zero Dwell Coating with Polymeric Tip without Vortex for Better Profiles and Coverage

2. **Kari Hilden, Papertech Inc.**  
   Improving Coater Runnability with Web Inspection and Web Monitoring Cameras

3. **Chris Woron, Ryeco, Inc.**  
   Automated Stripe and Defect Marking Technologies Used to Improve Productivity and Profitability

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**New Technology Showcase**

**NTS 1: Coating & General Topics**

1. **Ilkka Tamminen, FP Pigments**  
   Novel Inkjet Pigment for Fast Ink Drying and Improved Printing Efficiency

2. **Joy Bryant, BASF**  
   High Strength Coating Binders Enabling Significant Reductions in Coating Costs

3. **Chris Lazaroff, Coatex**  
   Rheocarb™ Platform - A Breakthrough in Rheology Modifiers for Paper & Board Coatings

4. **Ilkka Mustonen, ACA Systems**  
   DWR - Dynamic Water Retention Analyzer for Coating Colors

5. **Linda Kim-Habermehl, Omni Tech International**  
   Use of Bio-Based Materials in Forest Products Applications

6. **Stephan Defrance, Bekaert**  
   Control & Best Practice with Infrared Technologies
07 Craig McCollum, Clouth Sprenger Increasing Machine Efficiency When Converting From Steel Coater Blades to Long Life Blades

08 Mikko Rantanen, MoveRoll Innovative Kicker and Receiver from MoveRoll Pressure Conveyors for Controlled Handling of Paper Rolls

09 Albert Middeke, Arnold Company Opening Boxcars Safely & Efficiently

10 Mark Sherrill, TGM Turbine Generator Maintenance Running Condition Assessments for Optimized Availability

NTS 2: Papermaking Topics
Moderator: Mark Foulger, GL&V

01 Mike Wallace, Akzo Nobel Novel Engineered Cellulose for Significant Board Strength Gains

02 Jason Zyglis, Cognex Innovations in Web Imaging Video Review, Storage and Indexing to Enable Greater Accuracy and Rapid Recipe Changes to Maximize Customer Quality

03 Luc Farly, Xerium Formsoft - Optimized Forming Performance

04 Dean Devries, Archroma Leucophor SKH Liquid

05 Zach Manges, DuBois Chemicals Cleaning for High Speed Machines

06 John Turner, Emerson Process Management Emersons New CSI 2140 Machinery Health Analyzer provides a Complete Tool for Assessing & Preserving Mechanical Equipment Health

07 Rick Van Fleet, BTG Single Point Kappa SPK-5500

08 Petri Karhula, Procemex Pick-up Web Inspection System

09 Timo Haverinen, EV Group EV Online Cleaning System for Papermachine Wet Ends and Stock Preparation Systems

10 Elwyn Green, TSP QCS & Automation Services Solutions

Tissue360° Forum Program

T01: Tissue Market Overview
Moderator: Ken Patrick, Tissue360°
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<th>Abstract</th>
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<td>T02: Base Sheet I - Fiber Usage and Supply</td>
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<tr>
<td>1</td>
<td>The World's Recovered Paper Supply for Tissue Manufacturing</td>
<td>William Moore, Moore &amp; Associates</td>
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<td>2</td>
<td>The Challenges of Recycled Furnish in the Manufacture of Premium Tissue Products</td>
<td>David Jones, Buckman</td>
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<td>3</td>
<td>Novel Enzymatic Approach Offers New Possibility for Recycled Tissue &amp; Towel Manufactures</td>
<td>Pascal Rivard, Ashland</td>
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<td>T03: Tissue Properties Workshop I - Overview of Testing Methods</td>
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<td>1</td>
<td>Overview of Testing Methods</td>
<td>Steve Berg, Thwing-Albert Instrument Company; Charles Bohanan, TAPPI; Todd Popson, Technidyne</td>
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<td>T04: Base Sheet II - Insights into Sheet Structure</td>
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<td>1</td>
<td>Investigation of the Dynamic Liquid Absorption Properties of Kitchen Towel</td>
<td>Hannes Vomhoff, Innventia</td>
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<td>2</td>
<td>How Does Your Crepe Structure Measure Up?</td>
<td>Gary Furman, Nalco</td>
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<td>3</td>
<td>Development of Laboratory Wet Creping Method to Evaluate and Control Pulp Quality for Tissue</td>
<td>Phichit Somboon, Kasetsart University</td>
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<td>4</td>
<td>Sheet Structure Process Effect on Tissue Properties</td>
<td>Bruce Janda, InnovaSpec</td>
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T05: Tissue Properties Workshop II - Test Methods in Development
Moderator: Todd Popson, Technidyne

1 Michael J. Kocurek, Professor Emeritus, North Carolina State University; Tim Patterson, Ashland Water Technologies; Jeff Lundeen, Georgia-Pacific; David Loebker, Procter & Gamble; Rodger Segelstrom, Technidyne

T06: Base Sheet III - Chemistry
Moderator: Brian Hayes, Siemens

1 Joseph Mahoney, Ashland Water Technologies

2 Richard Riehle, Ashland Water Technologies

3 Chen Lu, Clay Campbell, Lucyna Pawlowska, Kemira

T07: Tissue Properties Workshop 3 - Laboratory Measurement Control
Moderator: Ann Timberlake, Consultant

1 Jeff Lundeen, Georgia-Pacific

2 Oliver Renier, IPS Testing

T08: Tissue Converting Innovations I
Moderator: Kevin Brennan, Ashland Water Technologies

1 Manrico Giusfredi, Fabio Perini

2 Justen Smith, Futura

3 Massimo Capisani, Pulsar America

T09: Tissue Converting Roundtable

1 Soile Kilpi, Poyry

2 William Nelson, E80
T10: Base Sheet IV - Tissue Manufacturing Technology
Moderator: Jeff Peters, BTG

1. **Soren Eriksson, Valmet**
   - Advanced Belt Winding on TM Reel for Improved Converting Efficiency

2. **Ed Graf, Consultant**
   - Air Dried Tissue, Commercial Installations and Results

3. **Bob Carney, Xerium**
   - Using Embedded Sensors in Press Rolls to Improve Tissue Machine Efficiency

4. **Tim Rye, Ryeco, Inc.**
   - Advances in Methods of Wire and Felt Guiding on a Tissue or Paper Machine

T11: Yankee Operations and Mill Safety
Moderator: Craig Hall, Clearwater

1. **Greg Ford, TalentClick**
   - Tissue Mill Safety - Personality a Leading Indicator of Human Error and Risk

2. **Jean Desharnais, Enerquin Air**
   - High Temperature vs High Impingement Velocity in Yankee Hoods

3. **Elmar Wind, Andritz**
   - A Creative Solution for Large Yankee Applications

NETInc (Nonwovens) Sessions

N1: NETInc Opening Session & Keynote
Moderator: Uday Raval, Kimberly-Clark

1. **Bryan Haynes, Kimberly-Clark**
   - Nonwoven Materials - Challenges for the Medical and Consumer Products Sector

2. **Steve Ogle, INDA**
   - Flushability - Past Present & Future
N2: Nonwovens Processes Tutorial

1. Dr. Royall Broughton, Auburn University
   Carding, Air Lay, Garnet, Needle Punch, Hydro Entanglement, & Adhesive Bonding

2. Dr. Gajanan Bhat, University of Tennessee
   Spunbond, Meltblown, Electrospinning, Calendar Bonding and New Technological Developments

N3: Sustainability
Moderator: Charles Fifelski, Stryon

1. Glenn Brower, ECOSE Technology
   Developing a Biobased Formaldehyde-Free Binder for Nonwovens & Filtration

2. Janet O'Regan, Cotton Inc.
   Cotton & Sustainability for the Nonwovens Supply Chain

3. Juuso Johannes Rantanen, Aalto University
   Microfibrillated Cellulose as a Component in Novel Nonwoven Composite Structures

N4: Process Technology
Moderator: Jim Robbins, Omnova

1. Paul Sawhney, U.S. Department of Agriculture
   The Hydroentangled Greige Cotton Nonwoven Fabrics may be Spared from the Traditional Scouring in Bleaching-Drying

2. Jeff Taylor, Crafts Technology
   Can Tungsten Carbide Cut It

   Roll Based MES System-Impact on Bottom Line Results

4. Jochen Koenig, Schenk Vision
   Advances in Automated Optical Defect Inspection and Formation Analysis for Nonwovens

N5: Emerging Technology
Moderator: John Jacquin, Ineos

1. Rajan Vempati, ChK Group, Inc.
   Antibacterial Nonwovens using Nanophase MnOxide

2. Laura Frazier, SNS Nano Fiber Technology
   Novel Applications for Nanofiber Nonwovens

3. Genevieve Garland, The Nonwovens Institute
   What's in the Text? Using Tech Mining for Nonwoven Market Intelligence and Technology Forecasting
### N6: Binders & Additives
**Moderator:** Maureen Nunn, Dow

1. **Chris Sharpe, ESP Foam Control**  
   - Process Foam - What Why & How to Attack

2. **Christoper Baron, Ashland Water Technologies**  
   - Biocides in White Water Systems - Maximizing System Performance While Minimizing Costs

### N7: Nanotechnology
**Moderator:** Seshadri Ramkumar, Texas Tech University

1. **Timothy Robson, Hills Inc.**  
   - Nanofiber Melt Spinning Technologies

2. **Gang Sun, University of California**  
   - Fabrications & Functionalizations of Thermoplastic Nano Fibers and Nanofibrous Membranes

3. **Dr. Gajanan Bhat, University of Tennessee**  
   - Structure & Properties of Melt Blown Submicron Fiber Nonwovens from Polypropylene

4. **Wang Xiwen, South China University of Technology**  
   - A Non-Based Multilayer Separator for Lithium Rechargeable Battery

### N8: Filtration
**Moderator:** Christina Ruiz, Hollingsworth & Vose

1. **Dr. Jayesh Doshi, eSpin Technologies**  
   - High Performance HVAC Air Filtration with Nanofiber

2. **Pengfei Zhao, Auburn University**  
   - Sea Salt Particles Filtration using Novel Nonwoven Media at Various Relative Humidities

3. **Seshadri Ramkumar, Texas Tech University**  
   - Filtration Efficiency of Submicron Filters

4. **Vincent Kandagor, University of Tennessee**  
   - Processing Structure and Properties of Melt Blown Polyetherimide

### N9: Modeling
**Moderator:** Rajeev Chhabra, Procter & Gamble

1. **Yalcin Yesil, Bartin University**  
   - Effect of Quenching on the Structure and Properties of Melt Blown Polyurethane Nonwovens

2. **Rajeev Chhabra, Procter & Gamble**  
   - Conduction and or Convection - Is there a Preferred Mode of Heat Transfer in Moving Porous Webs
### OpEx Reliability Workshop

**OPEX1: Improving Production Reliability**

**Moderator:** Ken Patrick, TAPPI

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<th>Speaker</th>
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<tr>
<td>3</td>
<td>Dr. E. Shim, <em>The Nonwovens Institute</em></td>
<td>Process Structure Property Relationship of Melt Spun PRA Filaments in the Spunbond</td>
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<td>1</td>
<td>Christer Idhammar, <em>IDCON</em></td>
<td>Reliable Production a Cornerstone in Operational Excellence</td>
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<td>2</td>
<td>Larry Schindler, <em>Wausau Towel and Tissue</em></td>
<td>Reliability Audit-Implementation Initiative at Wausau Towel and Tissue</td>
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<td>3</td>
<td>Allen Bowdler, Pratt Industries; Janie Lasik, <em>CrystalTek</em></td>
<td>Stickies Removal Cleaning</td>
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**OPEX2: Implementing, Applying Predictive Analytics**

**Moderator:** Mike Pemberton, ITT Industrial Process

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<tr>
<td>1</td>
<td>Mario Montag, Predikto</td>
<td>How to Get Started with Predictive Analytics</td>
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<td>2</td>
<td>Dragan Trivanovic, Zellstoff Celgar</td>
<td>How Analytics of Big Data Improves Reliability</td>
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<td>3</td>
<td>Bill Wick, <em>American Industrial Metrology</em></td>
<td>More Production and Uptime - Good PM Alignment Starts at the Wet End and Press</td>
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**OPEX3: Reliability Training and Management**

**Moderator:** John Yolton, SKF

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<td>1</td>
<td>Jim Davis, Performance Consulting Associates</td>
<td>Getting Operations More Involved in Asset Reliability Management</td>
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<td>2</td>
<td>Robert Matthews, Royal Purple; Christen Howard, RockTenn</td>
<td>Getting the Most Back From Your Reliability Training</td>
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<td>3</td>
<td>Bobby Allen, Allied Reliability Group</td>
<td>Managing a Preventative Maintenance Program in the Most Effective and Efficient Manner Possible</td>
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**OPEX4: Optimizing Asset Management**

**Moderator:** Ken Patrick, TAPPI

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<tr>
<td>1</td>
<td>David Neikirk, Allied Reliability Group</td>
<td>Managing Backlogs with Practical, Proven Techniques</td>
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<td>2</td>
<td>Lance Bisiger, Allied Reliability Group</td>
<td>Optimizing an Asset Health Management Program with Simple Techniques</td>
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<td><strong>RPTA Production-Technical Seminar</strong></td>
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<td><strong>RPTA1: Developments in Recycled Fiber Food Packaging</strong></td>
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<td>1</td>
<td>Jake Handelsman, AF&amp;PA</td>
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<td>Marko Kolari, Kemira</td>
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<td>Janet Woodward, Buckman</td>
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<td><strong>RPTA2: Fiber Quality &amp; Supply</strong></td>
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<td>1</td>
<td>Emily Freeman, Waste Management</td>
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<td>Hannah Zhao, RISI</td>
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<td>Bill Moore, Moore &amp; Associates</td>
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<td><strong>RPTA3A: Safety</strong></td>
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<td>Linda Robertson, International Microbial Associates Inc.</td>
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<td><strong>RPTA3B: Multiply Machines Developments</strong></td>
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<td>Luca Canali, Cristini</td>
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<td>Fernando Cabrera, FCPapel, LLC</td>
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<td>Enrico Raffanti, Toscotec</td>
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RPTA4: Advancements in Energy Conservation

1. **Paulo Rangel, CoProcess**
   - Principles of Infrared Heat Transfer and its Practical Applications in the Paperboard and Boxboard Industry

2. **Chuck Wunner, Vooner FloGard**
   - Vacuum Dewatering Cost per Ton of Paper

3. **Dick Reese, Dick Reese & Associates**
   - Successful Strategies to Reduce Energy Use on Paper Machines

**Poster Session**

**Posters**

1. **Jane Hutt, International Generator Technical Community**
   - Online Forum Develops into a Worldwide Generator-oriented Community of Practice

2. **Jinhua Yan, North Carolina State University**
   - A Novel Method for Nanoparticle Loading in Porous Cellulose Substrates

3. **Renmei Xu, GuangDong Industry Technical College**
   - Crosslinked PANI-Paper Composite

4. **Peter Fisera, Procsim**
   - Continuous Online PM Real Time Simulation and Close Loop MPC Raise PM Performance

5. **Petteri Paananen, MUAS Fiber Laboratory**
   - Optimal Dosing Points of Starch-Simultaneous Feeding of Starch and Filler

6. **Petteri Paananen, MUAS Fiber Laboratory**
   - Simultaneous Feeding of the Filler and Retention Agent-Effect of the Shear Rate

7. **Rachel Strelow, University of Wisconsin - Stevens Point**
   - Automated Fiber Blending System

8. **Jose Francisco Negrete Alvarez, Universidad de Guadalajara**
   - Adsorption Effect of Polyelectrolytes on Recycled Fibers

9. **Melissa Tatiana Andreuccetti, State University of Campinas**
   - Characterization of Eucalyptus Black Liquor and Correlation of Their Physico-chemical Properties

10. **Phichit Somboon, Laboratory of Pulp and Paper Technology, Kasetsart University**
    - Cracking Potential and Micro-Elongation of Linerboard Along the Operating Window of Jet or Wire Ratio
Advesh Gandwar, Advanced Enzyme Technologies

Improved Moisture Resistance of NFC Films by Printing a Water Barrier

Peter Ratto, Innventia

Creating Quality Index by Combining Process and Quality Measurements in Order to Enhance Process Performance

Jarmo Kahala, Savcor