

**Sunday, October 21, 2007**

**8:00 am – 4:00 pm SESSION 1**

**St. John's Bleach Plant Workshop**

*Presenters: Thomas McDonough, IPST @ Georgia Tech; Richard Berry, FPInnovations, Paprican; Doug Pryke, Alliance for Environmental Technology; Bill Miller, Andritz; Andy Garner, Andrew Garner & Assoc.*

**Monday, October 22, 2007**

**7:00 am – 9:00 am COFFEE BREAK**

**Outside Ballrooms 6-8**

**8:30 am – 10:00 am SESSION 2**

**Ballrooms 6-7 Opening Session, Awards & Keynote Address**

*Keynote - Innovation and Sustainability for the Forest Based Industries  
Miles Drake, CTO/Sr. VP of Technology, Weyerhaeuser Co.*

**10:00 am – 10:30 am COFFEE BREAK**

**Ballroom 5**

**10:30 am – Noon SESSION 3**

**Ballroom 7 State of the Industry Report**

*Presenter: Jacquelyn D. McNutt, CPBIS*

**10:30 am – 11:30 SESSION 4**

**Ballroom 8 Advances in Chemical Pulping**

*Session Chair: Calvin (Cal) Clark, BE&K Engineering Co.*

4-1 10:30

Effect of Sulfite, Sulfide and Hydroxide Concentrations in Mini Sulfite Sulfide Anthraquinone Pulping

*Ved Naithani, Mathias Lindstrom, Adrianna Kirkman and Hasan Jameel  
North Carolina State University*

4-2 11:00

How Does Hydroxyethylidene Diphosphonic Acid (HEDP) Accelerate Kraft Pulping?

*Richard Berry, Yujun Sun and Corinne Luthe, FP Innovations, Paprican*

**10:30 am – Noon SESSION 5**

**St. John's  
Today**

**Mill Engineering Panel Session: Challenges Mill Engineers Face**

*Panel Moderator: Steve Dowe, Jacobs Engineering Group*

Panelists:

*Byron Alvey, Weyerhaeuser Co.*

*Andy Norris, Georgia-Pacific Corp.*

*Charles L. Gustafso, Jacobs Engineering Group Inc.*

**10:30 am – Noon SESSION 6**

**Clearwater**

**Improvements in Mechanical Pulping**

*Session Chair: Stephen F. Robinson, Premier Chemicals LLC*

6-1 10:30

Shive Content Modeling and Simulation in Chemi-Thermo-Mechanical Pulping

*Manne Tervaskanto and T. Ahvenlampi, University of Oulu  
T. Harju, Metso Automation*

*T. Sippus, Stora Enso*

6-2 11:00 Synergistic Effects Between Chemical Mechanical Pulps and Chemical Pulps from Hardwoods  
*Eric C. Xu, Andritz Inc.*

6-3 11:30 The Study on Contamination Characteristic and Decolourization Method of Chemi-thermomechanical Pulp Effluent  
*Zhijun Hu and Kaitang Hu, Zhejiang University of Science and Technology*  
*Yuming Li, South China University of Technology*

**10:30 am – Noon**  
**Ballroom 6** **SESSION 7**  
**New Technology Showcase**

**1:30 pm – 3:00 pm**  
**Ballroom 6** **SESSION 8**  
**Effect of Fiber Raw Materials on Pulping Processes**  
*Session Chair: William S. Fuller, FRM Consulting*

8-1 1:30 The Effect of Seasonal Variation in Wood Moisture Content on Chip Size and Kraft Pulping  
*William F. Watson, CEM Machine, Inc.*  
*Randy Stevenson, Georgia-Pacific Corp.*

8-2 2:00 Effects of Specific Gravity and Lignin Content on the Pulp Yield of Loblolly Pine  
*David E. White, Charles E. Courchene and Thomas J. McDonough, IPST @ Georgia Tech*  
*Laurie Schimleck and David Jones, University of Georgia*  
*Gary Peter, University of Florida*  
*Robert Purnell and Gopal C. Goyal, International Paper Co.*

8-3 2:30 Evaluation of the SuperBatch™ Pulping Process for *Pinus taeda*  
*Fernando Soares Ribeiro de Vasconcelos, Klabin S.A*  
*Francides Gomes da Silva Júnior, University of São Paulo*

**1:30 pm – 3:00 pm**  
**Ballroom 7** **SESSION 9**  
**Bleach Plant Safety Panel Session**  
*Panel Moderator: Thomas J. McDonough, IPST @ Georgia Tech*

9-1 1:30 *Hydrogen Peroxide—An Environmentally Friendly but Dangerous Bleaching Chemical*  
*Alan W. Rudie, USDA Forest Products Laboratory*  
*Peter W. Hart, MeadWestvaco Corp*

9-2 1:50 Safety Considerations in the use of Chlorate and Chlorine Dioxide in Pulp Bleaching Processes  
*Jim J. Hopmans, ERCO Worldwide*

9-3 2:10 Update on Work Being Done on Chlorate and Chlorine Dioxide by a Subcommittee of AET  
*Douglas C. Pryke, AET*

9-4 2:30 Panel Discussion of Bleaching Chemical Safety Procedures and Practices

Panelists:

*Alan W. Rudie, USDA Forest Products Laboratory*

*Jim J. Hopmans, ERCO Worldwide  
Douglas C. Pryke, AET  
Tom McDonough, IPST @ Georgia Tech*

**1:30 pm – 3:00 pm  
Ballroom 8**

**SESSION 10**

**Wastewater Treatment and Analysis**

*Session Chair: Michael H. Foster, EBS Environmental*

- 10-1 1:30 Changes in Wastewater Pollutant Loading Associated with Closure of Recycled Fiber Processing  
*Curtis W. Bryant, Weyerhaeuser Co. and Diane Hardison, Domtar Inc.*
- 10-2 2:00 Nutrient, COD and Solids Mass Balances for Pulp & Paper Activated Sludge Wastewater Treatment Plants: The Practical Benefits for a TMP Mill  
*Lucy E. Cotter, Jean-Martin Brault and Paul R. Stuart, Ecole Polytechnique  
Daniel Lemire and Sylvain Bussière, White Birch Papers™*

**1:30 pm – 3:00 pm  
St. John's**

**SESSION 11**

**New Asset Management Approaches**

*Session Chair: Jerry D. Kahn, JK Consulting*

- 11-1 1:30 The Partnership Organization  
*H. Christer S. Idhammer, IDCON Inc.*
- 11-2 2:00 Managing Assets Using Performance Supervision  
*Michel Ruel, TOP Control Inc.*
- 11-3 2:30 The Potential for Improved Paper Quality and Machine Run-Ability through Machine Cleanliness  
*Wade Parks, WP Associates*

**3:00 pm – 3:30 pm  
Ballroom 5**

**COFFEE BREAK**

**3:30 pm – 5:00 pm  
Ballroom 6**

**SESSION 12**

**Simulation Software Workshop**

The apiMAX System,  
Felipe Perez-Paton, American Process Inc.

**3:30 pm – 5:00 pm  
Ballroom 7**

**SESSION 13**

**Bleaching with Oxygen and Peroxide**

*Session Chair: Richard M. Berry, FP Innovations, Paprican*

- 13-1 3:30 Modern Approaches to the Design of Environmentally Benign Stabilizers of Peroxy Compounds in Pulp Bleaching  
*Reijo Aksela, Ilkka Renvall, and Hannu Hämäläinen, Kemira Oyj*
- 13-2 4:00 Effect of Pulp Delignification Degree and Bleaching Process on an Eucalyptus Fiber Line Performance and Economics  
*Jorge L. Colodette, Jarrod Tucker, Richard Phillips, Hasan Jameel and José L. Gomide, Federal University of Viçosa*
- 13-3 4:30 TAED Activator for Peroxide Bleaching of Recycled Pulp  
*Jeffery S. Hsieh, Yong Zou, and Chhaya Agrawal, Georgia Institute of Technology  
Jane Matthews, Warwick International Group Limited*

**3:30 pm – 5:00 pm**    **SESSION 14**  
**Ballroom 8**            **Sulfur Emissions from Wastewater Treatment**  
*Session Chair: Robert M. Stein, Aware Environmental Inc.*

14-1    3:30            Reduced Sulfur Compound Emissions from Kraft Mill Wastewater Treatment Plants  
*Ashok K. Jain, NCASI*

14-2    4:15            Group Discussion  
Approaches Used to Control Sulfur Emissions' Problems in Mill Effluent Streams  
*Ashok K. Jain, NCASI*  
*Robert M. Stein, Aware Environmental Inc.*

**3:30 pm – 5:00 pm**    **SESSION 15**  
**St. John's**            **Bill Babbington Maintenance Roundtable**  
*Session Chair: Jerry D. Kahn, JK Consulting*

**Tuesday, October 23, 2007**

**6:45 am – 8:30 am**    **SESSION 16**  
**Daytona**            **Hot Topics Breakfast**  
*Group discussions of latest technical/production developments and operating problems*

**8:30 am – 10:00 am**    **SESSION 17**  
**Ballroom 6**            **Advances in ECF Bleaching**  
*Session Chair: Jorge L. Colodette, Federal University of Viçosa*

17-1    8:30            Comparison of Various Hardwood Kraft Pulp Pre-Beaching Techniques  
*Dale E. Nutter, MeadWestvaco Corp.*  
*Kelley Spence and Jarrod Tucker, North Carolina State University*  
*Peter W. Hart, North Carolina State University and MeadWestvaco Corp.*

17-2    9:00            The Chemistry of Aldehyde Enhanced Bleaching  
*Richard Berry, Waleed Wafa Al-Dajani, Zhi-Hua Jiang and Barbara van Lierop, FP Innovations, Paprican*

17-3    9:30            Optimization of ECF Bleaching of Kraft Pulp: II Effects of Acid Prehydrolysis on Hardwood Pulp Bleachability  
*Thomas J. McDonough and Charles E. Courchene, IPST @ Georgia Tech*  
*Shunichiro Uno, Nippon Paper Industries*  
*Alan W. Rudie, USDA Forest Products Laboratory*

**8:30 am – 10:00 am**    **SESSION 18**  
**Ballroom 7**            **Biorefinery Tutorial - A Review of Alternatives for Forest-Based Biorefineries**  
*William J. Frederick, Kristiina Iisa and Art Ragauskas, Georgia Institute of Technology*  
*Steve Kelley, North Carolina State University*

**8:30 am – 10:00 am**    **SESSION 19**  
**Ballroom 8**            **Measuring the Paper Business**  
*Session Chair: Colleen C. Walker, CPBIS*

- 19-1 8:30 Financial and Value Metrics Based Performance Evaluation of North American Pulp and Paper Companies and Identification and Adjustment of Deficiencies to Compete in the Global Market Place  
*Venketa R. Parthasarathy, Weyerhaeuser Co.*
- 19-2 9:00 Equity Carve-Out (ECO) as a Financial Instrument for Corporate Restructuring – Will it Work for the Pulp and Paper Industry?  
*Venketa R. Parthasarathy, Weyerhaeuser Co.*
- 19-3 9:30 Market Dynamics in Timber Procurement  
*Kendra C. Taylor, Booz-Allen-Hamilton, Paul M. Griffin, and Joel S. Sokol, Georgia Institute of Technology*

**8:30 am – 10:00 am St. John's** **SESSION 20**  
**Optimizing Chemical Recovery**  
*Session Chair: Christopher T. Dietel, DTE Energy Services*

- 20-1 8:30 Effects of Chloride, Potassium and Sulfate on the Causticizing Reaction in the Kraft Recovery Process  
*Honghi Tran, Sona Saeid and Vladimiro G. Papangelakis, University of Toronto*
- 20-2 9:00 Combustion by Design - Practical Kiln Optimization  
*Richard P. Manning, Cliff J. Rennie and Chris Sansom, Kiln Flame Systems Ltd.*
- 20-3 9:30 Pet Coke Grinding and Firing of Lime Kilns—An Overview  
*E.A. (Gene) Golebiowski and Marvin Weakly, Phoenix Process Engineering Inc.*

**8:30 am – 10:00 am Clearwater** **SESSION 21**  
**Workshop on Lower Furnace Corrosion—Part I**  
*Session Chair: Douglas L. Singbeil, FPInnovations, Paprican*

**10:00 am – 10:30 am Ballroom 5** **COFFEE BREAK**

**10:30 am – Noon Ballroom 6** **SESSION 22**  
**Pretreatments to Enhance Bleaching**  
*Session Chair: Brian N. Brogdon*

- 22-1 10:30 Reduction of Soda Usage for Acacia Kraft Pulp by Mechanical Pretreatment  
*Jeffery S. Hsieh and Arthur J. Ragauskas, Georgia Institute of Technology*  
*W. Widiatmoko, IPST @ Georgia Tech*
- 22-2 11:00 New Technology Tools Discover Enzyme Products to Enhance Pulp Bleaching  
*Bill Hancock and Ali R. Esteghlalian, Verenium Corporation*
- 22-3 11:30 Extractive Removal and Selectivity Improvement by Various Pretreatment Methods Prior to Oxygen Delignification for *Acacia mangium* and Mixed Hardwood Kraft Pulps  
*Jeffery S. Hsieh and Arthur J. Ragauskas, Georgia Institute of Technology*  
*W. Widiatmoko, IPST @ Georgia Tech*

<b>10:30 am – Noon Ballroom 7</b>	<b>SESSION 23</b> <b>Determining the Effects of Wood Pretreatments</b> <i>Session Chair: L. Dwight Husband, FutureBridge Consulting</i>
23-1 10:30	Acid Prehydrolysis of Wood <i>Alan W. Rudie, USDA Forest Products Laboratory</i>
23-2 11:00	Alkaline Extraction of Hemicelluloses from Aspen Chips and Its Impact on Subsequent Kraft Pulping <i>Waleed Wafa Al-Dajani, FPInnovations, Paprican and Ulrike Tschirner, University of Minnesota</i>
23-3 11:30	Kraft Pulping Kinetics of Hot-Water Extracted Eucalyptus Wood Chips Part I: An Experimental Study <i>Gangesh Mishra, State University of New York Shijie Liu, State University of New York</i>
<b>10:30 am – Noon Clearwater</b>	<b>SESSION 24</b> <b>Workshop on Lower Furnace Corrosion-Part II</b> <i>Session Chair: Douglas L. Singbeil, FPInnovations, Paprican</i>
<b>10:30 am – Noon St. John's</b>	<b>SESSION 25</b> <b>Chemical Recovery/Bio-Energy Opportunities</b> <i>Session Chair: Thomas M. Grace, T.M. Grace Co.</i>
25-1 10:30	The Integrated Forest Biorefinery: The Pathway to Our Bio-Future and the Range of Product Possibilities <i>Eric Connor, Thermo Chem Recovery International Inc.</i>
25-2 11:00	Short-Column Ion-Exchange Technologies for Kraft Pulp Mill Chemical Cost Reduction <i>Jon Foan, NORAM Engineering, Naceur Jemaa, FPInnovations, Paprican and Mike Sheedy, Eco-Tec Inc.</i>
<b>10:30 am – Noon Ballroom 8</b>	<b>SESSION 26</b> <b>Environmental Management - Sustainability Panel</b> <i>Panel Moderator: Dale K. Phenicie, Environmental Affairs Consulting</i>
26-1 10:30	Pursuing Sustainability <i>Dale K. Phenicie, Environmental Affairs Consulting</i>
26-2 11:00	Sustainability and Forest Products - Concepts, Application and Challenges <i>Sergio F. Galeano, Georgia-Pacific Corp.</i>
26-3 11:30	A review of programs for characterizing the environmental friendliness of paper products <i>Reid A. Miner, NCASI</i>
<b>1:30 pm – 3:00 pm Ballroom 6</b>	<b>SESSION 27</b> <b>Bandwidth Follow-Up Part I: Evaporator Panel</b> <i>Panel Moderator: Christopher L. Verrill, International Paper Co.</i>
27-1 1:30	Session Introduction: <i>Evaporator Panel: Opportunities to Reduce Energy Consumption</i> <i>Christopher L. Verrill, International Paper Co.</i>

- 27-2 2:00 Pulp and Paper Industry Energy Bandwidth Study  
David E. White, IPST @ Georgia Tech  
Robert B. Kinstrey, Jacobs Engineering Group Inc.
- 27-3 2:30 Jim Starka, A.H. Lundberg Associates, Inc.  
Evaporator Thermal Integration – State of the Art Technology
- 27-4 3:00 Membrane Technology for Pre-Evaporation  
Larry Stowell, New Logic Research

**1:30 pm – 3:00 pm**  
**Ballroom 7** **SESSION 28**  
**Non-Metal Corrosion Issues – Cause and Effect**  
*Session Chair: Randy Nixon, Corrosion Probe Inc.*

- 28-1 1:30 Corrosion Problems are Solved with Fiberglass that is Tougher than Ever  
*Gary L. Arthur, Fiberglass Reinforced Plastics Institute, Inc.*
- 28-2 2:00 Peroxide Resistance of Felts, Fabrics and Roll Covers  
*Andrew Garner, Andrew Garner & Assoc.*  
*André Menard, FPInnovations, Paprican*
- 28-3 2:30 TIP 0402-28 Best Practice for Inspecting FRP Equipment – Understanding the Damage Mechanisms and Specifying Damage Criteria Improves Inspection Value  
*David C. Bennett, Corrosion Probe Inc.*

**1:30 pm – 3:00 pm**  
**Ballroom 8** **SESSION 29**  
**Advancing the Biorefinery for Non-Woods**  
*Session Chair: Kristiina Iisa, IPST @ Georgia Tech*

- 29-1 1:30 Nonwood Fiber Raw Materials and the Biorefinery  
*Robert W. Hurter, HurterConsult Inc.*
- 29-2 2:00 A Biorefinery Process Suitable for Non-Wood Fibers  
*E. Kendall Pye, Michael Rushton and Alex Berlin, Lignol Innovations Ltd.*
- 29-3 2:30 Non-Wood Biorefinery Developments Outside North America  
*Jairo H. Lora, GreenValue SA*

**1:30 pm – 3:00 pm**  
**St. John's** **SESSION 30**  
**Boiler Water Treatment Workshop**  
*Session Chair: Mark Sargent, International Paper Co.*

- 30-1 1:30 Condensate Treatment and System Monitoring and Control  
*Virginia E. Durham, Hercules Inc.*
- 30-2 2:00 Recovery Boiler Waterside Inspections  
*Jim Graham, Buckman Laboratories Inc.*
- 30-3 2:30 Boiler Chemical Cleaning Frequency  
*Norris Johnson, Hercules Inc.*

**1:30 pm – 3:00 pm**  
**Clearwater** **SESSION 31**  
**Climate Change**  
*Session Chair: Reid A. Miner, NCASI*

- 31-1 1:30 Climate Change Policy and Regulatory Developments  
*Rhea Hale, AF&PA*  
*Tom Rosser, Forest Products Assn. of Canada*  
*Pertti Laine, Finnish Forest Industries Federation*  
*Sarah B. King, DuPont*
- 3:00 pm – 3:30 pm** **COFFEE BREAK**  
**Pre-function Area**
- 3:30 pm – 5:00 pm** **SESSION 32**  
**Ballroom 6** **Bandwidth Follow-Up Part II: Dewatering/Drying**  
*Panel Moderator: Timothy F. Patterson, IPST @ Georgia Tech*
- Panelists:  
David E. White, IPST @ Georgia Tech  
Robert B. Kinstrey, Jacobs Engineering Group Inc.  
John Nuen – Albany International  
Paul McCarten – Voith Paper  
Steve Metzler - MeadWestvaco Corporation  
Marc Foulger – GL&V
- 3:30 pm – 5:00 pm** **SESSION 33**  
**Ballroom 7** **Boiler Operations**  
*Session Chair: Chris Suggs, Sonoco Products Co. Inc.*
- 33-1 3:30 The Application of Automatic Port Rodding and High Efficiency  
Sootblowing to Improve Recovery Boiler Run Time  
*Philip S. McAllister, Simon Youssef and Jason Adams, Diamond Power  
International*  
*Dan Young and Nick Wildey, Glatfelter*
- 33-2 3:50 Optimizing CO and NO<sub>x</sub> Emissions from Hog Fuel Boilers  
*Allan R. Walsh, Jansen Combustion and Boiler Technologies, Inc.*
- 33-3 4:10 Induction Heat Tube Extraction for Generating Bank Re-Tubing:  
Technology Update  
*Wade P. Blaser, Babcock & Wilcox Co.*
- 33-4 4:30 Solubility and Solid Phase Composition in Boiling-Temperature Na<sub>2</sub>CO<sub>3</sub>–  
Na<sub>2</sub>SO<sub>4</sub> Solutions – A Modeling Approach  
*Nikolai DeMartini, IPST @ Georgia Tech*  
*Marta A. Bialik, Hans Theliander and Peter Sedin, Chalmers University of  
Technology*  
*Christopher L. Verrill, International Paper Co.*
- 3:30 pm – 5:00 pm** **SESSION 34**  
**Ballroom 8** **Kraft Liquor Corrosion—Reports from the Front Line**  
*Session Chair: Stephen J. Lukezich, Diamond Power International*
- 34-1 3:30 Susceptibility of Duplex Stainless Steels to Corrosion and Stress Corrosion  
Cracking in Pulping Liquors  
*Ananya Bhattacharya, Jamshad Mahmood and Preet M. Singh, Georgia  
Institute of Technology*
- 34-2 4:00 Corrosion of Stainless Steel in High Solids Black Liquor

*Margaret Gorog, Weyerhaeuser Co.*

34-3 4:30 Cracking of Pin-Studded Carbon Steel Waterwall Boiler Tubes  
*Joseph R. Kish, FP Innovations, Paprican*

**3:30 pm – 5:00 pm** **SESSION 35**  
**St. John's** **Advancing the Biorefinery for Wood**  
*Session Chair: Lucian A. Lucia, North Carolina State University*

35-1 3:30 A Biorefinery Approach: Non-Sulfur Pulping with Partial Lignin Recovery  
and  
Conversion  
*Todd S. Bolton, R. C. Francis and Thomas E. Amidon, State University of New York*

35-2 4:00 Evaluation of Wood-Based Biorefinery Options for Pulp and Paper Mills  
*Theodora Retsina and Vesa Pylkkanen, American Process Energy Recovery*

35-3 4:30 Biorefinery Discussion  
*Todd Bolton, State University of New York*  
*Theodora Retsina, American Process Inc.*  
*Lucian A. Lucia, North Carolina State University*

**3:30 pm – 5:00 pm** **SESSION 36**  
**Clearwater** **Current Issues in Air**  
*Session Chair: Daniel S. Diehl, Bowater Inc.*

36-1 3:30 New Source Review Reform—The Challenges Ahead  
*Tammy Wyles, Georgia-Pacific Corp.*

36-2 3:50 Bucksport Environmental Innovative Partnership Project  
*Marc A. Cone, Maine Department of Environmental Protection*  
*Kenneth Gallant, Verso Paper*

36-3 4:10 Case Study: PSD Permitting for Petcoke Fuel in a Lime Kiln  
*Phil Cobb, Golder Associates.*

36-4 4:30 BART Exemption and Control Evaluation Modeling Analyses Conducted for  
the Pulp & Paper Industry  
*Steven R. Marks and Sal K. Mohammad, Golder Associates*

**Wednesday, October 24, 2007**

**6:45 am – 8:00 am** **SESSION 37**  
**Daytona** **Hot Topics Breakfast**  
*Group discussions of the latest technical/production developments and operating problems*

**8:30 am – 10:00 am** **SESSION 38**  
**Ballroom 5** **Advances in Eucalyptus Pulping**  
*Session Chair: Gail A. Sherson, FP Innovations, Paprican*

38-1 8:30 Mixtures of Eucalyptus Grandis x Eucalyptus Urophylla and Pinus Taeda  
Woodchip for the Production of Kraft Pulping Using the Lo-Solids Process

Francides G. da Silva *Júnior*, University of São Paulo  
Ana G. M. C. Bassa, Vera M. Sacon and Eduardo Patelli, Votorantim  
Celulose e Papel

38-2 9:00 Lo-Solids Kraft Pulping off Eucalyptus Wood  
*José L. Gomide, L. R. Pimenta and Jorge L. Colodette, Federal University of Viçosa*  
*Nam H. Shin, Andritz Inc.*

38-3 9:30 Kraft Pulping of Eucalyptus with Anthraquinone, Polysulfide, and Surfactant  
*Francides G. da Silva Júnior, University of São Paulo*

**8:30 am – 10:00 am** **SESSION 39**  
**Ballroom 6** **Advances in Non-Wood Processing – Part I**  
*Session Chair: Jairo H. Lora, GreenValue SA*

39-1 8:30 Complete Hydrolysis of Bamboo Fibers in Formic Acid  
*Shijie Liu, State University of New York*  
*Yong Sun, Lu Lin, Chunsheng Pan, Haibo Deng, Hong Peng, Jiazhe Li, Runchang Sun and Beihai He, South China University of Technology*

39-2 9:00 Steam Explosion Pre-Treatment on Alkali-Oxygen Pulping of Bamboo  
*Wikhan Anapanurak, Nikhom Laemsak, Teera Veenin and Rusamee Boonpradit, Kasetsart University*  
*Pensri tiwannapat, Royal Forest Department, Bangkok*

39-3 9:30 Research on Cotton Bast Pulping Using Alkaline Peroxide BIVIS Pulp Method  
*Zhijun Hu and Kaitang Hu, Zhejiang University of Science and Technology*  
*Xunzai Nie, Hubei University of Technology*  
*Youming Li, South China University of Technology*

**8:30 am – 10:00 am** **SESSION 40**  
**Ballroom 7** **Advances in Chemical Recovery**  
*Session Chair: James A. Dickinson, Babcock & Wilcox Co.*

40-1 8:30 Prediction of the Solubility of Recovery Boiler Precipitator Ash  
*Daniel M. Saturnino and Honghi Tran, University of Toronto*

40-2 9:00 The Effect of Dead Load Chemicals in the Kraft Pulping and Recovery System  
*Thomas M. Grace, T.M. Grace Co.*  
*Honghi Tran, University of Toronto*

40-3 9:30 Update of the American Forest & Paper Association Recovery Boiler Program  
*Thomas J. Grant, AF&PA*

**8:30 am – 10:00 am** **SESSION 41**  
**Ballroom 8** **Details, Details, Details – Specifying Quality into Your Process Plant**  
*Session Chair: Alex D. Nadezhdin, Norbord*

41-1 8:30 Post-Fabrication Cleaning of Stainless Steel in the Pulp and Paper Industry  
*Elisabeth Torsner and Chris Baxter, Outokumpu Stainless Inc.*  
*Anders Bornmyr, Avesta Finishing Chemicals AB*  
*Ralph Davison, Technical Marketing Resources Inc.*

41-2 9:00 Welding of Duplex Stainless Steels  
*Ralph M. Davison, Technical Marketing Resources Inc.*

41-3 9:30 Understanding How Changes in Pressure Vessel Codes May Impact  
Pressure Vessel Performance  
*Patrick J. Sullivan, Highlander Engineering Services PLLC*

**8:30 am – 10:00 am** **SESSION 42**  
**Clearwater** **Water Issues**  
*Session Chair: William M. Jernigan, Georgia-Pacific Corp.*

42-1 8:30 Water Consumption at Pulp and Paper Mills  
*Barry Malmberg, NCASI*

42-2 9:00 Sheldon Mill Closure: From ESA to NFA  
*Nicole A. Roy, Abitibi-Consolidated*  
*C. Hunter Nolen, Camp Dresser & McKee*

42-3 9:30 Identification and Reduction of Juvabione, a Main Constituent of Inhibitory  
Effects on *Ceriodaphnia Dubia* Reproduction, in a Pulp and Paper Mill  
Effluent Using Todomatsu *Abies Sachalinesis*, Mast.  
*Hiroshi Araki, Akiko Nakamura, Katsuyuki Kishi, and Yasunori Nanri, Japan*  
*Pulp and Paper Research Institute, Inc.*  
*Norio Onikura, Kyushu University*

**10:00 am – 10:30 pm** **COFFEE BREAK**  
**Prefunction Area**

**10:30 am – Noon** **SESSION 43**  
**Ballroom 6** **Advances in Non-Wood Processing –Part II**  
*Session Chair: E. Kendall Pye, Lignol Innovations Ltd.*

43-1 10:30 Pulp and Paper Produced Using from EFB Using a Semichemical Process  
*Alberto Gonzalo and J.L. Sanchez, University of Zaragoza*  
*E. Escudero, F. Marín and R. Fuertes, Straw Pulping Engineering S.L.*

43-2 11:00 Characterization and Evaluation of Dhaincha (*Sesbania aculeata*) as  
Papermaking Fiber  
*M. Sarwar Jahan, D.A. Nasima Chowdhury, and M. Khalidul Islam, BCSIR*  
*Laboratories*

43-3 11:30 Wastewater Treatment of Papermaking Tobacco Leaf with Anaerobic  
Granular Sludge  
*Hou Yi, Li Youming and Hu Songqing, South China University of*  
*Technology*

**10:30 am – Noon** **SESSION 44**  
**Ballroom 5** **Measurement Techniques for Effective Pulping**  
*Session Chair: Michael H. Schofield, Hercules Inc.*

44-1 10:30 Improved Methods for Measuring Residual Effective Alkali in Kraft Black  
Liquors - Part 1: Absolute Measurement by Capillary Electrophoresis  
*Joseph L. Sullivan, Theodore Radiotis and Maurice Douek, FP Innovations,*  
*Paprican*

44-2 11:00 Improved Methods for Measuring Residual Effective Alkali in Kraft Black Liquors - Part 2: Comparison of Titration Methods  
*Theodore Radiotis, Joseph L. Sullivan, Martin MacLeod, Saima Syed and Tim O'Hagan, FP Innovations, Paprican*

44-3 11:30 Single Fiber Lignin Distributions Based on the Density Gradient Column Method  
*Alan W. Rudie, USDA Forest Products Lab*

**10:30 am – Noon  
Ballroom 7**

**SESSION 45  
Green Power Panel Session**  
*Panel Moderator: Ed Smith, SP Newsprint*

*A special panel comprised of a green power generator, marketer/purchaser, certifier, and user explore what green power is specifically, its sources, types, RECs, etc., and looks at how the markets for RECs work, what the buyer requires after the sale, what the potential value is, etc.*

**10:30 am – Noon  
Ballroom 8**

**SESSION 46  
Data Reconciliation**  
*Session Chair: Luc Laperrière, CIPP at UQTR*

46-1 10:30 Data Reconciliation 101- Challenges and Benefits  
*Luc Laperrière, CIPP at UQTR*

46-2 11:00 Mill Information System Uses Dynamic Data Reconciliation for Accurate Energy Accounting  
*Larry Wasik, Aurel Systems  
Dave Tannar, Catalyst Paper  
Dave Alexander, 3Sigma*

46-3 11:30 Process and Business Data Reconciliation in the Pulp and Paper Industry  
*Milan Korbel and Paul R. Stuart, Ecole Polytechnique De Montreal  
Laurent Garriques, OSISoft Canada*

**1:30 pm – 3:00 pm  
Ballroom 5**

**SESSION 47  
Dealing with Black Liquor**  
*Session Chair: Joseph Wilson, StarChem LLC*

47-1 1:30 Influence of Kraft Black Liquor Components on the Performance of Silicone Foam Control Agents  
*Sung-Hsuen Chao and Laurent Vermeire, Dow Corning  
Torolf Laxen, SciTech-Service Oy Ltd.*

47-2 2:00 Improving Washing Efficiencies in the Kraft Pulp Mill with New Defoamer Technology  
*Mark Schroen, Buckman Laboratories Inc.  
Philip M. Hoekstra, Buckman Laboratories Inc.*

**1:30 pm – 3:00 pm  
Ballroom 8**

**SESSION 48  
Semichemical Processing**  
*Session Chair: Leon A. Livingstone, Neill & Gunter Ltd.*

48-1 1:30 Condensate Chemistry in NSSC Evaporators  
*Douglas Wynn and Bett Antes, Smurfit-Stone Container Corp.*

48-2 2:00 Sulfur Dioxide Removal Efficiency Optimization in a Sulfite Recovery Boiler Scrubber/Absorber  
*Leon A. Livingstone, Neill and Gunter, Design and Consulting Engineers*  
*James P. Henderson, Rayonier Performance Fibers*

**1:30 pm – 3:00 pm** **SESSION 49**  
**Ballroom 7** **Improving Pulp Processing**  
*Session Chair: Deni Barton, Hercules Inc.*

49-1 1:30 Dynamic Steam Heating - Efficient Use of Low-Temperature and Low-Pressure Steam for Heating Different Media by Dynamic Steam Blending  
*Ludwig Michal and Christian Wallner, Andritz AG*

49-2 2:00 No-Load Characterization of a Low-Consistency Disc Refiner for an Effective Application of Refining Theories  
*Ruben Bordin, Jean-Claude Roux and Jean-Francis Bloch, Tembec R&D Kraft*

**1:30 pm – 3:00 pm** **SESSION 50**  
**Ballroom 6** **Advances in Non-Wood Processing - III**  
*Session Chair: Robert W. Hurter, HurterConsult Inc.*

50-1 1:30 Novel Feedstocks—Future Revolutions in Papermaking?  
*Keijo J.E. Hytönen and Juha P. Tanskanen, University of Oulu*  
*Päivi P. Rousu, Lappeenranta University of Technology*  
*Pasi P. Rousu, Chempolis Oy*

50-2 1:50 Fines Study in the Bleached Pulp from the Sugar Cane Bagasse  
*Juan Carlos Sadovnik, Propal S.A.*  
*Luis Andrés Betancourt, Jairo Ramos and Fred Alban, Universidad del Valle*

50-3 2:10 The Role of Nonwood Fines Constituents on Pulp and Paper Properties  
*Päivi P. Rousu, Lappeenranta University of Technology*  
*Keijo J.E. Hytönen, Chempolis Oy*

**1:30 pm – 3:00 pm** **SESSION 51**  
**Clearwater** **Gains in Energy Efficiency**  
*Session Chair: Gregory A. Burns, MeadWestvaco Corp.*

51-1 1:30 A Tool for Simulating Energy Efficient Evaporation Using Excess Heat in Kraft Pulp Mills  
*Marcus R. Olsson and Thore Berntsson, Chalmers University of Technology*

51-2 1:50 Process Control: Energy, Water, and Chemical Savings through Optimization and Improved Control of Existing Equipment  
*Carol Pullen, Hach Co.*

51-3 2:10 Achieving High Efficiency Thermocompressor Operation  
*Ken Hill, Jim Maggard and Jerry Timm, Kadant Johnson Inc.*

51-4 2:30 Prevention of Elements Leaching from Coal Ash by Adding Fixation Chemicals

*Makoto Iwasaki, Kaori Inoue and Kazuya Ikeshima, Oji Paper Co.*