

23 OCTOBER

OPENING

- 10:30 - 12:00 AM** **Opening** - Darcio Berni, Francisco Razzolini, Luiz Ramos e Juan Carlos Villar
- Creating Competitive Advantage in the BioEconomy Through Clusters** - Paul Stuart **PLENARY SPEAKER**
- INDÚSTRIA 4.0** Daniel Mieczyslaw

INNOVATION

- Session CHAIRS:** Lairton Leonard
- 02:00 - 02:45 PM** **Empowering Innovation and Scientific Discoveries** - Denise Ferreira / CHEMICAL ABSTRACT SERVICE - Keynote
- 02:45 - 03:00 PM** **Lignocellulosic matter advanced upgrading in integrated biorefineries** - Franck Dumeignil / UNIVERSITE DE LILLE, FRANCE - Keynote
- 03:00 - 03:15 PM** **Coffee break**
- 03:15 - 04:00 PM** **Biobased polymers as a material bank for the development of structure, color and function: my experience from bio-fabrication to arts and design** - Orlando Rojas / AALTO UNIVERSITY- Keynote
- 04:00 - 04:45 PM** **Towards large, fossil free mills with integrated biorefineries – Trends in modern pulp mills** - Esa Vakkilainen / UNIVERSITY OF TECHNOLOGY, LAPPEENRANTA, FINLAND - Keynote
- Encerramento - Closing**

Posters

PULP

- Evaluation of papers reinforced with silk microfibers** - Patricia Kaji Yasumura / IPT
- Biotechnology in hand of pulp and paper industry** - Erika Barbosa Neves / BUCKMAN
- Humidity control during setups on a paper machine** - Ricardo Scheid Filho / TRI SOLUTIONS
- Industry 4.0 technologies in coating maintenance of industrial assets - an approach model** - Otavio Carneiro Correa / VIDYA CORROSAO ENGENHARIA LTDA

FORESTRY

- In silico analysis of expression of water stress genes in eucalyptus supplemented with flavonoid** - Mariana Teixeira Rebouças / UNICAMP
- Evaluation of effects of flavonoid supplementation in adult eucalypt** - Bianca Azevedo Curzio / UNICAMP
- Production of activated charcoal from fast pyrolysis charcoal** - Mailson de Matos / UFPR
- Temperature study of biomass thermoconversion (pyrolysis) for the obtainment of charcoal and liquid fuels** - Layssa Aline Okamura / SENAI

NANOCELLULOSE

- Economic feasibility of nanofibrillated cellulose production by the grinding method** - Caroline Jordão / UFPR
- Control of the production of cellulose nanocrystals by potentiometric and turbidimetric measures** - Barbara Castro Moreira / UFV
- The key role of lignin and hemicelluloses content on final properties of lignocellulosic nanofibers** - Nancy Vanesa Ehman / INSTITUTO DE MATERIALES DE MISIONES
- Vegetable nanocellulose membrane for potential application as dressings on body wounds** - Francine Cecon Claro / UFPR
- Study of the relationship between intrinsic viscosity and aspect ratio of cellulose nanofibers suspensions** - Gregory Albornoz / UNIVERSITY OF CONCEPCION
- Extraction of nanocellulose from cardboard residues** - Gustavo Adolfo Duarte Uruña / UEPG

ENVIRONMENT AND ENERGY EFFICIENCY

- Biological indicators application in treated effluent discharge monitoring of a pulp and paper plant** - Fernando Aquinoga de Mello / APLYSIA
- Application of the union of fenton and physical-chemical processes for the treatment of paper industry effluent** - Cristiane Alves do Prado / UNIFEI
- Development of porous ceramics from waste of the paper and cellulose industry** - Gabriela Bortolin Milak / KLABIN
- Metakaolin replacement by fly ash and dregs in geopolymers: compressive strength** - Rafael Vidal Eleutério / UFSC
- Use of waste from the paper industry and cellulose for the obtainment of cimentary materials** - Joana Gomes Meller / UFSC
- Nitrogen oxide reduction technologies for pulp mill flue gases** - Naveen Kumar Chenna / VALMET
- Incorporation of dregs residue, in concrete production** - Helena de Cassia Brassaloti Otsubo / SENAI
- Rice husk bio-char as an adsorbent for removal of wastewater contaminants** - Beatriz Vega / UNIVERSIDAD MONTEVIDEO URUGUAY
- Effects of treated effluent recirculation on the kraft pulp bleaching plant** - Erika Nascimben Santos / UFV
- Assessment of the conditions of operation and efficiency of ultrafiltration membranes for treatment of the alkaline extraction effluent of kraft cellulose industry** - Marília Christian Gomes Morais Nascimento / CENIBRA

CHEMICAL RECOVERY AND ENERGY

- Analysis of advanced process control implementation on a recovery boiler** - Mauricio Montanha de Freitas Silva / I SYSTEM
- Validation of the ideas simulation software for evaporation process multiple effect (lamela and tubular) of the kraft process** - Ana Paula Kaucz / ANDRITZ
- Optimization of energy and steam generation in a paper mill** - Ricardo Scheid Filho / TRI SOLUTIONS
- Minimization of recovery boiler risks with valmet leak detection system** - Nathalia de Castro Leme / VALMET

BIOREFINERY

- Autocatalytic esterification of levulinic acid with ethanol using a continuous flow reactor** - Vinicius Kothe / UFPR
- Study of action of combined pre-treatments and acid hydrolysis in eucalyptus urograndis bioethanol production** - Camila Juliane Marcondes / UNESP GUARATINGUETA
- Eucalyptus biomass for second generation ethanol production** - Jorge Lepikson Neto / SENAI
- Hydrothermal treatment and organosolv pulping of softwood assisted by carbon dioxide** - Camila Maria Imlauer Vedoya / INSTITUTO DE MATERIALES DE MISIONES - IMAM
- Use of kraft lignins obtained by sequential precipitation to control phosphate fertilizer release in the soil** - Pedro Queiroz Takahashi / UFV

24 OCTOBER

PAPER I

- Session CHAIR:** Marcelino Sacchi
- 08:30 - 09:15 AM** **MFC for dematerialisation and cost savings** - Johannes Kritzing / FIBERLEAN TECHNOLOGIES - SWITZERLAND - Keynote
- 09:15 - 09:45 AM** **Paper pigmentation using a metered size press** - Andrew David Findlay / IMERYS
- 09:45 - 10:00 AM** **Coffee break**
- 10:00 - 10:30 AM** **From lonely discovery to crowd sourcing. What is the next?** - Maria Luiza Otero D'Almeida / IPT - Song Won Park / USP - Invited
- 10:30 - 11:00 AM** **Novel polymer technology for improved productivity & quality of unbleached kraft containing packaging grades** - Christopher Lewis / KEMIRA
- 11:00 - 11:30 AM** **Impact of carbonate particle size distribution on coating structure & paper properties** - Janet Preston / IMERYS
- 11:30 - 12:00 PM** **Guarantee of the process, quality and productivity** - Leandro do Prado de Almeida / CTEMS
- Encerramento - Closing**

PULP I

- Session CHAIR:** Leonardo Pimenta
- 08:30 - 09:15 AM** **Engineering multifunctional fibres: The future is now** - Pedro Fardim / BELGIUM AND ABOAKADEMI UNIVERSITY - FINLAND - Keynote
- 09:15 - 09:45 AM** **Portable refractometer for mill total dissolved solids (TDS) measurement** - Riku Kopra / FIBERLABORATORY, SOUTH-EASTERN FINLAND UNIVERSITY OF APPLIED SCIENCES
- 09:45 - 10:00 AM** **Coffee break**
- 10:00 - 10:30 AM** **Increasing production and operational efficiency in chip production area developing a new chipping control** - Sandro Santiago / ELDORADO
- 10:30 - 11:00 AM** **Chip leve control influence in digester stability** - Maria Emilia Drummond Blonski / SUZANO
- 11:00 - 11:30 AM** **Compact Cooking Technology update and review** - Andre Luiz Nunes Domingues / VALMET
- 11:30 - 12:00 PM** **Influence of hypoxylon spp.'s black stroma present in wood in bleached pulp quality** - Vessia da Silva Leite / ELDORADO
- Encerramento - Closing**

ENGINEERING, MAINTENANCE AND AUTOMATION

- Session CHAIR:** André Luiz Kakehasi
- 08:30 - 09:15 AM** **Organizational Culture & Human Resources View for Cyber Physical Systems and Industry 4.0** - Song Won Park / UNIVERSIDADE DE SÃO PAULO - Keynote
- 09:15 - 09:45 AM** **PESQUISA SETORIAL – INDÚSTRIA 4.0: A TRANSFORMAÇÃO DIGITAL NAS INDÚSTRIAS DE PAPEL E CELULOSE NO BRASIL** - Alessandro Frias - Invited
- 09:45 - 10:00 AM** **Coffee break**
- 10:00 - 10:30 AM** **"Valve stiction detection - a machine learning approach** - Ricardo Scheid Filho / TRI SOLUTIONS
- 10:30 - 11:00 AM** **Study of the dynamic behavior of wood chip pumps** - Danilo Amorim da Silva / SKF
- 11:00 - 11:30 AM** **Project autonomous pulp mill: concepts and first results** - Francisco Brasil Mattiazzo / ELDORADO
- 11:30 - 12:00 PM** **Bleach plant advanced controls – an approach using** - Marcius H de Oliveira / CAPSTONE TECHNOLOGY - BTG
- Encerramento - Closing**

FORESTRY

- Session CHAIR:** Otavio Brito
- 02:00 - 02:45 PM**
- 02:45 - 03:15 PM**
- 03:15 - 03:30 PM** **Coffee break**
- 03:30 - 04:00 PM**
- 04:00 - 04:30 PM**
- 04:30 - 05:00 PM**
- 05:00 - 05:30 PM**
- Encerramento - Closing**

PULP & PAPER

- Session CHAIR:** Luiz Wanderley Pace
- 02:00 - 02:45 PM** **What is the molar mass of technical lignin? Getting closer to absolute numbers** - Antje Potthast / UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES - Keynote
- 02:45 - 03:15 PM** **Prediction of lignin mixtures via Fotoacoustic Infrared spectroscopy (FTIR-PAS) and multivariate analysis** - Marcelo Coelho dos Santos Muguet Soares / KLABIN
- 03:15 - 03:30 PM** **Coffee break**
- 03:30 - 04:00 PM** **Benefits in using the triple layer wire in pulp drying machines** - Diego Almeida Leite / ELDORADO
- 04:00 - 04:30 PM** **Vibration damping engineering of paper rewinder** - Jose Claudio Fabiano / ENGEFAZ
- 04:30 - 05:00 PM** **Shives and Sand Profile Investigation in a Fiberline Screenroom** - Viridiane Vianna / ANDRITZ
- 05:00 - 05:30 PM** **Strategy for the selection of products to be produced from biomass** - Soledad Gutiérrez / UNIVERSIDAD DE LA REPUBLICA - Invited
- Encerramento - Closing**

NANOCELLULOSE I

- Session CHAIR:** Julio Costa
- 02:00 - 02:45 PM** **Strategy for the study of the application of CNF and CMF in paper furnishes at industrial-scale** - Maria Cristina Area / UNIVERSITY OF MISIONES - Keynote
- 02:45 - 03:15 PM** **Modified fillers and micro/nanocelluloses in papermaking** - Paulo Ferreira / UNIVERSITY OF COIMBRA - Invited
- 03:15 - 03:30 PM** **Coffee break**
- 03:30 - 04:00 PM** **Structural modifications in cellulose nanofibrils from banana rachis and corn husks by TEMPO-mediated oxidation** - Catalina Gómez Hoyos / UNIVERSIDAD PONTIFICIA BOLIVARIANA
- 04:00 - 04:30 PM** **Nanocrystalline cellulose from agroindustrial pineapple residues** - Jose Vega Baudrit
- 04:30 - 05:00 PM** **On the preliminary studies for the development of water-stable nanocellulose-based aerogels and spheres for Cu²⁺ removal** - Marc Delgado-Aguilar / UNIVERSITY OF GIRONA
- 05:00 - 05:30 PM** **Dissolving pulp from eucalyptus sawdust and its application in cellulosic beads and films** - Maria Evangelina Vallejos / INSTITUTO DE MATERIALES DE MISIONES (IMAM, UNAM-CONICET)
- Encerramento - Closing**

25 OCTOBER

PAPER II

- Session CHAIR:** Afonso Henrique Teixeira Mendes
- 08:30 - 09:15 AM** **New tissue for multicultural approaches: the challenge of Tissue 4.0** - Enrico Galli / NAVIGATOR COMPANY - Keynote
- 09:15 - 09:45 AM** **José Brazuna** - Invited
- 09:45 - 10:00 AM** **Coffee break**
- 10:00 - 10:30 AM** **Technologies landscape for tissue converting** - Andrea Coluccini / - Invited
- 10:30 - 11:00 AM** **Starch protection program for sustainability and runnability increasing in paper machines** - Talita Mendes Dultra / KEMIRA
- 11:00 - 11:30 AM** **Latest headbox technology for paper and boardmaking** - Milton Navarro / VALMET
- 11:30 - 12:00 PM** **O papel a partir da fibra reciclada.** - José Turrado Saucedo / GUADAJAJARA UNIVERSITY - Invited
- Encerramento - Closing**

PULP II

- Session CHAIR:** Márcia Colepicolo
- 08:30 - 09:15 AM** **Chromophores from hexeneuronic acids - identification, formation mechanism and relation to the chemistry of humins** - Thomas Rosenau / UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES - Keynote
- 09:15 - 09:45 AM** **"The state and role of gas dispersion in the oxygen delignification process** - Jari Käyhkö / SOUTH-EASTERN FINLAND UNIVERSITY OF APPLIED SCIENCES/FIBERLABORATORY
- 09:45 - 10:00 AM** **Coffee break**
- 10:00 - 10:30 AM** **Optimization of the consumption of sulfuric acid and sodium hydroxide in the bleaching of eucalyptus kraft pulp through control logic ph versus kappa number of the dhot stage input** - Mariana Faria Rabelo / SUZANO
- 10:30 - 11:00 AM** **Economic fundamentals of ozone bleaching** - Alexis Metais / XYLEM
- 11:00 - 11:30 AM** **Use of shives online values in bleaching advanced controls** - Francisco Brasil Mattiazzo / ELDORADO
- 11:30 - 12:00 PM** **Hemicelluloses extraction from pine sawdust: A kinetic study of spent liquor re-use** - Nicolás Clauser / UNIVERSITY OF THE REPUBLIC, URUGUAY
- Encerramento - Closing**

BIOREFINERY

- Session CHAIR:** Gabriela Lombardo Maranesi Amaral
- 08:30 - 09:00 AM** **Hemicelluloses: from "poor cousin" to one of most promising wood components in the biorefinery concept** - Denilson da Silva Perez / INSTITUT-TECHNOLOGIQUEFORÊT CELLULOSE BOIS-CONSTRUCTION AMEUBLEMENT - Keynote
- 09:00 - 09:30 AM** **Integrated systems for maximum value from biomass resources** - Richard Gustafson / UNIVERSITY OF WASHINGTON - Invited
- 09:30 - 09:45 AM** **Coffee break**
- 09:45 - 10:15 AM** **Biochemical processes for energy, value chemicals and fibers production from biomass resources** - Renata Bura / UNIVERSITY OF WASHINGTON - Invited
- 10:15 - 10:45 AM** **Enzymes for Biorefineries** - Bruno Angelo Vanelli / NOVOZYMES LATIN AMERICA - Invited
- 10:45 - 11:15 AM** **Valorization of the Lignocellulosic Components into Biofuels, Platform Chemicals and Materials** - Juan Carlos Villar / FORESTRY RESEARCH CENTER INIA - SPAIN - Invited
- 11:15 - 11:45 PM** **Building a collaborative model in R&D: CideB, 2nd Generation Biofuels R&D Center** - Silvia Böthig / LATITUD, FUNDACIÓN LATU, URUGUAY
- Encerramento - Closing**

CHEMICAL RECOVERY AND ENERGY

- Session CHAIR:** Geraldo Simão
- 02:00 - 02:45 PM** **Kraft Lignin Production: a LignoForce™ Perspective** - SHANE VANCAESELEE / NORAM CONSTRUCTORS AND ENGINEERING - Keynote
- 02:45 - 03:15 PM** **Planta de produção de ácido sulfúrico para manter o balanço químico de planta de celulose - Avanços em biorefinarias** - Naveen Kumar Chenna / Vamet
- 03:15 - 03:30 PM** **Coffee break**
- 03:30 - 04:00 PM** **Linear programming application to support the decision-making in the energy generation process** - Daniel Alvienes Wentz / CMPC
- 04:00 - 04:30 PM** **Best chemical practices for the reduction of metals ingress into recovery boilers** - Pedro H. B. Moreira / SOLENIS
- 04:30 - 05:00 PM** **Temperature profile in superheater as a tool for assessing the operational condition in recovery boilers** - Roberto Villarreal Guerrero / ELDORADO
- 05:00 - 05:30 PM** **Reduction of particulate and NOx emissions from kraft recovery boilers using catalytic filtration technology** - Afonso Pereira
- Encerramento - Closing**

ENVIRONMENT AND ENERGY EFFICIENCY

- Session CHAIR:** Nei Rubens Lima
- 02:00 - 02:45 PM** **Ecotoxicological effects assessment of microbrillated cellulose on effluent from a pulp mill** - Fernando Aquinoga de Mello / APLYSIA
- 02:45 - 03:15 PM** **Chemical pre-treatment of ecf kraft pulp mill bleaching filteres** - Sakari Toivakainen / TOIHAN OY
- 03:15 - 03:30 PM** **Coffee break**
- 03:30 - 04:00 PM** **Use of advanced oxidation process for pulp mill wastewater treatment** - Manoela Demori Lacombe Penna da Rocha / PUC-RIO
- 04:00 - 04:30 PM** **Solid Waste Management** - Fabricio Soler
- 04:30 - 05:00 PM** **Case study: economic and environmental impacts related to the methanol >85% recovery in a pulp and paper industry** - Guilherme Reis Fressato / TEQUALLY
- 05:00 - 05:30 PM** **Analysis of advanced process control implementation on a pulp dryer** - Mauricio Montanha de Freitas Silva / I SYSTEM
- Encerramento - Closing**

NANOCELLULOSE II

- Session CHAIR:** Luiz Pereira Ramos
- 02:00 - 02:45 PM** **Viscosity of Cellulose Nanofiber suspensions: a useful tool for the understanding and control of the cell wall deconstruction** - Miguel Pereira / UNIVERSITY OF CONCEPCION CHILE - Keynote
- 02:45 - 03:15 PM** **Production and characterization of bacterial nanocellulose from rotten banana fruit rejected in marketplaces** - Carlos Molina Ramirez / UNIVERSIDAD PONTIFICIA BOLIVARIANA
- 03:15 - 03:30 PM** **Coffee break**
- 03:30 - 04:00 PM** **Alkaline pre-treatments and different parameters as facilitators for obtaining MFC** - Renato Augusto Pereira Damásio / KLABIN
- 04:00 - 04:30 PM** **Study of pre-treatment and hydrolysis time in the production of cellulose nanocrystals** - Mayara Felix Santana / UNIVERSIDADE FEDERAL DE VIÇOSA
- 04:30 - 05:00 PM** **Carboxymetilcelulose: development of nano cmc** - Renato Guimaraes de Arruda Pereira Soares / AMTEX
- 05:00 - 05:30 PM** **Xylan based hydrogels for controlled drug release studies** - Miguel Angel Zanuttini / UNL
- Encerramento - Closing**