2009 International Conference on Nanotechnology for the Forest Products Industry
Edmonton, Alberta, Canada - June 23-26, 2009

Tuesday, June 23		
17:30-21:00	Tour of National Institute for Nanotechnology & Conference Reception	
Wednesday, June 24		
08:00-08:45	**Keynote Presentation:** ***Pierre Lapointe, President, FPInnovations***	
09:00-10:30	Session 1A: **Manufacture and Characterization of Nanostructured Cellulose** *Session Chair: Kristiina Oksman, Lulea University of Technology*	Session 1B: **Framework for Managing Environmental Risks & Rewards** *Session Chair: John Westland, Weyerhaeuser*
	"Individualization of Nano-Sized Plant Cellulose Fibrils Achieved by Direct Surface Carboxylation using TEMPO Catalyst" *Akira Isogai, The University of Tokyo* **"Novel Routes to Nanofibrillar Cellulose from Wood Pulps**" *Markus Nuopponen, UPM* **"Structure-Process-Yield Inter-Relations in Nanocrystalline Cellulose Extraction"** *Wadood Y. Hamad, FPInnovations*	**"The Responsible Develop-ment of Nanotechnology – Striking the Balance Between Risks and Benefits"** *Lori Sheremeta, National Institute for Nanotechnology* **"Strategic Management of Nanotechnology in Environmental Conservation"** *Morteza Hanifezadeh, M.A. Student in Agriculture Biotechnology* **"Application of Nanotechnology in Improving and Developing the Performance of Solid Wood Products"** *Girma Kifetew, Vaxjo University*
10:45-12:15	Session 2A: **Nanocomposites I** *Session Chair: John Simonsen, Oregon State University*	Session 2B: **Nano-Dimensional Interfaces** *Session Chair: Alan Rudie, US Forest Service, Forest Products Laboratory*
	"Conducting Properties of Nano-Crystalline Cellulose – Polypyrrole (NCC-PPY) Composite Films" *P. Syed Abthagir, University of Toronto* **"Development of Flexible and Optically Transparent Cellulosic Nanocomposites"** *Mohini Sain, University of Toronto* **"Composites Nano- and Micro fibers with Cellulos Nanocrystals"** *Orlando J. Rojas, North Carolina State University*	**"Probing Molecular, Nanoscale and Adhesive Forces Related to Fiber-Fiber Bonding and Optimized Surface Interactions"** *Agne Swerin, YKI* **"Pilot Plant Trial Runs with Layer-by-Layer Nanocoated Recycled Fibers—An Update on the Louisiana Tech Nano Pulp and Paper Initiative"** *George Grozdits, Louisiana Tech* **Electrowetting on paper substrate"** *Jarkko J. Saarinen, Abo Akademi University*
12:30-14:00	Luncheon Presentation : **"Current Knowledge on Nanomaterial Toxicity"** *Nigel Walker, National Institute of Environmental Health Sciences*	
14:15-15:45	Panel 1: **Environmental Health and Safety** *Panel Chairs: John Festa, American Forest & Paper Association; Lori Sheremeta, Alberta Ingenuity Fund* **"Nanotechnology and Forestry: Applications, Implications, Research Needs and Risk Assessment" -** *JoAnne Shatkin, CLF Ventures, Inc.* **"EHS Panel" -** *Lynn Bergeson, Bergeson & Campbell, LLP* *Andy Atkinson, New Chemicals Evaluation, Environment Canada*	

16:00-17:30	Panel 2: **Global Challenges** *Panel Chair: Ian de la Roche, Ex-President of FPInnovations*	Session 3: **Nanotechnology and Paper** *Session Chair: George Rosenberg, Sentinel Bioactive Paper Network*
	- *Phil Jones, Imerys* - *Martin Fairbanks* - *Stephane Rousseau* - *Robert Pelton, McMaster University*	**"Smart Pigments with Reactive Nanocolors Printed on Paper and Flexibles"** *Andreas Kornherr, Mondi Uncoated Fine Paper* **"Graphite Nanoplatelet Reinforced Cellulose Fibers for High Value Paper Products with Enhanced Properties"** *Kyriaki Kalaitzidou, Georgia Tech* **"Incorporation into Paper of Cellulose Triacetate Films Containing Semiconductor Nanoparticles"** *Derek G. Gray, McGill University*
17:45-19:30	**Posters Session 1**	
19:30-21:45	Dinner Presentation: **"Biomass and the Development of High Value Materials and Products: An Economic Perspective for Sustainable Living"** *Don Roberts, CIBC World Markets Inc.*	
Thursday, June 25		
08:00-08:45	**Keynote Presentation: "Nano-Enabled Biomaterials for Sustainable Living"** ***Carlo Montemagno, Dean, Faculty of Engineering, University of Cincinnati***	
09:00-10:30	Session 4A: **Nanocomposites II** *Session Chair: Siqun Wang, University of Tennessee*	Session 4B: **Novel Nanotechnology Applications I** *Session Chair: Orlando Rojas, North Carolina State University*
	"Preparation of Poly Vinyl Ester/Clay Nanocomposites and Investigation of Their Properties Against the Irradiation" *Seyyed Mahdi Mahjoob, University of Tehran* **"Bamboo Cellulosic Fibres"** *Yuqin Wan, University of British Columbia* **"Morphological Design of Highly Porous Nanocellulose Structures"** *Hans-Peter Hentze, KCL*	**Effects of Chemical Pretreatment on Enzymatic Hydrolysis of Lignocellulose Observed by AFM"** *Junyong Zhu, USFS Forest Products Laboratory* **"Development of an Antibacterial Paper Filter with Silver Nanoparticles"** *Derek G. Gray, McGill University* **"Nanocellulose Materials for the Furniture and Building Industry Made Out of Recovered Waste Paper"** *Martin Ernegg, Zeo International*
10:45-12:15	Session 5A: **UV Nanocoatings: Properties, Processing and Performance** *Session Chair: World Nieh, US Forest Service*	Session 5B: **New Generation Bioproducts** *Session Chair: David Bressler, University of Alberta*
	"Anti-UV Water-borne Nanocomposite Coatings for Exterior Wood" *Pierre Blanchet, Mirela Vlad, & Bernard Riedl, FPInnovations-Forintek*	**"Bioconversion of Agricultural Byproducts to Value-Added Materials"** *Yuko Ikeda, University of Alberta* **"A Stable Inkjet Ink Containing Inorganic Semiconductive Nanoparticle Pigments"** *Peter Angelo, University of Alberta*

	"Mechanical and Optical Properties of UV-Waterborne Composite Coatings with Nanoalumina and Nanosilica" *Caroline Sow, University of Laval* **"UV Nanocomposite High Solids and Waterborne Coatings for the Wood Products Industry"** *Pierre Blanchet, FPInnovations-Forintek*	**"Adsorption of Sulfur onto a Surface of Silver Nanoparticles Stabilized with Sago Starch"** *Vladimir Djokovic, University of Alberta*
12:30-14:00	Luncheon Presentation: **"ISO/TC 229 International Standards"** *Clive Willis*	
14:15-15:45	Panel 3: **Investing in Nanotechnology for the Forest Products Industry R&D – Global Perspectives** *Panel Chair: John Cowie, AF&PA Agenda 2020*	Session 6: **Nanoscale Characterization** *Session Chair: Chaoyang (CY) Jiang, University of South Dakota*
	- *Chris Risbrudt, Director, US Forest Service Forest Products Laboratory* - *George Weyerhaeuser, Jr.* - *Ian de la Roche, Ex-President of FPInnovations* - *Kristiina Oksman, Lulea University of Technology* - *STFI Speaker – (Mark Harmer/World Nieh)*	**"Free-standing Multilayer Thin Film of Cellulose Nanocrystals"** *Chaoyang (CY) Jiang, University of South Dakota* **"Analysis of Lignins by Surface Enhanced Raman Spectroscopy"** *Umesh Agarwal, US Forest Service, Forest Products Laboratory* **"Nanocomposites Reinforced with Cellulose Fibrils in Micro and Nano-Scales"** *George Cheng, West Virginia University*
16:00-17:30	Session 7A: **Cellulose Nanofiber Synthesis, Functionlization and Bonding** *Session Chair: Jeff Catchmark, Penn State University*	Session 7B: **Application of Nanotechnology for Improving Durability of Wood Products** *Session Chair: Catalino Blanche, USDA CSREES*
	"Cellulose Nanocrystal Aerogels: Structure and Chemistry" *John Simonsen, Oregon State University* **"Silver Nanowire Fabrication Using Cellulose Nanocrystal Templates"** *Robert Moon, US Forest Service, Forest Products Laboratory/Purdue University* **"Enhanced Microbial Cellulose Production through Fermentation Additives"** *Jeff Catchmark, Penn State University*	**"Wood Modification Through Impregnation Process Control and a Nanotech Approach"** *Pierre Blanchet, Xiaolin Cai, and Hui Wan, FPInnovations-Forintek* **"Improving the Fire Performance and Durability of Value-Added Wood Products through Nano-Treatments"** *Anisa Akhtara, FPInnovations-Forintek* **"Color Stabilization of Waterborne Semi-Transparent and Transparent Coatings by Nanotechnologies"** *Vincent Blanchard & Pierre Blanchet, FPInnovations-Forintek*
17:45-19:30	**Posters Session 2**	

Friday, June 26			
08:00-08:45	**Keynote Presentation:** ***George Weyerhaeuser Jr., Weyerhaeuser Company***		
09:00-10:30	Session 8A: **Self-Assembly** *Session Chair: Hicham Fenniri, National Institute for Nanotechnology*	Session 8B: **Nanomechanical Characterization** *Session Chair: Robert Moon, USFS Forest Products Laboratory/Purdue University*	
	"Surface Chemistry and Nanotechnology-Based Products for the Forest Industry" *Bruce Lyne, Royal Institute of Technology* **"Langmuir-Schaffer Thin Films of Cellulose Nanocrystals and Their Interfacial Behaviors"** *Orlando Rojas, North Carolina State University* **"Cationic Surface Functionalization of Cellulose Nanocrysals"** *Derek G. Gray, McGill University*	**"Broadband Nanoindentation Creep Experiments in Wood Cell Walls and Compound Corner Middle Lamellae"** *Joseph Jakes, University of Wisconsin-Madison & US Forest Service, Forest Products Laboratory* **"Characterization of Wood and Tunicate Based Cellulose Nanocrystals by AFM"** *Robert J. Moon, US Forest Service, Forest Products Laboratory/Purdue University* **"NanoCrystalline Cellulose Characterization by an Atomic Force Microscope"** *Roya Lahiji, University of Alberta*	
10:45-12:15	Panel 4: **Emerging Markets for Nano-Enabled Biomaterials** *Session Chair: Bruce Lyne, YKI*	Session 9: **Novel Nanotechnology Applications II** *Session Chair: TBD*	
	- *John Cowie, AF&PA Agenda 2020* - *Mark A. Harmer, DuPont* - *Hamdy Khalil, Woodbridge Corporation* - *Anoush Poursartip, University of British Columbia*	**"Effect of CPVA Polymer Characteristics at Saturation Level of Adsorption on Paper Strengths"** *Pedram Fatehi, University of New Brunswick* **"Novel Preparation Method of Cellulose Nanofibers from Lignocellulosics"** *Seung-Hwan Lee, National Institute of Advanced Industrial Science and Technology* **"Nanoparticles with Immobilized Biosensors for Bioactive Papers"** *Robert Pelton, McMaster University*	
12:30-14:00	Luncheon Presentation: *Martin Moskovits, University of California–Santa Barbar*		
14:15-15:45	**Interest Group Working Session I** **Self Assembly** *Hicham Fenniri and Lori Sheremeta, Alberta Ingenuity Fund*	**Interest Group Working Session II** **Nanophotonics** Martin Moskovits, *University of California – Santa Barbara*	**Interest Group Working Session III** **Forest Industry Opportunities in the Nano World** *Pat Guidera*