



*The Institute of Textile Science*

*Incorporated, Canada 1958*

**2023 Symposium and 66th AGM  
March 7 & 8, 2023**

**Locations:**

- **Montréal**

Université de Montréal, Ecole de Santé Publique: room 3019 (3rd floor)  
7101, avenue du Parc, Montreal.

Please note that parking is limited: use of the subway is suggested

- **Edmonton**

University of Alberta, Edmonton: room GSB 6-40  
([https://www.ualberta.ca/maps.html?l=53.526142,-113.529437&z=17&campus=north\\_campus&b=gsb](https://www.ualberta.ca/maps.html?l=53.526142,-113.529437&z=17&campus=north_campus&b=gsb))

- **Remote**

Zoom details sent to remote attendees a few days before the event

## Program

### Tuesday March 7, 2023

<u>MT</u>	<u>EST</u>	
7:45	9:45	<b>Greetings from Prof. Stanford Blade</b> , Dean, Faculty of Agricultural, Life & Environmental Sciences, University of Alberta and <b>Prof. Michèle Bouchard</b> , Vice-Dean, Research, Valorization and Knowledge Transfer, École de Santé Publique, Université de Montréal
<b>8 to 9</b>	<b>10 to 11</b>	<b><u>Technical textiles in composite materials</u></b>
8 - 8:30	10 - 10:30	<u>Controlling the engineering properties of polymer blends and composites</u> , Prof. Nicole Demarquette, École de technologie supérieure, QC
8:30 - 9	10:30 - 11	<u>Evolution of fibre processing and reinforcements in composites: synthetic and natural fibres</u> , Mr. Nicolas Juillard, Textiles Monterey, QC
<b>9 to 10</b>	<b>11 to 12</b>	<b><u>PPE-medical</u></b>
9-9:30	11-11:30	<u>Rechargeable Potent Anti-Viral Cotton Grafted with a New Quaternized N-Chloramine</u> , Prof. Song Liu, University of Manitoba, MB
9:30 - 10	11:30-12	<u>Viral lessons for making decisions about the use of antimicrobial technologies on textiles</u> , Dr. David J. Proctor, International Antimicrobial Council, USA
<b>10 - 11</b>	<b>12 - 1</b>	<b>Pause / Poster session in Edmonton</b>
<b>11-11:30</b>	<b>1 to 1:30</b>	<b><u>Panel Discussion: Challenges and opportunities for the textile business/industry - Textile education/training</u></b>
		<ul style="list-style-type: none"> <li>• Mr. Bob Kirke, Canadian Apparel Federation, ON</li> <li>• Prof. Jane Batcheller, University of Alberta, AB</li> <li>• Ms. Stephanie Phillips, Kwantlen Polytechnic University, BC</li> </ul>
<b>11:30-12</b>	<b>1:30 - 2</b>	<b><u>Students' Research Corner</u></b>
		<ul style="list-style-type: none"> <li>• <u>Temperature-Responsive Shape Memory Polymer Filament Integrated Polyester Knitted Fabric Featuring Memory Behavior</u>, Priyanka Gupta*, Bipin Kumar, Indian Institute of Technology Delhi, India</li> <li>• <u>Improvement in impact energy of 3D woven Honeycomb based composite using ZnO nanorod surface functionalization</u>, Omender Singh*, B.K. Behera, Indian Institute of Technology Delhi, India</li> </ul>
<b>12 - 1</b>	<b>2 - 3</b>	<b>Pause / Poster session in Montréal</b>
<b>1 - 1:30</b>	<b>3 - 3:30</b>	<b><u>Students' Research Corner</u></b>
		<ul style="list-style-type: none"> <li>• <u>The textile sensors' applications in clogging detection of industrial air filters</u>, Parian Mohamadi*, Elham Mohsenzadeh, Cedric Cochrane, Vladan Koncar, ENSAIT, France</li> <li>• <u>Studies of Polycyclic Aromatic Hydrocarbon Exposure to Wildland Firefighters' Protective Clothing</u>, Md. Momtaz Islam*, Sumit Mandal, Ishmam Zahin Chowdhury, Robert J. Agnew, Adriana Petrova, Elijah Schnitzler, Lynn M. Boorady, Oklahoma State University, USA</li> </ul>
<b>1:30 to 3</b>	<b>3:30 to 5</b>	<b><u>66<sup>th</sup> Annual General Meeting</u></b>
6pm	5:30pm	<b>Reception</b>

**Wednesday March 8, 2023**

<u>MT</u>	<u>EST</u>	
<b>8 to 9</b>	<b>10 to 11</b>	<b><u>Recycling/sustainable textiles</u></b>
8 - 8:30	10 - 10:30	<u>Sustainable technologies for green (eco-friendly) production in textile</u> , Prof. Akbar Khaddami, Isfahan University of Technology, Iran/ University of Alberta, AB
8:30 - 9	10:30 - 11	<u>Closed Loop Recycling of Used Aramid Garments and Fabrics</u> , Mr. Dave Kasper, General Recycled, QC
<b>9 to 10</b>	<b>11 to 12</b>	<b><u>Sportswear</u></b>
9 - 9:30	11 - 11:30	<u>Smart sportswear for optimized thermal comfort</u> , Prof. René Rossi, EMPA, Switzerland
9:30 - 10	11:30 - 12	<u>The tools, tactics, and philosophies behind lululemon apparel innovation</u> , Dr. Robert Gathercole, lululemon, BC
<b>10 to 11</b>	<b>12 to 1</b>	<b>Pause / Poster session in Edmonton</b>
<b>11- 12</b>	<b>1- 2</b>	<b><u>Smart/e-textiles</u></b>
11 - 11:30	1 - 1:30	<u>E-Textiles for Sensing and Actuation</u> , Prof. Lucy Dunne, University of Minnesota, USA
11:30 - 12	1:30 - 2	<u>Making millions: How we scale Smart Textiles using Technical Embroidery</u> , Dr. Christopher Anderson, ZSK USA Inc., USA
<b>12 to 1</b>	<b>2 to 3</b>	<b>Pause / Poster session in Montréal</b>
<b>1-1:30</b>	<b>3 - 3:30</b>	<b><u>Panel Discussion: Challenges and opportunities for the textile business/industry - Regulatory compliance</u></b>
		<ul style="list-style-type: none"> <li>• Mr. Sravanth Kanukuntla, formerly SGS North America Inc., USA; now Aloyoga, USA</li> <li>• Ms. Shona Mosslovshin, Innovation, Science and Economic Development Canada, ON</li> <li>• Mr. Bob Kirke, Canadian Apparel Federation, ON</li> </ul>
<b>1:30-2:30</b>	<b>3:30 - 4:30</b>	<b><u>Students' Research Corner</u></b>
		<ul style="list-style-type: none"> <li>• <u>Roll-To-Roll Electrochemical Fabrication of Silver/Silver Chloride Yarns for Developing E-Textile Electrodes</u>, Katherine Le*, Harishkumar Narayana, Saeid Soltanian, Amir Servati, Peyman Servati, Frank Ko, University of British Columbia, BC</li> <li>• <u>Laundry Practices and Proposed Sustainable Solutions in the Canadian Prairies</u>, Jackie Fisher*, Rachel McQueen, Sven Anders, University of Alberta, AB</li> <li>• <u>Improved thermal insulation performance of cold-weather protective clothing incorporating bio-sourced materials</u>, Marwa Sta*, Hilary Moukam Njeumen, Stéphane Hallé, Ludwig Vinches, Université de Montréal, QC</li> <li>• <u>Wear trial assessment of a newly developed bra fitting method</u>, Josephine T Bolaji*, Tamara Krawchuk, Patricia I Dolez, University of Alberta, AB</li> </ul>
<b>2:30 pm</b>	<b>4:30 pm</b>	<b>Closing remarks from Patricia Dolez, President, Institute of Textile Science</b>

## Posters

### Montreal, QC

- Green Electrospun ultrafine particles filter structures for chemical protective clothing, *Adnan Masri\**, *Ludwig Vinches*, Université de Montréal, QC
- ISO 11092 Standard: Is a review needed? *Mostafa Alakhdar\**, *Ludwig Vinches*, *Stéphane Hallé*, École de Technologie Supérieure, QC

### Edmonton, AB

- March 7
  - UV Aging of Fire-Protective Fabrics, *Md. Saiful Hoque*, *Patricia I. Dolez*, University of Alberta, AB
  - Controlling the Variability in the Measurement of the Efficiency of Joule Heating Textiles, *Shakil Mahmud\**, *Patricia Forcier*, *Justine Decaens*, *Patricia I. Dolez*, University of Alberta, AB
  - Optimizing the electrospinning parameters for meta-aramid nanofibres, *Jemma Forgie\**, *Floriane Leclinche*, *Emilie Dréan*, *Patricia Dolez*, University of Alberta, AB
  - Study of polyurethane films as a sacrificial UV-sensitive layer in a graphene-based end-of-life sensor for fire-resistant fabrics, *Marwa Khemir\**, *Hyun-Joong Chung*, *Patricia Dolez*, University of Alberta, AB
  - Development and assessment of N-halamine-based self-decontaminating finish on fabrics used in protective clothing, *Anita Amir Labonno\**, *René Arredondo*, *Jemma Forgie*, *Yongfeng Gao*, *Paulina de la Mata*, *Jane Batcheller*, *James Harynuk*, *Patricia Dolez*, University of Alberta, AB
- March 8
  - Optimization of the Electrospinning Conditions of Polyacrylonitrile Nanofibrous Membranes Embedded with Magnesium Oxide Nanoparticles for Chemical and Biological Protective Clothing, *Elham Kaviannasab\**, *Laura Munevar-Ortiz*, *Md. Saiful Hoque*, *Patricia I. Dolez*, University of Alberta, AB
  - Comfort properties of a proposed new wildland firefighters' shirt design with improved thermal protection, *Elena Kosareva\**, *Jane Batcheller*, *Stephen Paskaluk*, University of Alberta, AB
  - Polyimide as sacrificial polymer for a moisture-sensitive end-of-life sensor for fire-protective clothing, *Nadeesha Samaraweera\**, *Patricia Dolez*, University of Alberta, AB
  - Revisiting the Measurement of Dry Thermal Effusivity of Fabrics, *Md Rashedul Islam\**, *Farzan Gholamreza*, *Kevin Golovin*, *Patricia I. Dolez*, University of Alberta, AB