



The Institute of Textile Science

Incorporated, Canada 1956

Textile or Textile-Based Material Development Competition

The Institute of Textile Science (ITS) is a Canadian non-profit organization that is in its 54th year of operation. Its mission is to promote textiles research in Canada. The ITS membership comprises Canadian constituents from the textile industry, the academic community, government, and textile or materials research centers. It has over 50 members whose research expertise includes textiles for protection against heat, chemical agents, or bacteria; nanofabrication; three-dimensional fabrics; intelligent wearable systems; and the development of equipment and standards for measuring specific properties. Many ITS members' innovations have been commercialized or being used for health, medical, protective, or defense purposes.

As the Canadian textiles community continues to respond to the ever-changing economic, technological, and global trade environments, the ability to innovate is essential. The Institute is deeply committed to encouraging innovative research. This competition is an opportunity for students in higher educational institutions to:

1. Explore the role of textile innovations in improving quality of life of human beings.
2. Test their ideas for technological advancements in textile science.
3. Become knowledgeable about the Canadian textile industry.
4. Engage in discussion with peers of the Canadian textile industry.
5. Explore various career paths in the Canadian textile industry.

The Institute is grateful for the contributions made by:

Difco Performance Fabrics Inc.

Vintex Inc.

CTT Group/Groupe CTT



Who is Eligible to Compete?

1. This competition is open to full-time graduate or senior undergraduate students who are studying in Canada and are enrolled in a degree or diploma program in textiles, material science, engineering or a discipline related to textiles or textile-based materials.
2. Students from the same educational institution can, if they so wish, assemble a multidisciplinary team comprising students from textiles or related materials, marketing, business administration, engineering, or other related disciplines. The team must be led by a principal investigator.

Areas of Application

The competition involves developing an innovative textile or a textile-based material for one of the following three areas of applications:

1. Sports.
2. Protective workwear.
3. Ageing consumers.

Timeline

March, 2011	Announcement of competition.
November, 2011	Proposal due. Evaluation of proposals and announcement of finalists.
February, 2012	Submission of final prototype and supporting materials and documentation. Judging of projects and announcement of winners.
March 2012	Presentation of prizes at Advanced Workwear 2012.

Industry Support

1. Difco Performance Fabrics Inc. - www.difcoperformance.com

Competitors will have access to protective textile fabric supplies offered by Difco as well as its laboratory's testing services.

2. Vintex Inc. - www.vintex.com

Competitors will have access to coated textile fabric supplies from the company's existing product catalogue and quality testing services including Instron, UV, cold crack, flame, abrasion, FTIR, and wicking.

Proposal Guideline

1. The competitor will develop a textile or a textile-based material for one of the three areas of application under “Areas of Application”.
 - a) A textile material shall be defined as a material formed by weaving or knitting yarns made of natural or synthetic fibres.
 - b) Nonwoven materials are acceptable as well.
2. A textile-based material shall be defined as a material formed by combining the traditional woven, knitted or nonwoven structures with other methods of imparting functionality to the material.
3. Each competitor can submit only one proposal. This proposal cannot be submitted to other competitions.
4. The proposal must include the following:
 - a) Name of the student or names of all team members, their educational institution affiliation and educational background. If the entry involves a team, the principal investigator must be identified. The role of each team member must be clearly communicated.
 - b) Name and position of the advisor from the educational institution. If the team comprises students from various departments, the principal investigator and the advisor must be from the same department.
 - c) Identification of the area of application.
 - d) The textile or textile-based material to be developed:
 - A description of the material.
 - End use.
 - End user.
 - Appropriateness of the material for its end use.
 - Benefits of the material to the end user.
 - Innovativeness of the material.
 - e) The process of developing the proposed material.
 - f) Evidence of an appropriate and credible literature search, including a patent search.
 - g) A budget.

Finalists

Finalists will be announced in November 2012. The finalists will proceed to bring the ideas in their proposals to life! A prototype must be submitted with complete documentation of its development and outcome (e.g. experiments conducted, field tests, surveys, etc.).

Criteria for Evaluating Final Entries

1. The innovative nature of the proposed textile or textile-based material.
2. Originality of the end use and integration of textile materials and technology.
3. Appropriateness of supporting theory or theories.
4. Evidence of sound scientific approach.
5. Professional presentation.
6. A 500-word, non-technical summary of the project. The purpose of this summary is to assess the competitor's ability to communicate complex ideas to a general audience.

Adjudication Committee

1. Chair – a member of the ITS Board of Directors (non-voting).
2. One ITS member who is currently involved in technical textiles product development – voting.
3. One ITS member who is affiliated with a higher educational institution – voting.
4. An industry representative – voting.

Awards

1. First prize
 - a) *Institute of Textile Science Award* - \$1,000 plus travel and accommodation to Advanced Workwear 2012. If the winning project involves a team, ITS will pay for the principal investigator's travel and accommodation only.
 - b) *Merit Award* - \$250 donated by a member of the Institute of Textile Science.
 - c) *Vintex Inc. Award* - the winner will select one of the following three options:
 - i. An offer of a 10-week employment during the summer of 2012 at \$15.00 per hour based on a 37.5 hour work week. The student's work experience would include training on Vintex textile equipment, lab testing training and minor development work. Work could vary based upon the skills, capabilities and previous experience of the student. This option is open only to those who can legally work in Canada.
 - ii. \$5000 towards thesis funding.
 - iii. \$2500 towards travel and competition expenses.

If the winning project involves a team, the student who is the principal investigator will be eligible to receive this award.

- d) A one-year subscription to the *Textile Journal*, donated by the CTT Group/Groupe CTT.

2. Runner up

- a) *Institute of Textile Science Award* - \$750 plus travel and accommodation to Advanced Workwear 2012. If the winning project involves a team, ITS will pay for only one team member's travel and accommodation.
- b) *Merit Award* - \$250 donated by a member of the Institute of Textile Science.
- c) A one-year subscription to the *Textile Journal*, donated by the CTT Group/Groupe CTT.

Presentation of Winners' Projects

The winners will present their projects at Advanced Workwear 2012 (location to be determined). ITS will pay for the winner's travel and accommodation.

Ownership of Projects

The project will remain the property of the competitor. However, the Institute of Textile Science has the right to publish and use any pictures, drawings or written information submitted for the competition.

Please direct all inquiries and project proposals to:

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