

60th Annual Eastern Snow Conference

60^e Édition de la Eastern Snow Conference

Sherbrooke Québec, Canada

June 4-6 juin, 2003

**PROGRAM AND ABSTRACTS
PROGRAMME ET RÉSUMÉS**

60TH Annual Eastern Snow Conference

Remote Sensing of Snow & Ice – The State of the Art

June 4-6, 2003

Université de Sherbrooke, Sherbrooke Québec, Canada

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Program 60th Eastern Snow Conference

Wednesday, June 4th

- 19:00 Registration Begins, Ice Breaker Reception, Commercial Exhibits and Poster Paper Set-up
20:30 ESC Executive Pre-Conference Meeting

Thursday, June 5th

- 07:00 Attendees Breakfast
07:45 Registration and Poster Paper Set-up Continues
08:00 Welcome and Announcements: Miles Ecclestone & Hardy Granberg

ORAL SESSION 1 REMOTE SENSING

Chair: Hardy Granberg

- 08:10 Updating of snowpack SWE and areal distribution in the HYDROTEL hydrological model from RADARSAT and VEGETATION data.
Fortin, J.P., M. Bernier, C. Mathieu, A. Battay, R. Turcotte
- 08:30 The snow water equivalent scaling experiment: overview and initial results.
Derksen, C., A. Walker, B. Goodison
- 08:50 Determination of broadband albedos of partially snow-covered sites for validation of MODIS snow albedo retrievals.
Klein, A.
- 09:10 Validation of MODIS, SPOT, and GOES+SMM/I snow cover products over Canada based on snow surface depth observations.
Simic, A., R. Fernandes, R. Park, R. Brown, P. Romanov, W. Park, D. Hall
- 09:30 Validation of the snow cover variation of the Canadian Regional Climate Model (CRCM) using passive microwave satellite data.
Langlois, A., A. Royer, A. Frigon
- 09:50 **Poster Paper Highlights (2 minute presentation by Author)**

Poster Papers:

- 1 Radiation data corrections: are they needed for snowmelt modeling?
Melloh, R., T. Hall
- 2 From mm to cm. Study of snow/liquid ratios over Québec.
Dubé, I.

- 3 Teaching snow hydrology to science and non-science majors.
Fassnacht, S.
- 4 Toward the development of a Canadian National Snow Information System.
Brown, R., B. Goodison, T. Hirose

10:00 – 10:30 Coffee and Poster Session

ORAL SESSION 2 INTERFACES: SNOW & RIVERS; SNOW & SOIL.

Chair: Gerry Jones

- 10:35 A case study of three southern New England watersheds favorable for ice jams.
Hom, V., N. Belk
- 10:55 Earlier spring lake ice-out, river ice-out and river high flows in northern New England.
Hodgkins, G.
- 11:15 Greenhouse gas emission from an agricultural soil impacted by ice layers in a temperate snow.
Fortin, G., E. van Bochove, M. Bernier, G. Thériault, H.G. Jones
- 11:35 Design, installation of a snowmelt lysimeter and analysis for an energy mass balance model study in Turkey.
Tekeli, A.E., U. Sorman

11:55 Poster Paper Highlights (2 minute presentation by Author)

Poster Papers:

- 1 Wintertime net ecosystem exchange of CO₂ from the Mer Bleue Bog peatland.
Smith, R., P. Lafleur
- 2 Operational collection and assessment of snowpack data at National Weather Service, Burlington, VT.
Hanson, G.
- 3 Snowpack-permafrost relationships in the discontinuous permafrost zone.
Kershaw, P.

12:00 - 13:15 Lunch

ORAL SESSION 3 SNOW & ICE AT HIGH ALTITUDES & HIGH LATITUDES

Chair: Mauri Pelto

13:15 Climatic fluctuation, mass balance and river flow from glacierised basins in mountainous areas of Europe.

Collins, D., O. MacDonald, A. Reynolds

13:35 Predicting glacier distributions.

Arrell, K.

13:55 Change in longitudinal profile on three north Cascade glaciers during the last 100 years.

Pelto, M., P. Hartzell

14:15 Poster Paper Highlights (2 minute presentation by Author)

Poster Papers:

1 North Cascade glacier ecology: glacier macroinvertebrates.

Hartzell, P.

2 Geodetic estimate of the volume change of White Glacier tongue, Axel Heiberg Is., Nunavut, 1960-2002.

Hember, R., J.G. Cogley, M. Ecclestone

3 Pleistocene-age ice in the Canadian arctic.

Lacelle, D., I. Clark, B. Lauriol, C. Zdanowicz, Y. Troutet

4 Deriving glacier mass balance and recent climate conditions from shallow ice cores.

Stuart, C., M. Sharp

14:25-15:00 Coffee Break & Poster Session

ORAL SESSION 4 SNOW IN FORESTS

Chair: Derrill Cowing

15:00 A sensitivity study of snowmelt to the density of the forest canopy.

Sicart, J. J.W. Pomeroy, R. Granger, R. Essery, A. Gelfan

15:20 The spatial distribution of canopy elements in a lodgepole pine forest.

Melloh, R., C. Woodcock, J. Liu, G. Koenig, J. Hardy, R. Davis

15:40 Differential winter stemflow generation under contrasting storm conditions in a southern New England broad-leaved deciduous forest.

Levia, D.

- 16:00 Spatial distribution of fall soil moisture and spring snow water equivalent within a mountainous sub-arctic watershed.
Janowicz, J., D.M. Gray, J.W. Pomeroy
- 16:20 Snowpack-vegetation-terrain relationships across the Arctic treeline, Churchill Manitoba.
Kershaw, P.
- 16:40 **Announcements**
- 19:00 **PREPRANDIALS & ESC BANQUET**

Friday, June 6

07:00 Attendees Breakfast

08:00 Announcements

Oral Session 5 REMOTE SENSING OF SNOW AND ICE

Chair: Chris Derksen

- 08:10 Monitoring cryospheric processes in Canada with spaceborne scatterometer and passive microwave data.
Pivot, F., C. Duguay, K. McDonald, A. Walker
- 08:30 Estimating snow depth over Great Plains using visible and infrared observations from geostationary satellites.
Romanov, P., D. Tarpley, B. Ramsay
- 08:50 Using contextual analysis to monitor river ice from RADARSAT data.
Gauthier, Y., E. Batay, M. Bernier, T. Ouarda
- 09:10 Comparison of SSM/I satellite data with modeled snowpack water content for areas of northern and southern Ontario.
Gidda, C., H. Whiteley, I. Rubenstein, R. Dony

09:30-10:00 Coffee Break & Poster Session

Oral Session 6 SNOW MEASUREMENT & APPLICATIONS

Chair Ken Rancourt

- 10:00 Validation of the SNOWPOWER probe in a temperate snow cover in eastern Canada: preliminary results.
Niang, M., Fortin, G., Gauthier, Y., Martel, L., Bernier, M., van Bochove, E., Stacheder, M., Brandelik, A.

- 10:20 Snowfall gauge undercatch and snowpack sublimation for the monthly water balance.
Fassnacht, S.
- 10:40 Historical trend in the ratio of solid to total precipitation in New England.
Huntington, T.G.
- 11:00 From mm to cm. Study of snow/liquid ratios over Québec.
Dubé, I.
- 11:20 Snow information content of interferometrically processed synthetic aperture radar imagery.
Granberg, H.
- 11:40 **Closing Remarks. End of Oral Sessions**
- 12:00 **Lunch.** ESC Executive post-Conference meeting.
- 13:15 Depart on field trip to Bombardier Museum