Proceedings of the 72nd ANNUAL

EASTERN SNOW CONFERENCE
9-11 June 2015

Jouvence, Sherbrooke
Québec, Canada
CONTENTS

Foreword................................................................................................................................. vi
Statement of Purpose ................................................................................................................ vii
Executives for the 72nd Eastern Snow Conference................................................................. viii
President’s Page ....................................................................................................................... ix

Weisnet Medal for Best Student Paper
A Dual Pathway Heterogeneous Flow through Snow Model
LEROUX, N.R. AND POMEROY, J.W. ...................................................................................... 3

David Miller Award for Best Student Poster
SAR RADARSAT-2 and optical Pléiades stereo imagery for monitoring the melt of Baffin Island ice caps
(Nunavut, Canada)
PAPASODORO, C., ROYER, A., LANGLOIS, A. AND BERTHIER, E. ....................................... 16

Oral session #1: Climate, meteorology and glaciers
Sensitivity of snow processes to warming in the Canadian Rockies
POMEROY, J., FANG, X. AND RASOULI, K. ........................................................................... 22
Spatialization of the SNOWPACK Snow Model in the Canadian Arctic for Peary Caribou Winter Grazing
conditions Assessment
OUELLET, F., LANGLOIS, A., JOHNSON, C.-A. AND RICHARDS, A. ....................................... 34
Quantifying Glacier Runoff and its Impact on Stream Temperature and Discharge in the Nooksack River,
Washington
PELTO, M., GRAH, O. AND BEAULIEU, J. ............................................................................. 39

Oral session #2: Historical and snow measurements
Saltating Snow Mechanics: Three Species Classification from High Speed Videography
AKSAMIT, N.O. AND POMEROY, J.W. .................................................................................... 56
Less Snow or More Snow? The challenge of developing snow cover change scenarios for the Baffin Bay-Davis
Strait region
BROWN, R.D. ............................................................................................................................ 67
Recent Advancements in Ground Penetrating Radar Technology Offer Possibilities for Affordable Non-Contact
SWE Measurements
HORTON, G.D., HORTON, R.S., HUBER, F. AND FREI, A. .................................................. 78
Snow accumulation and redistribution in very steep rock faces
SOMMER, C.G., LEHNING, M. AND MOTT, R. ........................................................................ 87
Oral session #3: Remote sensing modeling
Effect of the snow cover on the ground surface temperature variations analyzed with the Canadian LAnd Surface Scheme (CLASS) constrained with remote sensing observations
MARCHAND, N., ROYER, A., KRINNER, G. AND ROY, A. ................................. 93

Oral session #4: Remote sensing monitoring I
NOAA ESRL Snow-Level Radar Deployment and Observations of Mixed Precipitation Events in Plymouth, NH
HOCH, B., HOFFMAN, E.G., AVILÉS, L., MILLER, S., AND CORDEIRA, J. ......................... 99

An Introduction to the new NASA Suomi-NPP VIIRS Snow Cover Data Products
RIGGS, G. AND HALL, D.K. ................................................................. 107

Ku- and X-band radar observations of deep seasonal snow in agricultural fields in Ontario
THOMPSON, A. AND KELLY, R. ................................................................. 118

Oral session #5: Remote sensing monitoring II
Preliminary validation analysis of the GlobSnow2 database over Eastern Canada

Understanding microwave interactions from a highly saline snow cover on smooth first-year sea ice (FYI):
A multi-frequency theoretical approach
NANDAN, V., GELDSETZER, T., ISLAM, T., YACKEL, J.J. AND GILL, J.P.S. ................................. 132

Oral session #6: Snow modeling
Measuring and modeling the impact of vegetation growth on tundra on snow physical properties.
Impact on the permafrost thermal regime.
BARRERE, M., DOMINE, F., SARRAZIN, D., MORIN, S. AND DECHARME, B. ................................. 138

Assessing accuracy of simulated and spatialized snow profiles from SNOWPACK and Alpine3D driven by in-situ and predicted meteorological data for avalanche forecasting in Canada
CÔTÉ, K., MADORE, J.-B. AND LANGLOIS, A. ................................................................. 145

Improvement of snow grain simulations from the multi-layered thermodynamic snow model SNOWPACK:
implications to avalanche risk assessment
MADORE, J.-B., CÔTÉ, K. AND LANGLOIS, A. ................................................................. 152

Poster session #1: Climate, meteorology and glaciers
Baseline Crevasse Measurements on North Cascade Glaciers to Detect Climate Change
PELTO, J. .......................................................................................... 160

Meteorological Characteristics of Heavy Snowfall Events in the Cordillera Vilcanota, Peru
POREMBA, R.J., PERRY, L.B., SEMON, A., MARTIN, D.T., TUPAYACHI, A. ................................. 167

Vertical Structure, Melting Layer Heights, and Antecedent Upstream Air Trajectories Associated with Precipitation Events during the 2014-15 Wet Season in the Central Andes of Peru
Poster session #2: Historical and snow measurements

Best Practices in Snow and Ice Removal

*ELHOUAR, S., KHODAIR, Y., LEE, Y.-S. AND PETERS, T.* ................................................................. 192

Poster session #3: Remote sensing modeling

Can the predictability of snow water equivalent and snow depth across regional scales be enhanced through atmospheric and forest decoupling?

*XUE, Y. AND FORMAN, B.A.* ........................................................................................................... 200

Poster sessions #4: Remote sensing monitoring I

Analysis of the Interactions Between Snow and Shrub Ecosystem of the Taiga in Nunavik

*BUSSEAU, B.-C., Royer, A. AND LANGLOIS, A.* ................................................................. 211

Sno-Foo Award................................................................................................................................. 216
FOREWARD

This proceedings volume contains papers presented at the 72nd Eastern Snow Conference (ESC) held 9-11 June 2015 in Jouvene, Sherbrooke, Québec, Canada. The meeting featured sessions on glaciology, river ice and hydrology, snow and climate, remote sensing, snowpack properties and hydrochemistry as well as a diverse spectrum of posters.

The ESC is a joint United States and Canadian forum for discussing recent work on operational, applied and scientific issues related to snow and ice. It also retains an increasing interest as a symposium where novel approaches to cryospheric science of international significance are presented. The ESC has published an annual series of proceedings since 1952. Typical topics include studies of snow and ice as materials, snow removal, meteorological forecasting, river ice control, snow hydrology, snow chemistry, glaciology, remote sensing of snow and ice, and snow ecology. Membership in the ESC is open to all interested individuals and corporations. Additional copies of the current proceedings and all back issues can be obtained from the Secretary. Additional information about the Eastern Snow Conference may be found at: http://www.easternsnow.org/.

We continue with an optional review process, and authors may submit extended abstracts or full papers to the Proceedings. Participants were invited in the option to submit papers relevant to winter hydrology to the international journal, Physical Geography, in which an ESC special issue is planned for 2015.

We thank members of ESC executive committee (M. Ecclestone, A. Langlois) for outstanding effort in publishing ESC 2014 proceedings, while being heavily involved in the 2015 edition. Over the years, the proceedings committee has contributed considerable time to this publication and has enhanced the quality of these proceedings.

The 2015 meeting of the Eastern Snow Conference and these proceedings were made possible by sponsorship and Corporate Memberships by the following:

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We look forward to seeing many of you at the 73\textsuperscript{rd} Eastern Snow Conference meeting to be held 7–9 June 2016 in Columbus, Ohio, USA. The conference will be organized by the Ohio State University.

Alex Langlois  
ESC Proceedings Editor 2015, Past President  
CARTEL, Université de Sherbrooke
STATEMENT OF PURPOSE

The Eastern Snow Conference (ESC) is a joint Canadian/US organization founded in the 1940s, originally with members primarily from eastern North America. Our current members are scientists, snow surveyors, engineers, technicians, professors, students, and operational and maintenance professionals from North America, the United Kingdom, Japan, and Germany. There is a western counterpart to the ESC, the Western Snow Conference (WSC), which also is a joint Canadian/US organization. Every fifth year, the ESC and the WSC hold joint meetings.

The Eastern Snow Conference is a forum that brings the research and operations communities together to discuss recent work on scientific, applied, and operational issues related to snow and ice. The location of the conference alternates yearly between the United States and Canada, and attendees present their work by either giving a talk or presenting a poster. Most resulting papers are reviewed, edited, and published in our yearly Proceedings of the Eastern Snow Conference. In recent years, the ESC meetings have included sessions on snow physics, winter survival of animals, snow and ice loads on structures, river ice, remote sensing of snow and ice, and glacier processes. Volumes of the Proceedings can be found in libraries throughout North America and Europe, and the papers are also available through the National Technical Information Service (NTIS) in the United States and CISTI in Canada.

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The 72nd annual meeting of the Eastern Snow Conference was held at the Jouvence Centre de Vacances in Sherbrooke, Quebec, on 9-11 June 2015. Jouvence is located on the shores of Lake Stukely in Mont-Orford National Park and offered an ideal blend of functional meeting space, comfortable accommodations, terrific food, wonderful staff, and a beautiful environment.

The scientific program included 27 oral presentations and 26 poster presentations with participants from Canada, the United States, Europe, and South America. The theme of this year’s program was “Recent Advances in Snow Remote Sensing.” Once again, the student participation was excellent, representing nearly half of the attendees and resulting in very stimulating presentations. The following students were recognized by the Research Committee at the Banquet for exemplary achievement:

- Charles Papasodoro from the University of Sherbrooke received the David Hewitt Miller Best Student Poster Award for his team’s poster entitled *SAR RadarSat-2 and Optical Pléiades Stereo Imagery for Monitoring Ice cap Melt over the Baffin Island, NU*.
- Nicolas Leroux from the University of Saskatchewan received the Wiesnet Medal for the best student paper (with J. Pomeroy) entitled *A Dual Pathway Heterogeneous Flow Snow Model*.

We were very fortunate to have ESC lifetime member Barry Goodison deliver the Banquet Address: *Observing and Monitoring the Cryosphere: Global Cryosphere Watch (GCW)*. His address encouraged ESC participants, and especially the students, to follow established best practices for observing and monitoring the cryosphere and to participate in the World Meteorological Organization’s Global Cryosphere Watch. Two life members also showed up and it was great to see Gerry Jones at the meeting as well.

Alex Langlois, for the second time in the past three years, presented the coveted Sno-Foo Award to one of his University of Sherbrooke students, Kevin Côté, for apparent reckless abandon on the ski slope that adversely impacted important fieldwork.

A special thanks to Alain Royer from the University of Sherbrooke for chairing the Local Arrangements Committee and serving as Vice President and Program Chair. Past President Alex Langlois of the University of Sherbrooke also served on the Local Arrangements Committee. ESC Executive Committee Members Derrill Cowing, Ken Rancourt, and Miles Ecclestone continue to provide outstanding leadership and were instrumental to the success of the 72nd meeting. The efforts of webmaster Andrew Klein, ESC Physical Geography special issue Editor Mauri Pelto, and members of the steering and research committees are also greatly appreciated. Likewise, the meeting would not have been a success without the participation and continued support of our corporate members: Campbell Scientific Canada, Geonor, Hoskin Scientific, Canadian Space Agency, and OTT Hydromet.

Please plan to attend the 73rd Eastern Snow Conference in June 2016, to be held at the Ohio State University in Columbus, Ohio. Michael Durand is the Vice-President and Program Chair and the meeting offers the exciting opportunity to visit the Byrd Polar Research Center and interact with the outstanding faculty and students at Ohio State. Students should check the ESC website for more information on submitting papers for the Wiesnet Medal and Campbell Scientific Canada Award.

Thank you for your participation and support of the Eastern Snow Conference and I look forward to seeing you all next year in Columbus. In the meantime, best wishes for a snowy, safe, and successful field season!

Baker Perry
72nd President
Eastern Snow Conference