

Editorial of the Finland100 Snow Seminar Special Issue

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Finland's 100 Anniversary Snow seminar was organized by the Finnish Meteorological Institute (FMI) on 1 Nov 2017, the day of Pyry (Blizzard), in co-operation with the EU COST ES1404 Action on snow. The event was also part of Finland's Chairmanship of the Arctic Council for its 2017-2019 program. It was the 7th in the series of national Pyry snow seminars on snow research and snow-related services organized at FMI, with national and international co-operation, in most years since 2009. Together with the open cross-organizational FMI snow team, the Pyry seminar convener for 2009-2016 has been Kirsti Jylhä, and for 2017-2018 Outi Meinander. The documentation of the Finland100 Snow seminar in 2017 is archived at the repository of the Finland100 Project on the centenary of Finland's independence at the Prime Minister's Office. In 2018, the Finland100 special issue dedicated to the 7th national Pyry snow seminar appears in *Geophysica*, an open access journal of the Geophysical Society of Finland, published since 1935.

The Finland100 seminar program in 2017 consisted of oral and poster presentations on a wide range of snow research and snow-related services. It was jointly organized by the COST ES1404 Action on snow, entitled "A European network for a harmonised monitoring of snow for the benefit of climate change scenarios, hydrology and numerical weather prediction" led by FMI and involving 29 European countries. The event also included one session on bringing together science and art.

The welcome and opening address was given by the Director General of FMI Juhani Damski. After this, Johanna Ekman presented a short resumé on Finland's chairmanship of the Arctic Council for the period 2017-2019. A Keynote speech, with a historical perspective, was given by Docent Esko Kuusisto of the Finnish Environment Center on "(Over) one hundred years of snow research in Finland". The session dedicated to COST Action ES1404 consisted of multiple talks on the work conducted in the Action. In the third session Professor Jouni Pulliainen, FMI, spoke on satellite-based research, services and products for high-latitude terrestrial areas. The poster session had several posters on snow research, services, and art. In the final, fascinating, session on science and art, Paola Livorsi, Sibelius Academy, gave a presentation combining sound and photos, and Professor Timo Vesala, University of Helsinki, gave a talk "From Vertigo to Blue velvet – Connotations between movies and climate change".

All the oral and poster presentations, as well as live-streamed seminar recordings, are documented at the webpages of the COST ES1404 Action (www.harmosnow.eu), thanks to Cemal Melih Tanış, FMI. In Twitter, at the FMI account of twitter.com/FMI_snow, the tweets on the event can be found with the hashtag #Pyr100. A report of the event by Outi Meinander is also available in the European Meteorological Society (EMS) May 2018 Newsletter (<https://www.emetsoc.org/finlands-100th-anniversary-snow-seminar/>), thanks to Piia Post and Emily Gleeson.

We wish to thank all the chairs, co-conveners and presenters of the seminar day. Here is a complete list of the posters and talks presented at the Finland100 Pyry snow seminar 1 Nov. 2017:

The posters presented at the Finland100 Pyry Snow seminar, 1 Nov 2017, at FMI, Helsinki, Finland: Anttila, K., T. Manninen & E. Jääskeläinen (FMI), Darkening of winter time surface albedo in Finland using CLARA-A2 SAL; Deng, Xiao (Tainyuan University of Technology, China), Multi-sensors monitoring method on snow and ice parameters in the Heilongjiang, the northernmost river of China; Hongisto M. (FMI), Snow in the Finnish golden age painters works; Jylhä, K. (FMI), Severe sea-effect snowfall on the Finnish coast; Karhu, J.A. (FMI), Effect of snow on solar panel output; Meinander O. (FMI) High latitude dust and elemental and organic carbon aerosols: what processes make them important to Arctic snow and ice?; Mäkinen J. (FGI), Experience with the Campbell CS725 Snow Water Equivalent sensor at the Metsähovi Geodetic Research Station, Kirkkonummi, Finland; Post, P. (University of Tartu, Estonia), Observing Large-scale Atmospheric Moisture Transport from Multiple Sources to Analyse Severe Snow Storm in the Baltic Sea Region (invited); von Lerber, A. (FMI), Investigating Dependences of Ze-S relation on Microphysical Properties of Snow.

The invited talks at the Finland100 Pyry Snow seminar: Director General Dr. Juhani Damski (FMI): Welcome and opening; J. Ekman (FMI): A short comment on Finland's chairmanship of the Arctic Council 2017-2019; Keynote speaker Docent Esko Kuusisto (SYKE): "One hundred years of snow research in Finland"; A.N. Arslan (FMI): Introduction to COST Action ES1404; R. Pirazzini (FMI): Overview of the in situ snow albedo measurements; L. Leppänen (FMI): Results of questionnaires on snow measurement practices and data assimilation in Europe; N. López-Moreno (Spanish National Research Council): Highlights from the field campaigns; Keynote speaker Professor Jouni Pulliainen (FMI): "Satellite based research, services and products for high latitude terrestrial areas"; T. Manninen (FMI): "The effect of snow on boreal forest albedo"; E. Saltikoff, FMI: "Snow forecasts for airports"; Vesa Raulos (Esri Finland): "Esri and GIS in snow management"; Lasse Makkonen (VTT): "Wet snow"; A. Jutila (UH): "Spatially distributed high-resolution snow evolution modeling"; T. Lemmettylä (Finnish Ski Association): "Skiers on Snow"; P. Livorsi (Sibelius Academy): "Water, snow, air, fire, earth"; EU Life+ MONIMET-project team (FMI): "Animation of seasonal changes in Finland using MONIMET camera network"; Keynote speaker Professor Timo Vesala (University of Helsinki): "From Vertigo to Blue velvet - Connotations between movies and climate change".

We warmly thank the editor-in-chief of *Geophysica*, Emeritus Professor Kimmo Kahma for making possible this special issue. Thanks also to the *Geophysica* editorial team of Leena Heino (SYKE) and Toni Veikkolainen (University of Helsinki).

The reviewers of the Finland100 special issue are gratefully acknowledged; these include (but are not limited to): Craig Smith (Climate Research Division, Environment and Climate Change Canada), Nick Rutter (Department of Geography and Environmental Sciences, Northumbria University, UK), Lichuan Wu (Uppsala University, Department of Earth Sciences, Sweden), Kirsikka Heinilä (Geoinformatics Research, Finnish Environment Institute, Finland), and Hannu Savijärvi (University of Helsinki, Finland).

In the Finnish language we have more than one hundred words for snow and ice. These words can contain important, or even vital, information on your environment, such as *railo* (crack in sea ice), *paukkupakkanen* ("bang" frost, i.e. very hard frost), *pyry* (blizzard) and *lumi* (snow). We welcome our readers to learning more about snow and ice here, and to our future *Pyry* snow seminars at FMI. This is your invitation!

Outi Meinander (Guest editor) & Ali Nadir Arslan (COST Action 1404 Chair)