



# International Symposium on Mitigation Measures against Snow Avalanches and other Rapid Gravity Mass Flows – Siglufjörður 3–5 April 2019

## Programme



Snow 2019 - Iceland

Tuesday 2 April 2019

17:00 – 19:00	<b>Registration at Hótel Sigló</b>
18:30 – 20:00	<b>Welcome reception sponsored by the municipality of Fjallabyggð/Siglufjörður in the Herring Era Museum</b>

Wednesday 3 April 2019

08:00 – 09:00	<b>Registration at the symposium venue (red/blud buildings near Hótel Sigló)</b>
09:00 – 09:20	<b>Symposium opening</b> – Guðmundur Ingi Guðbrandsson, the Minister for the Environment and Natural Resources, Gunnar Birgisson, the mayor of Fjallabyggð/Siglufjörður, Árni Jónsson, chairman of the local organizing committee.
<b>Session</b>	<b>Risk management, general</b> <b>Chair: Harpa Grímsdóttir</b>
09:20 – 09:40	<b>Michael Bründl:</b> <u>Risk management of gravitational driven processes in Switzerland (keynote)</u>
09:40 – 09:55	Andreas Drexel: <u>Blons in Vorarlberg, Austria – 60 years sustainable avalanche protection – Experience, setbacks and lessons learned</u>
09:55 – 10:10	Odd-Arne Mikkelsen: <u>Snow2019 NVE.RN The Norwegian way of preventing nature hazard</u>
10:10 – 10:25	Martin Proksch: <u>An integral avalanche safety concept for Goms region, Valais, Switzerland</u>
10:25 – 10:40	Hafsteinn Pálsson: <u>The importance of the Icelandic Avalanche and Landslide Fund for avalanche-prone areas in Iceland</u>
10:40 – 10:55	<i>Coffee</i>
<b>Session</b>	<b>Risk management, general, continued</b> <b>Chair: Fjóla Guðrún Sigtryggsdóttir</b>
10:55 – 11:10	Magni Hreinn Jónsson: <u>Avalanche hazard mapping and mitigation for settlements in Iceland – An overview</u>
11:10 – 11:25	Hiroki Matsushita: <u>A simple evaluation of dry-snow avalanche hazard using meteorological data</u>
11:25 – 11:40	Bruce Jamieson: <u>Adjusting for uncertainty when combining runout estimates for extreme snow avalanches</u>
11:40 – 11:55	Cam Campbell/Brian Gould: <u>Post wildfire analysis of avalanche hazard in Canada</u>
11:55 – 12:05	<i>Discussion</i>
12:05 – 13:00	<i>Lunch</i>
<b>Session</b>	<b>Society and the environment</b> <b>Chair: Tómas Jóhannesson</b>
13:00 – 13:20	<b>Arne Instanes:</b> <u>Society and environment in the context of changing climate in Arctic regions (keynote)</u>
13:20 – 13:35	Arnold Studeregger: <u>Avalanche commissions in Austria at the interface between locals and authorities. Embedding, decision process and quality assurance</u>
13:35 – 13:50	Fjóla Guðrún Sigtryggsdóttir: <u>Avalanche and landslide hazard zoning committees in Iceland</u>
13:50 – 14:05	Halldór Halldórsson: <u>Protection measures and working with the locals, practical challenges</u>
14:05 – 14:20	Eiður P. Birgisson: <u>Landscape design of snow avalanche protection structures in Siglufjörður, Ólafsfjörður and Seyðisfjörður</u>
14:20 – 14:35	Abdurrahim Aydın: <u>Historical development and future outlook of the avalanche hazard potential of residential areas in the Lake Uzungöl (Eastern Black Sea Region of Turkey) between 2004 and 2050</u>
14:35 – 15:00	<i>Discussion</i>
15:00 – 15:20	<i>Coffee</i>
<b>Session</b>	<b>Risk management, general, traffic and ski areas</b> <b>Chair: Magni Hreinn Jónsson</b>
15:20 – 15:40	<b>Peter Gauer:</b> <u>Avalanche observations related to probabilities (keynote)</u>
15:40 – 15:55	Martin Proksch/Pascal Venetz: <u>From the pilot study to the practical implementation – A case study from the Oberalppass in Switzerland</u>
15:55 – 16:10	Remzi Eker: <u>Evaluation of snow avalanche hazard on the highway using high resolution UAV data: Case of Erzurum-Çat-Karlıova highway, Turkey</u>
16:10 – 16:25	Patrick Siegele: <u>Hazard managing in Austrian ski areas</u>
16:25 – 16:40	Harpa Grímsdóttir: <u>Management of avalanche risk in Icelandic ski areas</u>
16:40 – 16:55	Tore Humstad: <u>Avalanche warning services as an integrated part of winter road operations in Norway</u>
16:55 – 17:10	Geir Sigurðsson: <u>Avalanche management for roads in Iceland</u>
17:10 – 17:25	Ole-André Helgaas: <u>Methods for avalanche protection on roads in Finnmark in Northern Norway</u>
17:25 – 17:40	Daniel Germain: <u>Avalanche hazard in urban snow storage sites in Province of Quebec, Canada</u>
17:40 – 18:00	<i>Discussion</i>
20:30 – 21:30	Optional evening session with <b>photos and videos of avalanches and protection measures</b>



## Programme

Thursday 4 April 2019

<b>Session</b>	<b>Planning, design, construction and management of protection measures</b>
	<b>Chair: Bruce Jamieson</b>
09:00 – 09:20	<b>Stefan Margreth:</b> <a href="#">Effectiveness and maintenance of technical avalanche protection measures in Switzerland (keynote)</a>
09:20 – 09:35	Cameron Ross: <a href="#">Avalanche deflection berm and stopping wall at a hydro-electric facility in north-western British Columbia, Canada</a>
09:35 – 09:50	Árni Jónsson: <a href="#">Longyearbyen Svalbard – Mitigation measures for Sukkertoppen and Vannledningsdalen</a>
09:50 – 10:05	Daniel Illmer: <a href="#">Everyday work of an avalanche engineer – Calculation of avalanche loads and protection of small objects in avalanche paths like ropeway towers</a>
10:05 – 10:20	Jón Skúli Indriðason: <a href="#">Experience and evaluation of reinforced soil systems in catching dams in Iceland 1998–2017</a>
10:20 – 10:35	Áslaug Traustadóttir: <a href="#">Landscaping of avalanche dams in Fjarðabyggð and Vestfirðir</a>
10:35 – 10:50	<i>Coffee</i>
<b>Session</b>	<b>Planning, design, construction and management of protection measures, continued</b>
	<b>Chair: Andreas Drexel</b>
10:50 – 11:05	Rico Brändle: <a href="#">Floating foundations for flexible snow nets on permafrost and creeping slopes – 10 years experience</a>
11:05 – 11:20	Nicolas Villard: <a href="#">Hybrid innovative protection structures with optimized foundations and field adaptation</a>
11:20 – 11:35	Jón Skúli Indriðason: <a href="#">Observed changes in hydrology downstream of large earth fill dams in Iceland. Lessons learned</a>
11:35 – 11:50	Anders Bjordal: <a href="#">Tree Tribes Meeting – how to build a protection dam</a>
11:50 – 12:05	<i>Discussion</i>
12:05 – 13:00	<i>Lunch</i>
<b>Session</b>	<b>Observations of avalanches, instrumentation</b>
	<b>Chair: Árni Jónsson</b>
13:00 – 13:20	<b>Betty Sovilla:</b> <a href="#">The avalanche flow regimes and their pressure on infrastructures (keynote)</a>
13:20 – 13:35	Philippe Berthet-Rambaud: <a href="#">Attempt to combine few historical data from a 19th century avalanche and recent modelling capabilities for hazard zoning at Tignes Brévières</a>
13:35 – 13:50	Þorsteinn Sæmundsson: <a href="#">Monitoring rock avalanche hazard from the Svínafellsheiði mountainside in SE Iceland</a>
13:50 – 14:05	Engelbert Gleirscher: <a href="#">SNOWCATCHER – full-scale test site in the Stubai Valley – site selection, installation of structure and monitoring system, first results of the avalanche–structure interaction</a>
14:05 – 14:20	Rune Solberg: <a href="#">Landslide detection and mapping by remote sensing</a>
14:20 – 14:35	Tómas Jóhannesson: <a href="#">Snow avalanches hitting deflecting and catching dams in Iceland 1997–2018</a>
14:35 – 14:50	Sveinn Brynjólfsson: <a href="#">Snow avalanches hitting natural obstacles in Iceland: The avalanches at Kisárdalur, Steinsstaðaskál and Upsi in N-Iceland</a>
14:50 – 15:00	<i>Discussion</i>
15:00 – 15:20	<i>Coffee</i>
15:20 – 16:20	<b>Poster session</b>
<b>Session</b>	<b>Simulations of avalanches, laboratory experiments</b>
	<b>Chair: Betty Sovilla</b>
16:20 – 16:40	<b>Chris Johnson:</b> <a href="#">Interaction of granular avalanches with obstacles and topography (keynote)</a>
16:40 – 16:55	Gísli Steinn Pétursson: <a href="#">Analyzing and mitigating the impact of avalanche protection structures on their local wind climate</a>
16:55 – 17:10	Kristín Martha Hákonardóttir: <a href="#">The design of slushflow barriers: Laboratory experiments</a>
17:10 – 17:25	Halldór Pálsson: <a href="#">The design of slushflow barriers: OpenFOAM simulations</a>
17:25 – 17:40	Hafþór Örn Pétursson: <a href="#">Use of RAMMS Avalanche and OpenFOAM to simulate the interaction of avalanches and slush flows with dams</a>
17:40 – 18:00	<i>Discussion</i>
18:00	<i>Closing remarks</i>
18:30 – 20:00	<i>Hotel lounge area open for meeting other guests before the banquet</i>
20:00	<i>Symposium Banquet</i>

Friday 5 April 2019

09:00 – 17:30	<i>Symposium Excursion</i>
18:00 – 19:00	<i>Bus to Akureyri airport from Siglufjörður or Dalvík with excursion participants (flight to Reykjavík departs at 20:10)</i>

Saturday 6 April 2019

09:00 – 16:00	<i>Ski mountaineering tour</i>
17:00 – 18:00	<i>Bus to Akureyri airport with ski mountaineering tour participants (flight to Reykjavík departs at 19:05)</i>



## Programme

### Posters, booths, company introductions

Susan J. Conway: <a href="#"><u>Using RAMMS (Rapid Mass Movement Simulation) to simulate rapid gravity mass flows in martian gullies</u></a>
Armelle Decaulne: <a href="#"><u>Mass movements in Nunavik: hazard and risk</u></a>
Andreas Drexel: <a href="#"><u>Adaption of snow bridges in the Großtal avalanche in Galtür, Tyrol, Austria – Constructive and static problems</u></a>
Örn Ingólfsson: <a href="#"><u>Using data from automatic snow sensors for avalanche forecasting in Iceland</u></a>
Árni Jónsson: <a href="#"><u>Planning for highways in avalanche-prone areas in Troms County, Northern Norway</u></a>
Árni Jónsson: <a href="#"><u>Wind simulation for Longyearbyen mitigation measures</u></a>
Costanza Morino: <a href="#"><u>Geomorphic signatures of different debris-flow release processes in Ísafjörður, north-western Iceland</u></a>
Trond Jøran Nilsen: <a href="#"><u>Methods for avalanche protection on roads in Finnmark in Northern Norway</u></a>
Elena Pummer: <a href="#"><u>Hybrid modeling of debris flows – Focusing on initial and boundary conditions</u></a>
Rune Solberg: <a href="#"><u>Mapping snow surface hoar by optical remote sensing</u></a>
Brynjólfur Sveinsson: <a href="#"><u>Snow avalanche history of rural areas in Iceland</u></a>
Þorsteinn Sæmundsson: <a href="#"><u>TDR used for the first time to monitor slope movements in Iceland. A case study from the Almennigar landslide in central North Iceland</u></a>
FSR – Government Construction Contracting Agency: <a href="#"><u>Protection measures in Iceland – 1997–2018 – Protection dams, supporting structures (three posters)</u></a>
<b>Exhibitors with booths</b>
Svarmi ehf. Iceland: Use of drones for mapping snow avalanches, landslides and construction areas
CautusGeo, Norway
Trumer Schutzbauten, Austria
Geobruigg, Switzerland
Húsasmiðjan/TAS, Iceland/France
<b>Company introductions</b>
Verkís hf.: Design of avalanche protection measures in Iceland. Verkís Consulting Engineers
Hnit hf.: Design of avalanche protection measures in Iceland. Hnit Consulting Engineers
Efla hf.: Design of avalanche protection measures in Iceland. Efla Consulting Engineers
TenCate Geosynthetics North West Europe
Reinforced Earth Company
Mair Wilfried GmbH
Wysen Avalanche Control