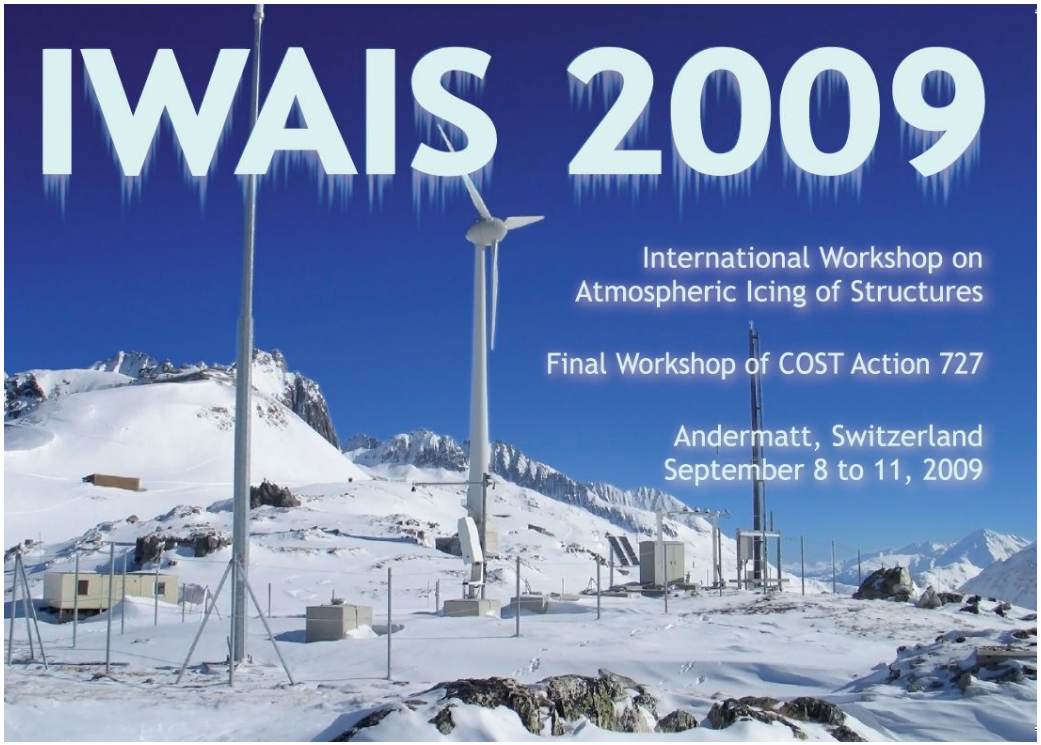
Preliminary Programme



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Overview Programme IWAIS 2009

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Programme IWAIS 2009

Lectures

Tuesday, September 8: Session 1

Opening Session

Chair: A. Heimo

Time	Presenter	Title	Company/Institute	Country
10:00	A. Heimo	Welcome Address	Meteotest	Switzerland
10:15	J. Nash	Future plans and priorities of CIMO	WMO/CIMO	UK
10:35	E. Klaper	COST – a flexible research networking tool	SBF/COST	Switzerland
10:55	B. Calpini	Meteorological measurements under icing conditions: challenge and results in MeteoSwiss	MeteoSwiss	Switzerland
11:15	K. Maus	The Wind Energy Research Program in Switzerland	BFE/Suisse Eole	Switzerland
11:35	S. Kunz	Research and development in meteorology: an optimal field for Public Private Partnership	Meteotest	Switzerland
11:55	A. Heimo	Administrative	Meteotest	Switzerland
12:05	**Lunch Break**			

Tuesday, September 8: Session 2

Icing on Powerlines				
	Chair: B. Wareing	**Co-Chair: S. Fikke**		
Time	**Presenter**	**Title**	**Company/Institute**	**Country**
14:00	M. Farzaneh	Overview of Atmospheric Icing of Power Networks: State of our Knowledge and Future Challenges	Université du Québec à Chicoutimi	Canada
14:45	A. J. Eliasson	Ice Accumulation at measuring site Hallormsstadahals	Landsnet	Iceland
15:05	X. Jiang	Survey and analysis of Ice Accidents of Early 2008 in Southern China.	College of Electrical Engineering of Chongqing University	China
15:25	T. Wagner	A Numerical Model for Atmospheric Icing of Conductor Bundles	Technical University Braunschweig	Germany
15:45	X. Huang	A New On-line Monitoring System of Transmission Line Icing and Snowing	Xi'an Polytechnic University	China
16:05	**Coffee Break**			
16:30	S. Chereshnyuk	Modern techniques of ice-load assessment and icing maps creation for the design of overhead transmission lines used in the Russian Federation	Electric Power Research Institute – VNIIE	Russia
16:50	R. Menini	Theoretical Studies and Quantification of Ice Adhesion Mechanisms	Université du Québec à Chicoutimi	Canada
17:10	L. Kollar	Modeling Wet-Snow Shedding from Current-Carrying Conductors	Université du Québec à Chicoutimi	Canada

17:30	**Icebreaker Party**

Wednesday, September 9: Session 3

COST Action 727 – Working Group 1: Modelling of Icing

Chair: B. Calpini **Co-Chair: D. Nikolov**

Time	Presenter	Title	Company/Institute	Country
09:00	G. Thompson	Using the Weather Research and Forecasting (WRF) model to simulate ground/structural icing events	National Center for Atmospheric Research	USA
09:30	L. Makkonen	Review of WG1 results	VTT Technical Research Centre of Finland	Finland
09:50	B. E. Nygaard	Evaluation of icing simulations for all the "COST727 icing test stations" in Europe	Norwegian Meteorological Institute	Norway
10:10	J. E. Kristjansson	How sensitive is simulated icing to the treatment of cloud microphysics?	Department of Geosciences, University of Oslo	Norway
10:30	**Coffee Break**			
11:00	B. Wareing	WRF Model simulation of wet snow and rime icing incidents in the UK	Brian Wareing.Tech Ltd	UK
11:20	S. Dierer	Modeling the risk of icing in Switzerland	Meteotest	Switzerland
11:40	J. Hosek	Synoptic icing observations in central Europe and their applicability for icing mapping	Institute of Atmospheric Physics	Czech Republic
12:00	B. Wichura	Application of a wet snow accretion model to the Münsterland event	German Meteorological Service	Germany
12:20	**Lunch Break**			

Wednesday, September 9: Session 4

COST Action 727 – Working Group 2: Icing Measurements

Chair: B. Wichura **Co-Chair: R. Cattin**

Time	Presenter	Title	Company/Institute	Country
14:00	A. Peabody	Evolution of Real-time Monitoring and its Future Benefits	University of Alaska Anchorage	USA
14:30	S. Fikke	COST Action 727 WG2 - Review of results	Consultant	Norway
14:50	B. Wareing	European Test Sites	Brian Wareing.Tech Ltd	UK
15:10	S. Kimura	Evaluation of ice detecting sensors by icing wind tunnel test	Kanagawa Institute of Technology	Japan
15:30	B. Wichura	Intercomparison of icing measurements at Zinnwald test site	German Meteorological Service	Germany
15:50	**Coffee Break**			
16:20	A. Heimo	Meteorological Measurements under icing conditions	Meteotest	Switzerland
16:40	J. Rast	Icing Indices: a good solution?	Meteotest	Switzerland
17:00	K. Harstveit	Measurements of cloud water content and droplet density; and calculation of cloud water gradients at Kuopio, Finland	Kjeller Vindteknikk AS	Norway
17:20	G. Ronsten	Proposed Research Policy for Wind Energy in Icing Climates	WindREN AB	Sweden

Thursday, September 10: Session 5

Icing in Wind Energy

Chair: M. Farzaneh **Co-Chair: B. Tammelin**

Time	Presenter	Title	Company/Institute	Country
09:00	T. Laakso	Wind Energy in Cold Climates IEA Task 19 - Outlook 2010	Pöyry Energy Oy	Finland
09:30	D. O'Hern	Development of an Electrothermal Ice Protection System for Wind Turbine Applications	Goodrich Corporation	USA
09:50	A. Westerhellweg	Evaluation of Operational Data in respect to Production Losses due to Icing	DEWI GmbH	Germany
10:10	Ø. Byrkjedal	Estimating wind power production loss due to icing	Kjeller Vindteknikk	Norway
10:30	**Coffee Break**			
11:00	C. Hochart	Methodology and validation of wind farm production loss estimates due to icing events	Garrad Hassan Canada Inc	Canada
11:20	L. Fuchs	Ice accretion on wind-turbines	KTH, Royal Institute of Technology	Sweden
11:40	S. Barber	The effect of ice shapes on wind turbine performance and aerodynamic behaviour	ETH Zürich	Switzerland
12:00	H. Gedda	Development of an Electro Thermal Wind Turbine Ice Protection System	Kelly Aerospace Thermal Systems LLC	USA
12:20	**Lunch Break**			

14:00 – 18:00	**Session 6: Poster Session**
19:00	**Banquet**

Friday, September 11: Session 7

Various Icing Topics

Chair: A. Peabody **Co-Chair: S. Kimura**

Time	Presenter	Title	Company/Institute	Country
09:00	B. Bernstein	European Icing Frequency Derived From Surface Observations	Leading Edge Atmospherics	USA
09:30	T. Ozeki	Field Observation of sea spray icing on lighthouses and ice adhesion test of superhydrophilic pliable sheet for deicing	Sapporo Campus, Hokkaido University of Education	Japan
09:50	E. Lozowski	Wind and Ice Load Model Using Numerical Weather Prediction	University of Alberta	Canada
10:10	C. Ryerson	Icing and Offshore Arctic Oil Operations Safety	U.S. Army Corps of Engineers Cold Regions Research & Engineering Laboratory	USA
10:30	**Coffee Break**			
11:00	M. Kermani	Mechanical Behaviour of Atmospheric Ice under Different Loading Conditions	University of Quebec at Chicoutimi	Canada
11:20	B. Weber	Anti-ice technologies - coating concepts and evaluation	Fraunhofer IFAM	Germany
11:40	K. Ueno	The Effect of Airflow on the Wavelength of Ripples on Icicles	University of Quebec at Chicoutimi	Canada
12:00	B. Calpini / M. Russi	Introduction to the Alpine Test Site Guetsch	MeteoSwiss / Elektrizitätswerk Ursern	Switzerland
12:20	A. Heimo	Closing Words	Meteotest	Switzerland

12:30 – 17:00	**Excursion to the Alpine Test Site Guetsch**

Posters

Icing on Powerlines

Poster no.	Presenter	Title	Company/Institute	Country
PO.001	P. Bonelli	Experimental activity and investigation of wet-snow accretion on overhead power lines in Italy	CESI RICERCA	Italy
PO.002	I. Gutman	Flashover performance of line composite insulators with different profiles intended for ice & snow environment	STRI AB	Sweden
PO.003	A. Leblond	Performance Study of LC-Spiral Rods Under Icing Conditions	Hydro-Quebec TransEnergie	Canada
PO.004	B. Zemljaric	Phase conductor broke caused by snow accretion on 110 kV power overhead line	IBE, Consulting Engineers	Slovenia
PO.005	X. Huang	Study on the icing process of transmission lines and the local meteorology parameters	Xi'an Polytechnic University	China
PO.006	R. Menini	PTFE-Coated Anodized Aluminum Alloy 6061 with Icephobic Properties	Université du Québec à Chicoutimi	Canada
PO.007	X. Jiang	Analysis on Influencing Maximum Temperature Factors during DC Ice-melting of Uniformly Ice-Covered Conductors	College of Electrical Engineering of Chongqing University	China
PO.008	X. Jiang	Analysis of Ice-melting Critical Current for DC Transmission Lines with Short Circuit Method	College of Electrical Engineering of Chongqing University	China
PO.009	L. Shu	Study of Effects of Prepolluting Methods on Artificial Icing Flashover Characteristics of Composite Insulators	College of Electrical Engineering of Chongqing University	China
PO.010	E. Xiao	Review on the Icing Flashover Characteristics and Measures to Preventing Iced Insulators from Flashover Voltage	College of Electrical Engineering of Chongqing University	China

PO.011	J. Hu	Statistical Characteristic Analysis of AC Flashover Performance of Iced Insulator String	College of Electrical Engineering of Chongqing University	China
PO.012	K. Satoh	Investigation of a Simple Estimation for Snow Accretion on overhead power lines	Central Reseach Institute of Electric Power Industry	Japan
PO.013	Q. Hu	Study on Effect of AC Electrical Field on Rime-icing Process of Composite Insulators	College of Electrical Engineering of Chongqing University	China
PO.014	Z. Zhang	Dynamic Simulation and Experiment of Ice-melting Process on an Ice-covered Conductor	College of Electrical Engineering of Chongqing University	China
PO.015	A. Takahashi	Electrical Conductivity and Chemical Composition of Snow	Central Research Institute of Electric Power Industry	Japan
PO.016	L. Kollar	Experimental Simulation of Wet-Snow Shedding from Sagged Cables	University of Quebec at Chicoutimi	Canada
PO.017	L. Kollar	Adhesion of Wet Snow to Different Cable Surfaces	University of Quebec at Chicoutimi	Canada
PO.018	Y. Kamata	Resolution of Frost-Phenomena Adherent to the Overhead Lines and a Study on Prediction Method of Overhead Line Frosting	Railway Technical Research Institute	Japan
PO.019	F. Jakl	The First Experiences with Ice-Monitoring System for Transmission Network in Slovenia	ELES Ljubljana	Slovenia
PO.020	S. Kulinich / M. Farzaneh	Ice Adhesion and Hydrophobic Properties of Coatings Based on Doped RTV Silicone Rubber	University of Quebec at Chicoutimi	Canada
PO.021	H. Homma	Snow Accretion Properties of Various Insulators Exposed to an Artificial Wet Snow Accretion Test	Central Research Institute of Electric Power Industry	Japan

PO.022	M. Kermani	Study of Influencing Factors on Ice Shedding from Power Transmission Lines	University of Quebec at Chicoutimi	Canada
PO.023	Y. Higashiyama	Effect of Salt Content and Water Droplet on Partial Discharge Occurred in Artificially Packed Snow Formed over a 66kV Insulator	Department of Electrical Engineering, Graduate School of Science and Engineering	Japan
PO.024	K. Fujii	Observation of Natural Snow Accretion on the Test Conductors	Hokkaido Electric Power Company, Inc	Japan
PO.025	T. Watanabe	A study of light weight interphase spacer	Hokkaido Electric Power Company, Inc	Japan

Wind Energy

Poster no.	Presenter	Title	Company/Institute	Country
PO.026	S. Barber	Assessment of wind turbine power performance at the Alpine Test Site Gütsch	ETH Zürich	Switzerland
PO.027	P. Drage	Numerical Simulation of Ice Accretion on Wind Turbines	qpunkt GmbH	Austria
PO.028	D. O'Hern	Development of an Electrothermal Ice Protection System for Wind Turbine Applications	Goodrich Corporation	USA

Various Icing Topics

Poster no.	Presenter	Title	Company/Institute	Country
PO.029	P. Mitten	SensEarth - A Web-based Geoportal for Acquisition, Analysis, Mapping, and Modeling of Ice Accretion Observations	Compusult	Canada
PO.030	K. Szilder	A Novel Numerical Model of Surface Water Flow and Freezing for Glaze Ice Accretion with Runback	Institute for Aerospace Research	Canada
PO.031	M. Farzaneh	A Numerical Study of Forced Convection around a Snow Sleeve in a Cross-flow of Air	University of Quebec at Chicoutimi	China
PO.032	C. Ryerson	Experiments in Acoustically-Induced Freezing	U.S. Army Corps of Engineers Cold Regions Research & Engineering Laboratory	USA
PO.033	S. Kulinich	Ice Adhesion on Superhydrophobic and Hydrophobic Surfaces: Effect of Wetting Hysteresis	University of Quebec at Chicoutimi	Canada
PO.034	S. Kulinich	How Dynamic Hydrophobicity of Superhydrophobic Surfaces Governs Evaporation of Small Water Droplets	University of Quebec at Chicoutimi	Canada
PO.035	G. Delgado	VORTEX Icing modelling project	Universitat de Girona - VORTEX FdC, SL	Spain
PO.036	N. Bezrukova	Model for Road Icing Forecast and Control	Central Aerological Observatory (CAO)	Russia

PO.037	D. Baumgardner	An integrated system for detection and classification of icing fog and drizzle	Droplet Measurement Technology	USA
PO.038	C. Antonini	Icing mitigation strategies using surface coatings	Department of Mechanical Engineering - University of Alberta	Canada
PO.039	C. Antonini	Impact of water drops on cold sub-zero surfaces	Università degli Studi di Bergamo	Italy
PO.040	S. Kulinich / M. Farzaneh	Ice-repellent performance of alkyl-grafted aluminum alloys surfaces	University of Quebec at Chicoutimi	Canada
PO.041	K. Ueno	Comparison of Theoretical Models of Ripple Formation on the Surface of Icicles with Experiments	University of Quebec at Chicoutimi	Canada
PO.042	R. Westerlund	Icing Rate Measurements Using Clear Ice Indicators™	HoloOptics	Sweden

COST Action 727 Working Group 1: Icing simulations

Poster no.	Presenter	Title	Company/Institute	Country
PO.043	J. Hirvonen	Case study on a cloud layer with severe icing	Finnish Meteorological Institute	Finland
PO.044	A. Manea	Analysis of the spatial and temporal distribution of the freezing rain events in Romania and Germany	National Meteorological Administration of Romania	Romania
PO.045	A. Kann	The INCA icing potential	Central Institute for Meteorology and Geodynamics	Austria

PO.046	D. Nikolov	Analysis of spatial and temporal distribution of wet snow events in Germany	National Institute of Meteorology and Hydrology Bulgaria	Bulgaria
PO.047	D. Nikolov	Relation between atmospheric icing and some meteorological characteristics at high-mountain sites in Bulgaria and Slovakia	National Institute of Meteorology and Hydrology Bulgaria	Bulgaria
PO.048	D. Nikolov	Analysis of some extreme icing events on the territory of Bulgaria	National Institute of Meteorology and Hydrology Bulgaria	Bulgaria
PO.049	K. Tóth	Climatology and forecasting of severe wet-snow icing in Hungary	Hungarian Meteorological Service	Hungary
PO.050	K. Harstveit	Validation of Regional In-Cloud Icing Maps in Norway	Kjeller Vindteknikk AS	Norway
PO.051	K. Harstveit	Using Metar - Data to Calculate In-Cloud Icing on a Mountain Site near by the Airport	Kjeller Vindteknikk AS	Norway
PO.052	B.E. Nygaard	Comparison between measured ice load caused by freezing rain and corresponding simulations with a NWP model for the Northeast part of Bulgaria.	Norwegian Meteorological Institute	Norway
PO.053	J. Hosek	Comparison of WRF simulations and icing measurements at Milešovka and Dlouhá Louk	Institute of Atmospheric Physics	Czech Republic

COST Action 727 Working Group 2: Icing measurements

Poster no.	Presenter	Title	Company/Institute	Country
PO.054	M. Ostrozlik	Atmospheric icing at the high-mountain sites in the Low and High Tatras	Geophysical Institute of the Slovak Academy of Sciences	Slovakia
PO.055	B. Wareing	Deadwater Fell Test Site (EA Technology)	Brian Wareing.Tech Ltd	UK
PO.056	B. Wareing	Test site data on icing monitors and conductor ice loads	Brian Wareing.Tech Ltd	UK
PO.057	B. Wareing	Testing the PMS Icemeter at Deadwater Fell	Brian Wareing.Tech Ltd	UK
PO.058	A. Berne	A field experiment for the observation of alpine precipitation	EPFL	Switzerland
PO.059	K. Säntti	Icing Measurements at the Luosto Test Site	Finnish Meteorological Institute	Finland
PO.060	R. Cattin	Four years of monitoring a wind turbine under icing conditions	Meteotest	Switzerland
PO.061	M. Homola	Two years of icing monitoring at Nygårdsfjell wind park	Narvik University College	Norway
PO.062	B. Wichura	Zinnwald test site for intercomparison of icing measurements	German Meteorological Service	Germany
PO.063	S. Fikke	COST Action 727 - Summary of Phase 1	Consultant	Norway
PO.064	M. Homola	Energy production losses due to iced-up blades and instruments (at Nygårdsfjell, Sveg and Aapua)	Narvik University College	Norway
PO.065	P.-E. Persson	The Sveg (SE) icing measurement station	Saab Security	Sweden
PO.066	R. Cattin	A test of the Goodrich 0871LH1 ice detector at the Guetsch station	Meteotest	Switzerland
PO.067	B. Calpini	Setup of the Icing Test Station at the Guetsch	MeteoSwiss	Switzerland

PO.068	J. Sabata	Icemeter tests at Studnice Station	EGÚ Brno, a.s.	Czech Republic
PO.069	J. Sabata	Studnice Test Station	EGÚ Brno, a.s.	Czech Republic