Wednesday April 20th

09:00 - 10:00

Ice detection (1)

Chairs: Helena Wänlund & Mark Zagar

Accelerated Integration of Joint Ice Load and Damage Detection, Timo Klaas, Wölfel Wind Systems, DE (14)

Autonomous calibration and optimization of blade based ice detection systems, Daniel Brenner, Weidmüller Monitoring Systems GmbH, GER (27)

Load Monitoring: The way to operate WTG under Ice Conditions?, Nils Lesmann, Deutschland (28)

Production losses (2)

Chairs: Jenny Longworth & Sven-Erik Thor

Validation of icing loss forecasts with SCADA data, Mona Kurppa, Kjeller Vindteknikk part of Norconsult, FI (4)

Improvement of ILM calculation by pre-processing of the acquired data, Wakana Igarashi, Kanagawa Institute of Technology, JP (13)

A smart algorithm for wind turbine controlling under icing conditions, Franziska Gerber, Meteotest AG (36)

10:30 - 12:00

Opening session (3)

Moderators: Jeanette Lindeblad & Göran Ronsten

Swedish Windpower Association, Jeanette Lindeblad, Swedish Windpower Association, SE (40)

Renewable energy as a growth factor, Stefan Forsgren, Skellefteå Kraft AB, SE (42)

Wind and Electricity Storage from an European perspective, Johan Söderbom, InnoEnergy, SE (41)

Northvolt - Enabling the Future of Energy, Wilhelm Löwenhielm, Northvolt, SE (39)

12:00 - 13:30

Exhibition: Lunch break

13:00 - 13:30

Poster session

Moderator: Nils Lesmann

A novel model for glaze ice accretion, Robert Szasz, Lund University, SE (26)

Cold climate validation testing using a large climate chamber, cold-start-up test bench and large size ice spray array, Bram Cloet, Sirris, BE (18)

13:30 - 14:30

Ice detection (4)

Chairs: Sigrid Carstairs & Lorena Sproll-Astorquiza

Enhancing power production without safety concessions in cold climates – early ice prediction by sensor fusion of surface and high-precision wind data, Michael Moser, eologix sensor technology, AT (22)

A thermal based ice detection sensor - from academic research to a commercial product, André Bégin- Drolet, Université Laval and Instrumentation Icetek, CA (20)

Marinvent Airfoil Performance Monitor integration to a wind turbine, Dominic Bolduc, Nergica, CA (29)

Production losses (5)

Chairs: Mona Kurppa & Per Olofsson

Validation of Ice-Affected Plant Energy Assessment at a Large OEM, Anne Lund Christophersen, Vestas, DK (16)

Nordex advanced Anti-Icing System for N163 wind turbines, Konrad Sachse, Nordex Energy SE & Co. KG (1)

Assessment of ENERCON blade heating performance in various conditions, Gilles Boesch, ENERCON (25)

14:30 - 15:00

Break, Poster session two

Moderator: Christer Andersson

Wind measurment that works in cold climate, Emil Dahl, AQ system AB, SE (45)

Drone Based Direct Wind Resource Measurement & Performance Monitoring, Rasmus B. Lajevardi, First Airborne Ltd, IL (46)

15:00 - 16:00

Ice throw forecast (6)

Chairs: Marie Cecilie Pedersen & Gilles Boesch

Introducing IceRiskForecast 2.0: Managing icing related risks at wind farms with nowcasts and ensemble forecasts, Sigbjørn Grini, Kjeller Vindteknikk part of Norconsult, NO (11)

windThrow 1.0: the aerodynamics ice-throw toolbox, now with a graphical interface, Hamid Sarlak, DTU, DK (31)

Calibration icing forecasts using real-time SCADA data, Kristian Ingvaldsen, Kjeller Vindteknikk part of Norconsult, NO (8)

Third party solutions (7)

A joint panel with Raphael Janssen (EDF), Daniela Roeper (Borealis), Petteri Antikainen (Wicetec) and André Bégin-Drolet (ULaval)

Third-party solutions for ice mitigation, Dominic Bolduc, Nergica, CA (34)

19:00

Dinner

Thursday April 21st

08:30 - 09:30 Key Notes (8)

Moderators: Anne Lund Christophersen & Lars Jacobsson

Enhancing icing datasets: Lessons learned from the U.S. ice storm, Luke Cunningham, Clir Renewables, CA (5)

Business Intelligence Analyst, Simon Grenholm, W3 Energy, SE (24)

Using drones for an ice piece collection campaign, Anne Mette Nodeland, Kjeller Vindteknikk part of Norconsult, NO (6)

10:00 - 11:00 Validation and offshore (9)

Chairs: Daniela Roeper & André Bégin-Drolet

Addressing the challenges of accurately characterising the impact of cold climate atmospheric conditions for ever larger offshore turbines through a review of operational data, Marie-Anne Cowan, Wood Thilsted, UK (30)

Storage of electricity in molecules, Finn Daugaard Madsen, Siemens Gamesa (37)

Validation study of modelled icing using met mast data and SCADA data, Marie Cecilie Pedersen, EMD International A/S, DK (15)

Ice throw (10)

Chairs: Liselotte Aldén & Anne-Mette Nodeland

Comparison and validation of ice throw models, Markus Drapalik, University of Natural Resources and Life Sciences, Vienna (BOKU), AT (9)

Perceptions of impact-based warning information for ice-throw risk: A Norwegian survey, Rolv Erlend Bredesen, Kjeller Vindteknikk part of Norconsult, NO (for Norwegian Meteorological Institute, NO) (7)

Edition 2 of the IEA Wind TCP Task 19 International Recommendations for Ice Fall and Ice Throw Risk Assessment – What's new?, Claas Rittinghaus, Energiewerkstatt Verein, AT (21)

11:00 - 11:30 Break, Poster session three

Moderator: Linnéa Karlsson

Long-term high-efficient Graphene-based anti-/de-icing coating, Jun Chen, Lulea University of Technology, SE (44)

ArcticDEM – Next generation elevation model for wind farms in cold climate? Morten Lybech Thøgersen, EMD International A/S, DK (17)

Preliminary Investigation into Shear-Web Behaviors under Thermal Loads from IPS, Dylan Baxter, Borealis Wind Inc., CA (47)

11:30 - 12:30 Ice protection systems and repair (11)

Chairs: Marie-Anne Cowan & Konrad Sachse

Preventing wind turbines from catching colds, Patrice Roberge, Canada (2)

Blade repair in artic climate, Greger Nilsson, Blade Solutions, SE (43)

Validation of modelled instrumental icing with mast measurements, Ville Lehtomäki, Kjeller Vindteknikk, FI (3)

Bridging the Gap – Validation of Preconstruction Wind Farm Modelling Against Operational Data, Enrico Sindici, Natural Power, UK (10)

Linnovation concept for wind turbines in cold climate – experiences from field operation fall 2021- winter 2022, Lars Tarberg, Linnovation AB, Sweden (19)

Validation (12)

Chairs: Franziska Gerber & Finn Daugaard Madsen

Validation of modelled instrumental icing with mast measurements, Ville Lehtomäki, Kjeller Vindteknikk part of Norconsult, FI (3)

Bridging the Gap – Validation of Preconstruction Wind Farm Modelling Against Operational Data, Enrico Sindici, Natural Power, UK (10)

A note on ice detection of wind turbine blades by a rotating-cylinder-type ice sensor, Reina Muto, Kanagawa Institute of Technology, JP (12)

12:00 - 13:30 Exhibition: Lunch break

13:00 - 13:30 Poster session four

Moderator: Andreas Wickman

Aerodynamics of iced blades: a 2D investigation, Hamid Sarlak, DTU, DK (32)

Lifetime extension of main bearings, scientific calculation and practical implementation, Stefan Bill, Rewitec GmbH, DE (35)

13:30 - 15:00 Closing session (13)

Moderators: Cecilia Dalman Eek & Lars Ydreskog

Challenges with Powering the Electrification of the Industry, Daniel Gustafsson, Vattenfall, SE (38)

The IEA Wind TCP Task 19: 19 years of cold climate wind research., Timo Karlsson, VTT Technical Research Centre of Finland Ltd, FI (23)

Ice Detection Guidelines for Wind Energy Applications by IEA Wind TCP Task19, Charles Godreau, Nergica, CA (33)