

Workshop on High Winds and Tornadoes Hazard Assessment and Protection of Nuclear Installations

Provisional Programme

Zoom Videoconference, 22-25 March 2022

Date	Session	Title	Speakers	Seoul, KST	Amsterdam/ Paris, CET	Washington/ Toronto, EST
22 March 2022						
	Opening session	<ul style="list-style-type: none"> Welcome 	KAERI	20:30-20:35	12:30-12:35	06:30-06:35
	Workshop Chairs: Minkyu Kim (KAERI, Korea) & John Nakoski (NRC, USA)	<ul style="list-style-type: none"> Introduction that includes background, the purpose of the workshop and expected outcomes. 	Marina Demeshko (NEA)	20:35-20:45	12:35-12:45	06:35-06:45
		<ul style="list-style-type: none"> Introduction of the Chairs. An overview of the outline of the workshop. 	Minkyu Kim (KAERI, Korea)	20:45-20:50 20:50-20:55	12:45-12:50 12:50-12:55	06:45-06:50 06:50-06:55
		<ul style="list-style-type: none"> Introduction of the Technical Note focusing on key messages 	Vincent Rebour (IRSN, France)	20:55-21:20	12:55-13:20	06:55-07:20
		<ul style="list-style-type: none"> Priorities and challenges 	John Nakoski (US NRC, USA)	21:20-21:30	13:20-13:30	07:20-07:30
		Coffee break			21:30-21:45	13:30-13:45

	<p>Session 1</p> <p>Phenomenological aspects of High Winds and Tornadoes</p> <p>Chair: Vincent Rebour (IRSN, France)</p> <p>Rapporteur: Gernot Thuma (GRS, Germany)</p>	<ul style="list-style-type: none"> • High Winds: Storm types, characterization and impact on infrastructure • Violent tornado and severe downburst in Czechia 23-24 June 2021 • Recent characteristics and future changes of tropical cyclone activities over the western North Pacific. • TBC • TBC 	<p>John Kilpatrick (RWDI)</p> <p>David Ryva, ČHMÚ (Czech National Meteorological Institute, Czech Republic)</p> <p>Dong-Hyun Cha (Korea)</p> <p>Catalin Obreja (Environment and CC Canada / Gov. of Canada)</p> <p>Kevin Quinlan/ Elena Yegorova (US NRC, USA)</p>	<p>21:45-01:00</p> <p>Coffee break: 23:20-23:35</p>	<p>13:45-17:00</p> <p>Coffee break: 15:20-15:35</p>	<p>07:45-11:00</p> <p>Coffee break: 09:20-09:35</p>
23 March 2022	<p>Session 2</p> <p>Data</p> <p>Chair: Dana Havlin Novakova (SUJB, Czech Republic)</p> <p>Rapporteur: Marina Demeshko (NEA)</p>	<ul style="list-style-type: none"> • Data Collection and Analysis Methods for Estimating Tornadic Wind Speeds • Developing Data Sources for Extreme Winds using Meteorological Forecasting Models • Managing disparate sources of Canadian data for the Northern Tornadoes Project • Tornado's and downbursts in the Netherlands • TBC • From wind measurements to high winds characterization for nuclear installations 	<p>Marc Levitan (US NIST, USA)</p> <p>Ken Mylne (Met Office, UK/ WMO)</p> <p>David Sills (Northern Tornado Project, Western University – London, ON, Canada)</p> <p>Peter Siegmund (KNMI, Netherlands)</p> <p>Catalin Obreja (Environment and CC Canada / Gov. of Canada)</p> <p>Claire-Marie DULUC (IRSN, France)</p>	<p>20:30-01:00</p> <p>Coffee breaks: 21:30-21:45 23:15-23:30</p>	<p>12:30-17:00</p> <p>Coffee breaks: 13:30-13:45 15:15-15:30</p>	<p>06:30-11:00</p> <p>Coffee breaks: 07:55-08:10 09:25-09:40</p>

24 March 2022	<p>Session 3</p> <p>Design & Operation</p> <p>Chairs: Joey Wang (CNSC, Canada) & Shizhong Lei (CNSC, Canada)</p> <p>Rapporteurs: John Nakoski (NRC, USA) & Vincenzo Tiberi (IRSN, France)</p>	<ul style="list-style-type: none"> Recent updates form IAEA Safety Guides and Technical documents on extreme meteorological events Tornado Load Methodology in the new ASCE 7-22 Standard High Winds: Structural design considerations TBC Design Basis Tornado (DBT) – Site evaluation from operators point of view TBC 	<p>Paolo Contri (IAEA)</p> <p>Marc Levitan, (US NIST, USA).</p> <p>John Kilpatrick (RWDI, Canada)</p> <p>Kevin Quinlan (US NRC, USA)</p> <p>Španihel Vojtěch (ČEZ, Czech Republic)</p> <p>Nick Lovelace (Jensen Hughes, USA)</p>	<p>20:30-01:00</p> <p>Coffee breaks: 21:55-22:10 23:25-23:40</p>	<p>12:30-17:00</p> <p>Coffee breaks: 13:55-14:10 15:25-15:40</p>	<p>06:30-11:00</p> <p>Coffee breaks: 07:55-08:10 09:25-09:40</p>
25 March 2022	<p>Session 4</p> <p>Safety case approaches</p> <p>Chair: John Nakoski (NRC, USA)</p> <p>Rapporteur: Stef Carelsen (ANVS, Netherlands)</p>	<ul style="list-style-type: none"> TBC Independent Core Cooling requirements for the Swedish NPPs, and how the licensees met them Development of Probabilistic High Wind Risk Assessment Methodology for Korean Nuclear Power Plants Regulatory Approach to High Wind Assessment for Nuclear Power Plants in Canada Review of Tornado Parameters for Temelin NPP 	<p>Kevin Quinlan & Elena Yegorova (US NRC, USA)</p> <p>Lars Bennemo, (SSM, Sweden).</p> <p>Minkyu Kim (KAERI, S. Korea)</p> <p>Joey Wang (CNSC, Canada)</p> <p>Carl Mazzola, (Jacobs/Numark, Czech Republic)</p>	<p>20:30-23:50</p> <p>Coffee breaks: 21:55-22:10</p>	<p>12:30-15:50</p> <p>Coffee breaks: 13:55-14:10</p>	<p>06:30-09:50</p> <p>Coffee breaks: 07:55-08:10</p>
	Coffee break			23:50-00:20	15:50-16:20	09:50-10:20
	<p>Session 5</p> <p>Wrap-up session</p> <p>Chair: Minkyu Kim (KAERI, Korea)</p>	<ul style="list-style-type: none"> Rapporteurs' reports (60 min) + Sessions Chairs' conclusions (identify key topic) Closing Session (10 min) 		<p>00:20-00:45 00:45-00:50</p> <p>00:50-01:00</p>	<p>16:20-16:45 16:45-16:50</p> <p>16:50-17:00</p>	<p>10:20-10:45 10:45-10:50</p> <p>10:50-11:00</p>