ERIGrid-CINELDI Workshop on “ICT for automation in smart grid and its cybersecurity challenges”

Date: January 30-31, 2022 in Trondheim, Norway
Organized by: ERIGrid and CINELDI

There is a limited number of places, so participation is not guaranteed before you receive a confirmation. Travel and accommodation must be arranged by the participants and will not be covered by the organizers.

Hotel suggestions: Thon Hotel Prinsen, Comfort Hotel Park, and Scandic Bakklandet

Dinner: on Monday January 30 at 19:00 will take place at **ØX Tap Room, Munkegata 26,** in the city centre.

Purpose of workshop: Share knowledge and experience regarding the use of ICT for automation in smart grid with a special focus on the use of new technologies such as 5G and the cybersecurity aspects.

ERIGrid 2.0
Connecting European Smart Grid Infrastructures

CINELDI
Centre for intelligent electricity distribution
- to empower the future Smart Grid

Workshop program

Monday, January 30 Location: Auditorium, Staten hus, Prinsens gt. 1A, 7013 Trondheim		
Time	Presentation title	Presenter name
12:00	**Lunch** (Staten hus auditorium, prinsens gate 1A, Trondheim)	
13:00 - 13:10	Welcome, Introduction about CINELDI and ERIGrid projects	*Henning Taxt, SINTEF Energy*
Automation in smart grid		
13:10 - 13:50	***Keynote 1: Role of real-time virtualization in smart grid applications***	***Anna Kulmala,*** *R&D Project Manager, ABB*
13:50 - 14:10	Testbed for Advanced Distribution Management Systems	*Merkebu Z. Degefa/ Santiago Sanchez Acevedo, SINTEF Energy Research*
14:10 - 14:30	Virtualization and Management in Substations	*Jirapa Kamsamrong, OFFIS*
14:30 - 14:50	**Coffee break**	
14:50 – 15:10	Smart meter measurements-based topology identification in distributions network	*Raymundo E. Torres-Olguin, SINTEF Energy Research*
15:10 – 15:30	Data-driven monitoring of cyber-physical energy systems: enhancing resilience and security	*Nils Müller, DTU*
15:30 – 15:50	Comparison of different control architectures in distributions network	*Jonatan Klemets, SINTEF Energy Research*
15:50 - 16:20	***Visit to National Smart Grid laboratory (travelling)***	
16:20 – 16:35	Presentation/Introduction about NSGL	*Salvatore D. Acoro*
16:35 – 17:00	Digital substation Intrusion detection and prevention system based on Software defined network technology	*Santiago Sanchez Acevedo*
19:00 - 20:00	**Dinner**	

Tuesday, January 31 Location: Auditorium, Staten hus, Prinsen gt. 1A, 7013 Trondheim		
Time	Presentation title	Presenter name
08:30 - 09:00	Welcome & registration	
Cyber-security in smart grid		
09:00 - 09:40	**Keynote 2: *Using Offensive Security Techniques to Build better Resilience into Smart Grid***	***Prof.dr. Siv Hilde Houmb*** *(Senior Advisor Digital Security, Statnett- Norwegian TSO)*
09:40 - 10:00	Cybersecurity of digital substations: Impact analysis on cascading failures	*Vetrivel Subramaniam Rajkumar, TUD*
10:00 - 10:20	Cyber-attack forensics on substation	*Petra Raussi, VTT*
10:20 - 10:40	Threat modeling for Smart Grid	*Lars Flå, SINTEF Digital*
10:40 - 11:00	**Coffee break**	
11:00 - 11:20	Examples of practical cyberattacks on the Smart Grid.	*Lars Flå/Martin, SINTEF Digital*
11:20 - 11:40	Autonomous Adaptive Security for 5G-enabled IoT from smart grid perspective	*Sandeep Pirbhulal, Norwegian Computing Centre (NR)*
11:40 - 12:00	Blockchain Support for Time-Critical Self-Healing in Smart Distribution Grids	*Befekadu Gebraselase, NTNU*
12:00 - 13:00	**Lunch** (Staten hus auditorium, prinsens gate 1A, Trondheim)	
5G for smart grid		
13:00 - 13:40	**Keynote 3: *5G communication services for critical infrastructure operation***	***Prof. Poul Heegaard, NTNU***
13:40 – 14:00	Edge computing for smart grid applications incl. fault indication	*Heli Kokkoniemi-Tarkkanen, VTT*
14:00 - 14:20	**Coffee break**	
14:20 - 14:40	Intent-based 5G Network Slicing for Smart Distribution Grids.	*Kalpanie Mendis, NTNU*
14:40 – 15:00	Data compression of SV data to decrease packet losses in 5G channel	*Petra Raussi, VTT*
15:00 -15:05	Closing statement	*Henning Taxt, SINTEF Energy*