



# CINELDI/NORCICS workshop on cyber security in cyber-physical electricity grids 28 March 2023

**Location:** Trondheim, at Statens Hus, Prinsens gt. 1 – entrance from Tinghusgata

**Date/Time:** 28 March 2023 at 10:00-15.30

**Purpose:**

- Present activities and results from research in CINELDI on cyber security in cyber-physical electricity grids (Smart Grid)
- Present demonstrators planned to start or started in NORCICS related to the electricity grid, and related activities
- Mutual learning and exchange of experiences. Discussions on possibilities for cooperation.

Time	Agenda
10:00-10:05	Welcome
10:05-10:15	Short introductions to FME CINELDI and SFI NORCICS
10:15-10:30	Cyber security challenges in the flexible and intelligent electricity grid (Siv Hilde Houmb, Statnett)
10:30-10:40	Focus areas in NORCICS – short introduction (Sokratis Katsikas, NTNU IIK): IT/OT Integration, 5G, Human and organizational aspects, Data analytics
10:40-11:00	Highlights from research on cyber security in CINELDI, including laboratory activities <ul style="list-style-type: none"> <li>• Threat modelling in cyber-physical environments (Lars Flå, SINTEF Digital)</li> <li>• Hardware related security analysis (Lars Flå, SINTEF Digital)</li> </ul>
11:00-11:20	Break
11.20-12.00	<ul style="list-style-type: none"> <li>• Security architecture in Smart Grids (Vahiny Gnanasekaran, NTNU/ SINTEF Digital)</li> <li>• Cyber security vulnerabilities and consequences in advanced grid operation (Merkebu Z. Degefa, SINTEF Energy Research)</li> <li>• Cyber security consequences for security of electricity supply and cyber security considerations in grid planning (Gencer Erdogan, SINTEF Digital / Oddbjørn Gjerde, SINTEF Energy Research)</li> </ul>
12:00-12:45	Lunch
12:45-13:45	Research and (plans for) demonstration activities on cyber security in NORCICS, related to cyber-physical electricity distribution grids.



	<ul style="list-style-type: none"> <li>• Hardware security of IEDs in power system automation (Arvind Sharma, NTNU-IIK)</li> <li>• Cybersecurity in digital supply chains (Arne Roar Nygård, NTNU-IIK)</li> <li>• Cyber- Security in 5G enabled smart grid applications (Sandeep Pirbhulal, Norsk Regnesentral)</li> </ul>
	<ul style="list-style-type: none"> <li>• Identifying cyber treats and vulnerabilities in protection and monitoring systems of power (distribution) grid (Tom Ivar Pedersen, SINTEF Energy Research)</li> <li>• Context Sensitive Integrity Properties for ICS security (James G Wright, NTNU IIK)</li> <li>• Investigation of intrusion detection &amp; prevention in power grid subject to cyber-attacks (Santiago Sanchez Acevedo, SINTEF Energy Research)</li> </ul>
13:45-14:05	Break
14:05-14:20	Virtual visit to the National Smart Grid Laboratory, incl. short presentation of related lab setups, projects, and link to Cyber Range. Short demo from related project. (Santiago Sanchez Acevedo, SINTEF Energy Research)
14:20-14:30	Relationships with focus areas in NORCICS (Gerd Kjølle, SINTEF Energy Research): IT/OT Integration, 5G, Human and organizational aspects, Data analytics
14:30-15:15	How to cooperate in CINELDI – NORCICS Group discussions on possibilities for cooperation on laboratory activities, etc., benefits/ synergies.
15:15-15:30	Summarize the group discussions and wrap-up
15:30	Closure