

## 2024 Seminar on Safety and Security Issues in Positioning, Navigation and Timing

Arranged by SINTEF in collaboration with the Nordic Institute of Navigation (NNF)

**Wednesday 12 June 2024**

Venue: SINTEF Digital, Forskningsveien 1, Oslo, Norway

Format: In person and virtual (MS Teams)

Presentations are 20 minutes including time for questions and change of speakers. The exception is the welcome speech (10 minutes).

Time	Presentation title	Speaker
<b>08:30</b>	<b>Coffee ++</b>	
09:00	Welcome by SINTEF and the Nordic Institute of Navigation	Heidi Kuusniemi and Aiden Morrison
09:10	Status on services from Galileo and update from ESA navigation programs	Norwegian Space Agency, Kristian Svartveit
09:30	Jammertest – who and how	Nkom, Nicolai Gerrard
09:50	Why is the Jammertest so important for the NPRA?	Statens Vegvesen, Tomas Levin
10:10	Experiences after jamming and spoofing of certified GNSS ship receivers	Kystverket, Steinar Nyhamn
<b>10:30</b> <b>10:50</b>	<b>Coffee</b>	
10:50	GNSS receivers successfully failed	SINTEF, Aiden Morrison
11:10	Improving the resilience of the Finnish GNSS monitoring station network	FGI, Mika Saajasto
11:30	Cheap GNSS receiver at Jammertest – a geodesist's view	Kartverket, Anders Martin Solberg
11:50	Defending against multi-constellation spoofing: insights from Jammertest 2023	Fugro, Xifeng Wen
12:10	Current status of COSEC time	Justervesenet/Statnett, Harald Hauglin
<b>12:30</b> <b>13:30</b>	<b>Lunch</b>	
13:30	Tests of Galileo OSNMA for protection of GNSS timing receivers	Justervesenet, Thomas Rødningen
13:50	Testing OSNMA in the wild and in the lab	Kartverket, Åsmund Steen Skjæveland
14:10	Roadside monitoring of vehicle based GPS interference in 2018 - 2023	FFI, Anders Rødningsby
14:30	Interpretable GNSS jamming classification with Tsetlin Machine	UiA, Sindhusa Jeeru (remote presentation)
14:50	In-lab receiver testing based on live captured RFI events from the ARFIDAAS project	SINTEF, Adrian Winter

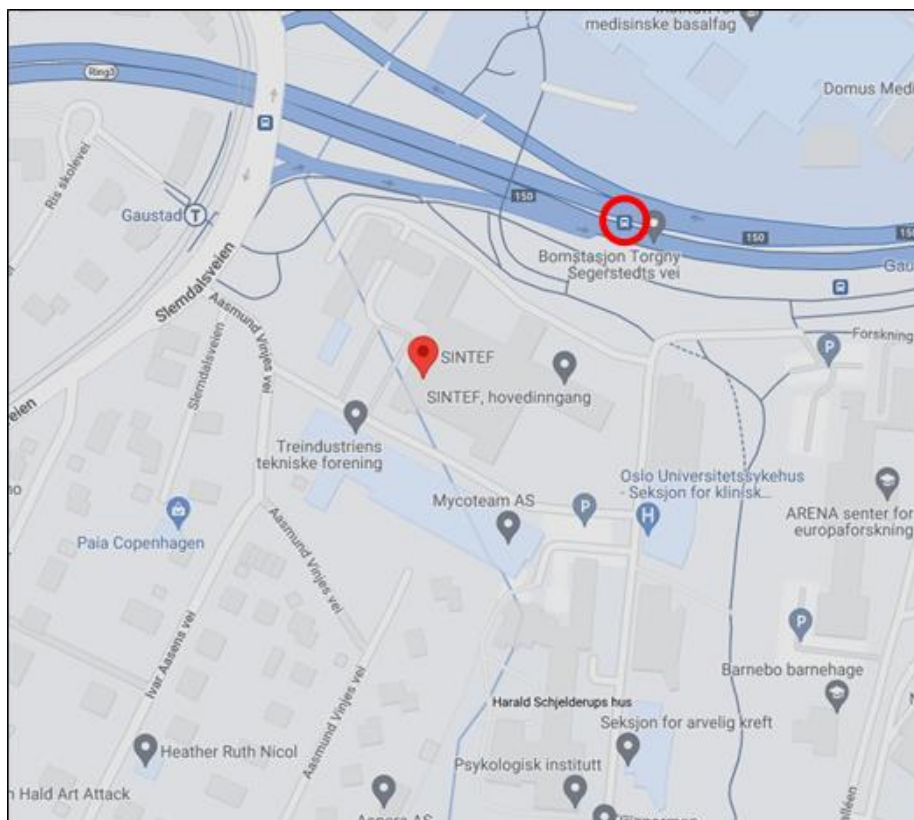
15:10 15:30	<b>Coffee</b>	
15:30	Detecting jamming and spoofing with open-source ADS-B data	FFI, Tor Atle Solend
15:50	GNSS-R at NTNU - Maritime surveillance and GNSS monitoring for LEO	NTNU, Roger Birkeland
16:10	A short review on activities around LEO-based GNSS RFI monitoring – next steps in the Nordics?	University of Vaasa, Heidi Kuusniemi
17:00	General Assembly for the Nordic Institute of Navigation (NNF). Only for members of the NNF. Not yet a member of NNF? Welcome to join us!	

## Travel Directions

From Oslo Airport (Gardermoen):

The easiest option is to take the bus FB3 from Gardermoen to the stop named Gaustad (marked with a red circle), which is a 2-minute walk to the venue. For schedule and tickets go to:

<https://www.flybussen.no/>



It is also possible to travel by Flytoget from the airport to the Oslo S station and take the subway to either Gaustad (line 1 direction Frognersteteren) or Blindern (line 5 direction Sognsvann) station which are a 4 and 10-minute walk to the venue, respectively.