

# Nordic Navigation Workshop 2024

**Dates:** September 17–18, 2024

**Venue:** Gränsö Slott, 2<sup>nd</sup> floor of the Castle

**Organizer:** WASP Localization and Navigation Cluster

Gustaf Hendeby (phone: +46 (0)700-89 66 68)

**Hosted by:** WARA-PS Demo Week 2024

## Tuesday, September 17

**12:00 Lunch** (the Castle)

**13:00 Welcome**

*Gustaf Hendeby, LiU*

**13:20 Session I**

- MARISA — Platform for perception and navigation research at sea  
*Mårten Lager, Saab Kockums*
- Navigating with awareness — introspective low-visibility navigation for field robots  
*Martin Magnusson, Örebro Universitet*
- Securing GNSS-based positioning  
*Panagiotis Papadimitratos, KTH*
- Overview of Robust PNT Research Activities at FOI  
*Jouni Rantakokko, FOI*
- Indoor radio positioning with Ericsson's Radio Dot System (RDS)  
*Clara Gómez Blázquez/Roberto Castro Sundin, Ericsson*

**15:00 Coffee break**

**15:20 Session II**

- GNSS-free Navigation  
*Anja Hellander/Eric Sevonius, Saab Dynamics/LiU*
- The Map to Anywhere  
*Erik Stenborg, Zensact*
- Fusing GNSS and visual-inertial navigation for seamless indoor-outdoor positioning  
*Joakim Rydell, FOI*
- UWB Positioning Technology Enabling Automated Drone Operations in the Edge Spaces  
*Hafeez Chaudhary, Agilica (Belgium)*
- Bat call localization  
*Jens Gulin, Sony*

**17:00 End of Sessions**

**19:00 Dinner** (the Castle)

*Presentations are  $\lesssim$  20 minutes unless otherwise agreed.*

*The intention is to have an open atmosphere and promote discussions, please leave time for questions.*

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## Wednesday, September 18

### 08:00 Joint Session with AERO EDIH AI & Flight Workshop

- LLMs and Drone Control: Unveiling Misunderstanding Surfaces

*Claudio Augusto Silveira Lelis, ITA (Brazil)*

- Deep Sets of Random Neighbors with Attention: an Architecture for Spatio-Temporal Machine Learning

*Leonardo Silveira, ITA (Brazil)*

### 08:40 Session III

- Matrix-Valued Measures and Wishart Statistics for Target Tracking Applications

*Robin Forsling, Saab Aeronautics/LiU*

- GPS Spoofing Detection Using Local Sensors, Multivariate Predictors and Dynamic Models

*Antônio Augusto Fröhlich, UFSC (Brazil)*

### 09:20 Coffee break

### 09:50 Session IV

- Nordic Inertial — Wheel IMU sensor and North finding

*Håkan Carlsson, Nordic Inertial (Finland)*

- An Observability-Constrained Magnetic Field-Aided Inertial Navigation System

*Chuan Huang, LiU*

### 10:30 Closing remarks

*Gustaf Hendeby, LiU*

### 11:00 WARA-PS Project Presentations (Magasinet)

### 12:00 Lunch (the Castle)

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