

# Nordic IoT News

## No. 3-2021

### PhD student Hackathon

On 17-18 June, our PhD students will organize an on-line Hackathon with the theme “IoT in space and on Mars.” The event is open for all Hub students and associated postdocs. No prior knowledge on the topic is required, so you can get creative and use the skills and knowledge you already have. There will be keynote speakers addressing the constraints arising when working in space.

The tentative programme is outlined below:

- Thursday morning: Welcome + Keynotes \*)
- Thursday afternoon: Teamwork
- Friday morning: Teamwork + Prepare presentations
- Friday afternoon: Presentation + Closing

\*) Christer Fuglesang, Professor at KTH and Sweden’s first astronaut has accepted our invitation.

If you want to participate, please contact the organizers:

- Jaakko: jaakko.harjuhato@aalto.fi
- Niklas: nikre@dtu.dk



### Student seminars

Currently 50 PhD students are associated with the Nordic IoT Hub. See the complete list at: <http://www.nordic-iot.org/doctoral-school/list-of-affiliated-phds/>



The students are divided into four topical groups, and to create synergies between those working in similar areas the Hub is arranging a number of focused seminars with selected students from the various Hub universities. The first seminar will take place on 1 June at 13.00 (CET). In the seminar three students will present and get feed-back on their projects. Each student will make a high-level presentation of their current work. This will be followed by questions/discussions from their fellow students. Furthermore, we encourage the students to look for synergies as they are working in the same domain.

The selected students and their theses are:

- Information security for operational safety in Industry 4.0 based production  
Jan Sramota, NTNU
- Configuration of Autonomous Vehicle System Platforms for Safety-Critical Applications  
Niklas Reusch, DTU
- Optimization and control of networked systems for autonomous vehicle applications  
Zarah Chamideh, LTH

The session will be moderated by Xenofon Fafoutis (Fontas) from DTU. Access the seminar via the Hub web page.

The second Hub student seminar will take place after the Summer vacation. The theme being “Industrial 5G.”

### Roadmap press feed-back

Our roadmap “Nordic Industrial IoT- Research and Innovation for the Green Transition” was well received by the IoT community. Many technical magazines had extended stories about the roadmap, and tweets and feed-back were received from NIST in the US.



The Nordic Industrial IoT Roadmap was developed by the Hub to complement existing roadmaps and research agendas, such as the European initiatives on Green Deal, Smart Everything Anywhere, and Autonomous systems. A long-term focus on sustainability has provided the Nordic countries with significant advantages. For example, the CO2 intensity (gCO2/kwh) of power and district heating production amounts to only 14% of the EU25 average and transport’s total energy use decreased by over 20% compared with 2000, despite a 70% increase in overall passenger and freight activity. Many of these results have been achieved by a long-term focus on digitalization - in fact the four Nordic countries are ranked on the top four places in EU’s 2020 “Digital Economy and Society Index”.



Thus, the Nordic countries are good at both sustainability and digitalization! The Nordic countries are also strong in trustworthiness and cyber-physical systems. We believe that there is now a unique opportunity to leverage these competences (trustworthiness, digitalization - AI, 5G, cloud and edge computing, and the IoT- and CPS) to enable and promote sustainability and a circular economy.

### Collection of course modules among the Hub partners



The global pandemic has forced the educational system to shift the educational system from traditional lecturing to on-line learning (lectures, labs, etc.). Within a short time frame most of the courses provided by the Hub partners have become on-line. This means that the partners have available many on-line modules that can be combined into new courses. Therefore, the Hub partners are about to establish a repository of course modules that can be freely used in building up new courses or labs.

### Recruitment support for the Hub candidates

Beside the many technical courses, seminars and conferences being offered by the Hub we are currently negotiating with the university administrations about setting up an on-line course to support our Hub students when searching for a carrier following their graduation. The pandemic has hindered our student’s travelling to e.g., conferences and international meetings. Traditionally these events have provided good chances to mingle with fellow colleagues and thereby opening job opportunities.

All the Hub universities have HR departments working on global level when recruiting staff. Therefore, we have started a cooperation with these departments to find ways of supporting the career for our graduates.



Aalto University, FI  
Lund University, SE  
Norwegian University of Science and Technology, NO  
Royal Institute of Technology, SE  
Technical University of Denmark, DK

