Nordic IoT News

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New research center at KTH supported by Vinnova

In June a new Swedish competence center on Trustworthy Edge Computing Systems and Applications (TECoSA) was awarded by Vinnova. The center is strongly supported by an industrial consortium. The center will pursue Research, innovation, education and industrial development in edge computing, which is computer power that is provided locally in relation to users and embedded systems, distributed towards the "edge" of internet/cloud solutions. The center, which will start January 2020, is likely to provide useful synergies with HI2OT.

2019 Summer school in Lund:
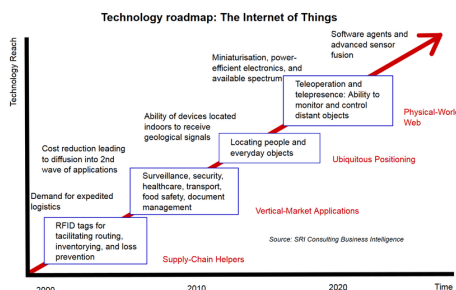## Robotics with topics in motion planning and control for underactuated mechanical systems

In the beginning of August 2019, a Hub Summer school on Robotics with topics in motion planning and control for underactuated mechanical systems was organized in Lund. The summer school was organized as joint forces of LTH, NTNU, and TU Chemnitz and it was held at the Department of Automatic Control (LTH). The summer school was rich with social events which gave good opportunities to interact with almost all participants of the summer school in smaller groups to get to know them better.

The summer school started with an introductory lecture to motion planning done by Prof. Ulrike Thomas and a practice session (including programming in Matlab) done by her colleague Sascha Kaden. During the following days, lectures were held by Prof. Anton Shiraev with focus on planning, control, and path following for nonlinear systems and non-prehensile manipulation. As an example of the latter, the Butterfly robot was shown to the students.

As the first Hub Summer school it was entirely streamed on Zoom to participants joining it on various partner sites.

The Hub organizes Industrial IoT roadmapping workshop

An Industrial IoT roadmapping workshop has been scheduled on 28 November at KTH - mark in your calendar!

We are looking at a full day workshop at KTH. The purpose of the workshop is to provide an overview of IIoT roadmaps and related roadmaps on AI and Edge/Fog computing and thereby developing a synthesis based on the views of invited/participating experts (including the Hub consortium) and existing roadmaps.

NordForsk

Distinguished lecturer programme

The IoT Hub Distinguished Lecturer Program (DLP) provides a service to support the Hub students/faculty with high qualified distinguished lecturers specialized on various aspects of IoT technologies and to deliver technical seminars and workshops. The DLP can be arranged in response to a request from one or more Hub partners.

On 18 November we will have Dr. George Oikonomou, Senior Lecturer in IoT Networking at the University of Bristol, UK to give a 3h lecture on "the Contiki-NG open source operating system for low-power, severely constrained wireless embedded devices: Introduction and hands-on crash-course for beginners." This lecture will be fully streamed to all Hub students.

Recently we have also had the following lecture: Optimization challenge – The TSN scheduling problem, by Dr. Silviu S. Craciunas, Systems Architect at TTTech Computertechnik AG (AT), 25 September, 2019

The Hub Distinguished Lecturer programme is coordinated by Associate Professor Xenofon Fafoutis, DTU-Compute.

EFECS 19-21 November in Helsinki

At the upcoming European Forum for Electronic Components and Systems (EFECS) on 19-21 November 2019 in Helsinki, the Hub will be present at the event with new proposals presented by means of posters and "pitch your idea" presentations. The organizers of this event are the key research programmes of AENEAS, ARTEMIS-IA, EPoSS, ECSEL and the European Commission, in association with EUREKA.

Joint DTU/NTNU student

In October 2019 a Nordic Five Tech Alliance PhD student (Niklas Reusch) was hired to make his thesis jointly between DTU and NTNU. Nordic Five Tech is a strategic alliance of the five leading technical universities in Denmark, Finland, Norway and Sweden. The alliance was established in November 2006 with the goal of utilizing the shared and complementary strengths and creating synergies within education, research and innovation. The student will work on methods for the design of FogComputing-based secure autonomous systems with a shared presence in Lyngby and Trondheim.

New Hub Review Magazine

By the end of 2019 a Hub Review magazine will be published with stories from our PhD students and the associated research work carried out by the eight Hub partners. It will cover progress made during the first two years of the Hub (2018-2019). A similar magazine will appear after four and six years. The magazine will be in a printed as well as pdf format.

New PhD students associated with the Hub

Three new PhD students have been associated with the Hub. Please welcome:

- Ultra reliable IoT network for mission-critical applications
  Kalpit Dilip Ballal, DTU
- Virtual reality for IoT
  Anton Debner, Aalto University, FI
- Fog Computing for IoT
  Jaakko Harjuhahto, Aalto University, FI

In total we now have 43 PhD students affiliated to the Hub meaning that their Hub activities are eligible for funding. Please visit http://www.nordic-iot.org/doctoral-school/list-of-affiliated-phds/ for a complete list of students.

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