Nordiska kommissionen för Geodesi

Nordic Geodetic Commission

NKG Summer School 2021

Space Geodesy in Support of Future Autonomous Society

Monday, August 30

1200 – 1215 Welcome by Markku Poutanen, NKG President

1215 – 1300 **Never Lost : Building intelligent mobility solutions for the world**
Ed Parsons, Google, UK

1300 – 1345 **Space geodesy – a review of observation techniques and science applications**
Bjørn Ragnvald Pettersen, Norwegian University of Life Sciences, Norway

1345 – 1415 COFFEE/TEA BREAK

1415 – 1500 **Autonomy in Humans and Machines (and how not to confuse them)**
Henrik Scharfe, Autonomous Systems, Denmark

1500 – 1545 **InSAR at a continental scale: national and European ground motion services**
John Dehls, Geological Survey of Norway, Norway

1545 – 1600 COFFEE/TEA BREAK

1600 – 1645 Evening Lecture
Nordic cooperation and conflict on coordinates during three centuries
Martin Ekman, Summer Institute for Historical Geophysics, Åland Islands

1645 – 1800 ICEBREAKER

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Tuesday, August 31

0830 – 0915 **Applied Kalman Filtering and Sensor Fusion**
0930 – 1015 **Applied Kalman Filtering and Sensor Fusion**
Jon Glenn Gjevestad, Norwegian University of Life Sciences, Norway

1015 – 1045 COFFEE/TEA BREAK

1045 – 1230 **Exercises in "Applied Kalman Filtering and Sensor Fusion" (MATLAB/Python)**
Jon Glenn Gjevestad, Norwegian University of Life Sciences, Norway

1230 – 1330 LUNCH

1330 – 1415 **PNT Robustness and Resilience**
Zahidul Bhuiyan, Finnish Geospatial Research Institute, Finland
1415 – 1500 **Privacy in an autonomous world**
Eirik Gulbrandsen, Norwegian Data Protection Authority, Norway

1500 – 1530 COFFEE/TEA BREAK

1530 – 1615 **Network RTK reliability and integrity**
Mohammed Ouassou, Kartverket, Norway
1615 – 1700 **Navigation in a Challenging environment**
Shady Zahran, The University of Calgary, Canada

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Wednesday, September 1

1000 – 1045 **TAPAS & DANGO: High precision positioning for autonomy**
Lars Stenseng, Technical University of Denmark, Denmark

1045 – 1130 **Best Integer Equivariant estimation for low-cost, multi-GNSS, single- and dual-frequency RTK receivers with short and long baselines**
Robert Odolinski, University of Otago, New Zealand

1130 – 1200 COFFEE/TEA BREAK

1200 – 1245 **Precise GNSS Positioning with Android Smartphones and Tablets**
Martin Håkansson, Lantmäteriet, Sweden

1245 – 1345 LUNCH

1345 – 1430 **Future GNSS & positioning services for Autonomous Vehicles**
Samieh Alissa, Lantmäteriet, Sweden

1430 – 1515 **RaD on Navigation and Control for UAS and Excavators based Automatisation in BIM & Agriculture 4.0**
Reiner Jäger, Karlsruhe University of Applied Sciences, Germany

1515 – 1545 COFFEE/TEA BREAK

1545 – 1630 **GNSS Networks for Solid Earth Science in Europe in the Perspective of EUREF and EPOS**
Martin Lidberg, Lantmäteriet, Sweden

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Thursday, September 2

1000 – 1045 **Future GNSS corrections**
Temmo Wübbena, Geo++, Germany

1045 – 1130 **An introduction to PROJ**
Kristian Evers, Agency for Data Supply and Efficiency, Denmark

1130 – 1200 COFFEE/TEA BREAK

1200 – 1245 **3D-navigation at sea**
Benjamin Hell, Sjöfartsverket, Sweden

1245 – 1345 LUNCH

1345 – 1430 **Navigation of Drones – applications and challenges**
Daniel Olesen, Technical University of Denmark, Denmark

1430 – 1515 **Drones and autonomy**
Anders Martinsen, UASNorway, Norway

1515 – 1530 Closing session