

Invitation to an Aerospace & Electronic Systems IEEE-CH Joint Lecture on

Helicopter Recording Random Flights 40'000 Flight Hours probing GPS L1 Signal Quality in Lower Swiss Airspace

Dr. M. Scaramuzza, Member IEEE, Dr M. Troller
both skyguide, Swiss Air Navigation Services Ltd

Date: 22th January 2019

Time: 18.00

Place: ETH Zürich, HG D 1.1



Dr. Marc Troller is a navigation expert at the Swiss Air Navigation Services Ltd., Switzerland. He is project manager of the first Swiss civil GNSS approach at Zurich airport and involved in several other GNSS approach implementation projects. He has a MS and a PhD degree in Geodesy from the Swiss Federal Institute of Technology (ETH) Zürich. Dr. Troller is chairman of the ICAO EUR PBN taskforce, a member of the Swiss Geodetic Commission/Swiss Academy of Sciences and a board member of the Swiss Institute of Navigation.

Dr. Maurizio F. Scaramuzza received his Diploma in Geomatics in 1995 from the ETH Zürich. He joined the Institute of Geodesy and Photogrammetry at the ETH Zurich, where he received the doctorate in technical sciences in the field of satellite based flight approaches and landings in 1998. In 1999 he joined skyguide building up and leading the GNSS team. Since 2006 he is head of the expert group on Communication, Navigation and Surveillance. Dr. Scaramuzza is a member in working groups of ICAO, EUROCAE, Eurocontrol and the European Commission. He is lecturer at the aviation bachelor program of ZHAW.

In the frame of the Swiss-wide implementation program to develop satellite-based flight procedures (CHIPS) a project of helicopter recording random flights has been launched. The aim of the project was to assess the GPS and EGNOS navigation performance at low altitudes. Helicopters of Rega and the Swiss Air Force have been equipped with data recording units, allowing to record GPS, EGNOS, FMS and AHRS data during their daily missions. Furthermore, dedicated flights using high accuracy GPS reference data have been carried out to record data under special conditions. Throughout the project duration of five years, a total of 40'000 flight hours have been recorded with three different helicopter types. The presentations include a summary of the HRRF project, the availability of GPS and EGNOS navigation in particular in mountainous area, the trajectory accuracy of the flights on dedicated routings, such as the Swiss low-flight network, the assessment of the radio frequency interference level, and the validation of simulation tools.

We look forward to your participation. Guests are welcome.

Aperitif after the lecture - sponsored by ION-CH.