



Switzerland

Institute of Electrical and Electronics Engineers



Institut für Geodäsie und
Photogrammetrie



Invitation to an AES-CH Joint Lecture on

Navigation Sensors and Systems in GNSS Degraded and Denied Environments

Dr. George T. Schmidt

IEEE Life Fellow

Distinguished Lecturer

Vice President Member Services AESS

AIAA Fellow

Date: Oct 06th 2015

Time: 17:15 – 18:15

Location: ETH Zürich, Room HG D 7.1

I have the pleasure to inform you, that the IEEE - CH Aerospace & Electronic Systems succeeded in arranging a joint lecture in Zurich of Dr. G. T. Schmidt, a member of the AESS Board of Governors. He has served on NATO's Research and Technology Organization (former AGARD) since 1968 and acted as director of several NATO-RTO lecture series related to navigation in GPS denied environments. NATO awarded him the distinguished von Kármán Medal in 2005. As a former Editor-in-Chief of the AIAA Journal of Guidance, Control and Dynamics he oversaw an unprecedented growth of that journal. A director of the MIT's Draper Guidance Technology Center and leader of the Guidance and Navigation Division, he was also teaching estimation at MIT's Department of Aeronautics and Astronautics while advising thesis students in control and navigation. He authored more than 100 technical publications. Dr. Schmidt earned his BS, MS degrees and the ScD both from MIT.

Position, velocity, and timing signals from Global Navigation Satellite Systems are in use throughout the world. The availability, reliability and integrity of these signals have become a subject of concern for both military and civilian applications alike. International news reported a successful GPS spoofing attack on a civilian UAV at White Sands Missile Range in New Mexico. This has increased concerns over the planned use of UAV in the U.S. national airspace and safety of flight in general. The problem requires filling the position, velocity, and timing gap. One solution uses inertial and/or other sensors to bridge that gap. The lecture summarizes the past and recent advances in navigation sensor technology. State-of-the-art sensor integration technology, synergistic benefits and projections for the future are elaborated. Expected technology improvements for system robustness will be highlighted.

We look forward to your participation. Guests are welcome. Refreshments will be served after the lecture.

Heinz Wipf, Chair AES
IEEE Switzerland

Prof. Alain Geiger
Inst. Geodäsie & Photogrammetrie

Prof. Bertrand Merminod
Präsident ION-CH

