



LSGI Distinguished Lecture Series

Novel Indoor Localization Technologies Using Wireless Fidelity (Wi-Fi)

Prof. Dr. Guenther Retscher

Associate Professor

Department of Geodesy and Geoinformation of the TU Wien

Vienna University of Technology, Austria



Date : 14 May 2016 (Saturday)

Time : 10:00 am

Venue : Z509

Abstract

This talk aims to provide an insight into the use of a prominent signal of opportunity, namely Wi-Fi. Two new approaches developed at the TU Wien – Vienna University of Technology, Austria are introduced. In the first one, localization fingerprinting is the employed positioning method. A so-called ‘intelligent check-point’ (iCP) concept has been developed to reduce the laborious work for the establishment of reference points and radio maps of Wi-Fi signal strength distributions located throughout the area of interest. The second approach is based on the well-known DGPS principle. We term it Differential Wi-Fi (DWi-Fi). From measurements to reference stations area correction parameters are derived and applied for positioning determination of a mobile user. Both technologies have been extensively tested in a multi-storey office building. The main findings are highlighted in this presentation. It is shown that the two approaches are capable to located a user carrying a smartphone or other mobile device in complex buildings, like office buildings, hospitals, airports, train stations, hotels, convention centers, etc.

Biography

Prof. Dr. Guenther Retscher is Associate Professor at the Department of Geodesy and Geoinformation of the TU Wien – Vienna University of Technology, Austria. He received his Venia Docendi in the field of Applied Geodesy from the same university in 2009 and his Ph.D. in 1995. His main research and teaching interests are in the fields of engineering geodesy, satellite positioning and navigation, indoor and pedestrian positioning as well as application of multi-sensor systems in geodesy and navigation.

All interested are welcome

All registered attendees will receive a Certificate of Attendance after the lecture.

Registration link: <https://myacs.polyu.edu.hk/utills/mysurvey/index.php/348973/lang-en>

Contact: Ms. Kathy Law, Email: kathywj.luo@polyu.edu.hk

