



ELEDIA Research Center

ELEDIA@UniTN - University of Trento
Via Sommarive 5, 38123 Trento, ITALY
E-mail: contact@eledia.org
Web: www.eledia.org/eledia-unitn

SEMINAR SERIES

Ground Penetrating Radar: UWB Radar for Subsurface Imaging and Target Classification

Speaker: Prof. Alexander YAROVOY
(*Delft University of Technology, the Netherlands*)

Note: The seminars will be held in English

Contact: Dr. Giacomo Oliveri (giacomo.oliveri@unitn.it)



Part:	Date:	Location:
1	30 January 2019 @ 10:00 AM	Room A219
2	31 January 2019 @ 10:00 AM	Room A219
3	4 February 2019 @ 02:00 PM	Room A215

Ground Penetrating Radar (GPR) is fast developing radar application area. In contrary to conventional narrowband radars, typical GPR uses ultra-wide band signals to create an image of shallow sub-surface and support detection and classification of subsurface objects. In this seminar, basic GPR principles, GPR system designs, antenna arrays and imaging algorithms will be discussed step by step. On an example of challenging application of GPR - landmine detection - details of signal processing, imaging and target classification will be given.

• **About the Speaker**

Alexander Yarovoy (F'15) received the Diploma degree (with Hons.) in radiophysics and electronics and the Candidate Phys. and Math. Sci. and Doctor Phys. and Math. Sci. degrees in radiophysics from Kharkov State University, Kharkov, Ukraine, in 1984, 1987, and 1994, respectively. In 1987, he joined the Department of Radiophysics, Kharkov State University, as a Researcher and became a Professor in 1997. From 1994 to 1996, he was with the Technical University of Ilmenau, Ilmenau, Germany, as a Visiting Researcher. Since 1999, he has been with the Delft University of Technology, Delft, The Netherlands. Since 2009, he has been the Chair of Microwave Sensing, Signals, and Systems, Delft University of Technology. He has authored or co-authored more than 250 scientific or technical papers, four patents, and 14 book chapters. His research interests include ultrawideband (UWB) microwave technology and its applications (particularly radars) and applied electromagnetics (particularly UWB antennas).

Prof. Yarovoy served as a Guest Editor for five special issues of the IEEE TRANSACTIONS and other journals. Since 2011, he has been an Associated Editor of the International Journal of Microwave and Wireless Technologies. He was a recipient of the European Microwave Week Radar Award for the paper that best advances the state of the art in radar technology in 2001 (together with L. P. Ligthart and P. van Genderen) and in 2012 (together with T. Savelyev), and was also a recipient of the Best Paper Award of the Applied Computational Electromagnetic Society in 2010 (together with D. Caratelli). He served as the Chair and TPC Chair for the Fifth European Radar Conference (EuRAD 08), Amsterdam, The Netherlands, as well as the Secretary of the First European Radar Conference (EuRAD 04), Amsterdam. He also served as the Co-Chair and TPC Chair for the 10th International Conference on Ground Penetrating Radar (GPR 2004) in Delft. Since 2008, he has been the Director of the European Microwave Association.