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European Technology Transfer Conference 2008: Security

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VITA

Peter de Maagt was born in Pauluspolder, The Netherlands. He received the M.Sc. and Ph.D. degrees from Eindhoven University of Technology, Eindhoven, The Netherlands, in 1988 and 1992, respectively, both in electrical engineering. In the period 1992/1993 he was station manager and scientist for an INTELSAT propagation project in Surabaya, Indonesia. He is currently with the European Space Research and Technology Centre (ESTEC), European Space Agency, Noordwijk, The Netherlands. His research interests are in the are of millimetre and submillimeter-wave reflector and planar integrated antennas, quasioptics, electromagnetic bandgap antennas, and millimetre- and submillimetre-wave components. Dr. de Maagt was co-recipient of the H.A.
Wheeler Award of the IEEE Antennas and Propagation Society for the best applications paper of 2001. He was granted a European Space Agency Award for innovation in 2002. He was co-recipient of the LAPC 2006 and IWAT 2007 best paper award. In 2008 he received as a co-recipient the H. A. Wheeler Award for the Best Applications Paper for a second time.

Dr. de Maagt is an active member of the IEEE, serving as an Associate Editor for the IEEE Transaction on Antennas and Propagation since 2005. Dr. de Maagt is currently also a Distinguished Lecturer for the IEEE APS and a member of the AP ADCOM. He is also a member of the IET (formerly IEE) Antenna and Propagation Professional Network Executive Team since 2002.

ABSTRACT

“Introduction to: Safety and Border Control with Tetrahertz”

The terahertz (THz) part of the electromagnetic spectrum falls between the lower frequency millimetre wave region and, at higher frequencies, the far-infrared region. The frequency range extends from 0.1 THz to 10 THz, where both these limits are rather loose. As the THz region separates the more established domains of microwaves and optics, a typical THz technique will incorporate aspects of both realms, and may even draw on the best of both. The two bounding parts of the spectrum also yield distinct sets of methods of generating and detecting THz waves. These approaches can thus be categorised as having either microwave or optical/photonic origins. As a result of breakthroughs in technology, the THz region is finally finding applications outside its traditional heartlands of remote sensing and radio astronomy. Extensive research has identified many attractive uses and has paved the technological path towards flexible and accessible THz systems. The presentation will discuss the range of THz applications and will present the components and systems that are utilised for the frequency region.