

The MTT-S Benelux Chapter and the MTT-S Technical Committee on 'Microwave Measurements' are announcing the following talk within the MTT-S Speakers' Bureau programme:

## **Microwave Fiber-Optic Links: Design and Measurement Issues**

**Prof. Stavros Iezekiel**

University of Cyprus

Editor-in-Chief of IET Microwaves, Antennas and Propagation

Optical fibre is an excellent transmission medium - it has very low loss and very large bandwidth (especially when compared with microwave transmission media). In addition, it is possible to modulate light at several tens of GHz and then recover that modulation. Hence there has been much interest in the use of optical fibre for the transmission and processing of RF signals.

In the first part of the talk, some of the basic design issues for analogue links will be discussed. In particular, the effect of component-to-component interaction on small-signal, large-signal and noise performance will be considered. It will be seen that it is useful to be able to model and measure the "microwave characteristics" of optoelectronic and optical components. In the second part of the talk, various techniques for the measurement of high-speed lightwave components will be outlined. The emphasis will be on extending microwave network analyser techniques to these devices. Issues associated with polarization effects, optical cavity resonances and nonlinearity will be discussed in some detail.

### ***Biography***

Stavros Iezekiel received the B.Eng. and Ph.D. degrees in electronic and electrical engineering from the University of Leeds, U.K., in 1987 and 1991, respectively.

From 1991 to 1993, he worked in conjunction with M/A-COM on the development of high-speed photonic multichip modules. From 1993 to 2006, he was a Member of Academic Staff at the University of Leeds, where he led research activity in microwave photonics and developed a new degree program in photonics sponsored by Agilent Technologies. At Leeds, he was Deputy Director of the Institute of Microwaves and Photonics and also Director of Learning and Teaching. He joined the Department of Electrical and Computer Engineering, University of Cyprus, in 2006, where he is an Associate Professor.

His research interests are in the general area of microwave photonics. He has recently edited a book in this field ("Microwave Photonics", Wiley, 2009). Dr. Iezekiel received the 1999 Institution of Electrical Engineers Measurement Prize for his work on lightwave network analysis. He has organized several IEEE events and was the Membership Development Officer for the IEEE UKRI Section. In 2009, he became the Editor-in-Chief of IET Microwaves, Antennas and Propagation.

**Date and Time:** May 26<sup>th</sup>, 14:30

**Location:** K.U.Leuven, Dept. ESAT, room 02.58

**Host:** Prof. Dominique Schreurs (Dominique.Schreurs@esat.kuleuven.be)