

Keynote Speech I

16:00–17:00, Monday, March 29, 2021

The Role of TCAD and TCAD Based DTCO in Advanced Technology Nodes

Prof. Asen Asenov

The James Watt Professor of Electrical Engineering, the University of Glasgow
CEO, Semiwise Ltd., UK

Abstract

For more than 40 year TCAD has been plain a key role in improving the existing CMOS technologies and in the development of new technology generations. According the 2015 edition of the ITRS the extensive use of TCAD reduces by up to 40 % the cost of new technology development. TCAD is also indispensable when evaluation new technology options and device architectures. It played essential role in the introduction of FinFET and FDSOI technology. In recent years the role of TCAD has expanded from technology development to TCAD based Design-Technology Co-Optimisation aiming to tune the technology for particular circuit implementations and products.

In this talk we will present the rationale and examples in using of TCAD for technology optimisation and development, path finding and TCAD based DTCO.