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SiC Power MOSFETs: Application Benefits and Technology Validations Needs

Alberto Castellazzi is an Associate Professor of Power Electronics at the University of Nottingham, UK. He has been active in power electronics R&D for over 15 years, collaborating with some of the main industrial and academic institutes worldwide. His research interests are power devices and the enabling technologies of power electronics. He has published over 170 papers in peer reviewed journals and conference proceedings and is a member of the Technical Program Committee of the IRPS, ISPSD, ESREF, ESTC and IPEC conferences.

This talk will review the rapid development of SiC MOSFET technology over the past 5 to 10 years. It will discuss its application-related interest and its establishment as the preferred device type against alternative normally-off solutions. It will review qualification needs, including the development of bespoke validation methodologies, and offer insight into present technology maturity and ongoing progress.

The presentation will conclude by addressing concurrent technology development needs enabling full exploitation of the device characteristics.