

EMC Professional Talk



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A Brief Introduction to Parasitic Capacitance in Magnetic Components

Magnetic components are non-ideal. Besides providing the inductance as the fundamental function, the electric field inside and around will always introduce several parasitic capacitances, in either small or large values. It was not paid enough attention before, when the switching dynamics and frequencies are low. However, due to the wide-bandgap semiconductor devices of having a much higher voltage variations (dv/dt) and switching frequencies, parasitic capacitances in magnetic components are becoming real and emerging problems. This webinar will offer a brief introduction to the fundamental knowledge and recent research outcomes of parasitic capacitances, where some of the knowledge can be easily implemented in daily research/engineering work.

30 October 2024, 14:00-15:00 (CEST)

[Link](#)

About the speaker:

Hongbo Zhao (S'16, M'21) received the Ph.D. degree in Power Electronics from Aalborg University, Denmark in 2021. He was a visiting researcher at the University of Texas at Austin in 2021, a visiting scholar at the University of Galway in 2023, and a visiting professor at G2ELab in 2024. His idea on next-generation sustainable magnetic components was awarded as 'The Bright Idea Award' from Otto Mønstedts Fond in 2023. He received the Villum Fellowship in 2022. He was awarded by Frenetic with the 'Best Magnetic Design' in 2022. He was selected as a future entrepreneur by the Spin-outs Denmark program in 2023. He has authored and co-authored around 50 peer-reviewed publications and is the first inventor for 4 pending international patent applications. Currently, he is an assistant professor at AAU Energy, Aalborg University, Denmark. His research interests include the analysis and packaging of modern magnetic components, as well as the applications of wide bandgap semiconductor devices.

Organization:

Associate Prof. Pooya Davari, AAU Energy, Aalborg University
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