



Vortragsreihe des Vereins  
„Freunde des Instituts für  
Stromrichtertechnik und  
Antriebsregelung“



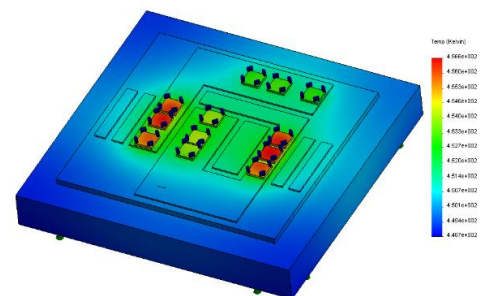
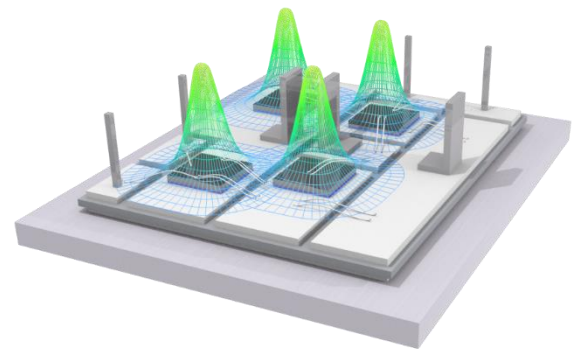
## Power Module Layout Synthesis



Alan Mantooth  
PELS President  
University of Arkansas  
United States



One of the most substantial needs for wide bandgap (WBG) power electronics is design tools for power module physical design. WBG technologies promote faster switching edges and higher frequency switching, but have to be carefully designed in order to minimize electrical parasitics that can lead to poor signal integrity and larger-than-necessary generated electromagnetic interference. Furthermore, because of additional properties that allow for higher temperature operation, WBG technologies also promote higher power densities. Again, careful electrothermal design of the power modules and application cabinetry are required to achieve maximum performance and longevity. Design automation for WBG power electronics is a growing need in general. This talk will focus on the physical design aspects of these power electronics, most specifically power module layout synthesis tools. The basic architecture of the subject tool, known as PowerSynth, will be described. Its ability to support the current, prevalent module approaches will be described. Current research efforts to extend this capability to future 3D module architectures that promote the utmost in high power density while maintaining reliability will also be described.



**Wann: Dienstag, 27.11.2018, 17 Uhr**

**Wo: S3 | 06/052 (Hans-Busch-Institut), Merckstraße 25**

Anschließend, mit Unterstützung des Joint IAS/PELS/IES German Chapter,...

**...Leistungselektronisches Herbstfest  
mit saisonalen Leckereien  
im Labor der SRT (S3|09 / 8)**

**Alle Interessenten sind herzlich eingeladen!**



## Lageplan S3|06 (Vorträge, HBI) Merckstraße 25



## Lageplan Labor des SRT S3|09/8

