

## Alan Mantooth – University of Arkansas

AN NSF SPONSORED CENTER





- Electronic design automation tools
- 3D Packaging
- Analog IC Design
- Semiconductor Device Modeling

http://eleg.uark.edu/



## **PowerSynth**

Electrical and Thermal Modeling

 Fast Multi-objective Optimization of Multi-Chip Power Module Layouts

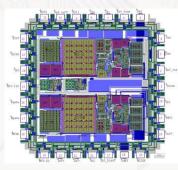
- Software Design
- Import and Export
- Physical Validation

**Design Automation Tools** 

**Analog IC Design** 

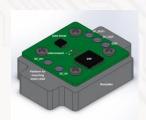
## High temperature and high efficiency integrated circuits

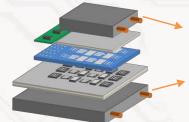
- Semiconductor modeling
- Model-based design approach
- Design and verification
- Physical design layout
- Post-layout analysis
- Test over extreme temps



**3D Packaging** 

## **Wire bondless Integrated Power Modules**





Double sided cooling capability to facilitate heat removal

High density electronic modules, with low parasitics and ultrafast switching capability suitable for wide bandgap semiconductors