

Preliminary Agenda: NSF I/UCRC for EMC Meeting

November 9 – 10, 2010

Greenville, SC

CU-ICAR Campbell Graduate Engineering Center, 4 Research Drive, Greenville, SC

Tuesday, November 9	Wednesday, November 10
8:00 am Continental breakfast	8:00 am Continental breakfast
8:30 am Welcome, introductions, and meeting overview – <i>T. Hubing (Clemson)</i>	<u>NSF I/UCRC Business Meeting</u>
8:45 am NSF Presentation – <i>L. Hornak (NSF)</i>	8:30 am Review of Agenda and New Business Budget presentations from each university
<u>Power Inverter Noise</u>	- Missouri S&T
9:15 am Application of imbalance difference model to circuit board and cable geometries - <i>H. Kwak (Clemson)</i>	- Clemson
9:40 am Active cancellation of common-mode currents on cables - <i>A. McDowell (Clemson)</i>	- Houston
10:05 am Estimation of maximum radiation from heatsinks – <i>X. He (Clemson)</i>	- Oklahoma
10:30 am Break	New Business
<u>Signal Integrity, Power Integrity</u>	10:00 am Break
11:00 am A tool environment for SI, PI, and EMC, with causality and passivity checking, and RLGC cross-sectional analysis as the first functionalities – <i>A. Razmadze (S&T)</i>	<u>Modeling</u>
11:30 am Crosstalk among multiple stripline traces crossing a split - <i>S. Wu (S&T)</i>	10:30 am Chamber modeling - <i>J. Chen (Houston)</i>
12:00 pm Lunch at CU-ICAR	11:00 am Maximum emission calculator update – <i>T. Hubing (Clemson)</i>
1:00 pm Modeling dense via arrays in multilayer printed circuit boards with a generalized multiple scattering method - <i>Y. Zhang (S&T)</i>	11:30 pm Modeling EM coupling from an ESD gun to an IC– <i>J. Zhang (S&T)</i>
1:30 pm Stochastic analysis for vias - <i>J. Chen (Houston)</i>	12:00 pm Lunch at CU-ICAR
<u>Cable EMI</u>	12:45 pm Full-vehicle modeling – <i>H. Zeng (Clemson)</i>
2:00 pm Calculating EMI reduction with absorbing materials applied on cables - <i>M. Koledinstseva (S&T)</i>	1:15 pm Model segmentation for radiated immunity simulation – <i>J. Zhang (S&T)</i>
2:30 pm Estimation of maximum common-mode currents on a cable due to crosstalk - <i>C. Su (Clemson)</i>	<u>LIFE Form Review</u>
3:00 pm Effect of water, oil and grease on cable connector impedance – <i>H. Zeng (Clemson)</i>	1:45 pm Jeff Mayer (NSF)
3:30 pm Break	<u>Novel Design Concepts</u>
<u>EMC Standards</u>	2:15 pm RF design lab projects – <i>D. Pommerenke (S&T)</i>
4:00 pm The current state of C63 – <i>H. Refai (Oklahoma)</i>	2:40 pm New capacitor technologies – <i>T. Hubing (Clemson)</i>
4:30 pm Recommendation for wireless coexistence standard – <i>H. Refai (Oklahoma)</i>	3:00 pm Break
5:00 pm Tour of CU-ICAR	<u>Review of Center Research Results (Past 5 Years)</u>
6:30 pm Dinner at the Upcountry History Museum in Greenville	3:30 pm Key Elements of IC Design and Layout for EMC
	4:00 pm Diagnosing and Troubleshooting Radiated Emissions Problems
	4:30 pm Diagnosing and Troubleshooting Transient Susceptibility Problems
	5:00 pm Adjourn

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Directions to CU-ICAR

The CU-ICAR campus is located in Greenville, SC about 10 minutes from the Greenville-Spartanburg airport (GSP) just off I-85. The NSF I/UCRC meeting will be held in the Campbell Graduate Engineering Center on the CU-ICAR campus.

The address is

4 Research Drive
Greenville, SC 29607
Phone: (864) 283-7215

From Interstate 85 (Greenville-Spartanburg Airport “GSP”):

From I-85, take Exit 48A East (U.S. 276 East, Laurens Road) toward Mauldin, S.C. At the next traffic light, turn left on Millennium Boulevard, which is the main road through the CU-ICAR campus. Drive into the campus about 1 mile, and turn left on Research Drive. Take the first left, and then make a right-hand turn into the parking garage, AutoPark.

From Interstate 26 West (Columbia/Charleston)

Take Interstate-385 toward Greenville. Take I-85 toward Atlanta. Take Exit 48A East (U.S. 276 East, Laurens Road) toward Mauldin, S.C. At the next traffic light, turn left on Millennium Boulevard, which is the main road through the CU-ICAR campus. Drive into the campus about 1 mile, and turn left on Research Drive. Take the first left, and then make a right-hand turn into the parking garage, AutoPark.

From I-26 East (Asheville, N.C./Tennessee)

Take I-85 toward Atlanta. Take Exit 48A East (U.S. 276 East, Laurens Road) toward Mauldin, S.C. At the next traffic light, turn left on Millennium Boulevard, which is the main road through the CU-ICAR campus. Drive into the campus about 1 mile, and turn left on Research Drive. Take the first left, and then make a right-hand turn into the parking garage, AutoPark.

From Clemson, S.C., on U.S. 123:

Travel U.S. 123 to downtown Greenville. Turn right on Washington Street. Follow Washington Street to Laurens Road. Turn right and follow Laurens Road east until you pass under I-85. At the next traffic light (just past CarMax on your right), turn left on Millennium Boulevard, which is the main road through the CU-ICAR campus. Drive into the campus about 1 mile and turn left on Research Drive. Take the first left and turn into the parking garage, AutoPark. CU-ICAR is about 45 miles from Clemson.

From Downtown Greenville, S.C.:

From U.S. 123/Academy Street in downtown Greenville, turn toward Columbia, S.C., on Interstate 385 and follow instructions below. The campus is about 12 miles from downtown Greenville.

From I-385:

From I-385, exit at Roper Mountain Road and turn south toward Woodruff Road. Drive straight through the Woodruff Road intersection (Roper Mountain Road now becomes Verdae), and travel to Salters Road located just before you reach the Embassy Suites Hotel. Turn left on Salters Road. At the first traffic light, turn right on Millennium Boulevard, which is the main road through the CU-ICAR campus. Pass Hubbell Lighting headquarters on your right. Continue through the traffic circle and turn right on Research Drive. Take the first left and turn into the parking garage, AutoPark.

From Atlanta, Ga. (Hartsfield-Jackson Airport “ATL”):

Take I-85 North toward Greenville. Take Exit 48A East toward Mauldin, S.C. (U.S. 276 East, Laurens Road). At the next traffic light, turn left on Millennium Boulevard, which is the main road through the CU-ICAR campus. Drive into the campus about 1 mile and turn left on Research Drive. Take the first left and turn into the parking garage, AutoPark. The campus is about 150 miles from Atlanta.

From Charlotte, N.C. (Charlotte Douglas Airport “CLT”):

Take I-85 South toward Gastonia, N.C. Cross into South Carolina, and continue on the interstate to Greenville. Take Exit 48A East toward Mauldin (U.S. 276 East, Laurens Road). At the next traffic light, turn left on Millennium Boulevard, which is the main road through the CU-ICAR campus. Drive into the campus about 1 mile and turn left on Research Drive. Take the first left and turn into the parking garage, AutoPark. The campus is about 90 miles from Charlotte.

Meeting on Monday evening, November 8

Several of us are planning to meet for dinner at Soby's in Downtown Greenville on Monday evening at 6:30 pm. Please feel free to join us if you wish to do so and please let Kristina (cathcar@clermson.edu) know if you are planning to come to this dinner. This will allow her to give the restaurant a reasonably accurate count of the number of people so that they can accommodate our group.

Address: Soby's
207 S. Main
Greenville, SC 29601

207

South

Main

Street