

# Final 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
<p>8:00 am Continental breakfast</p> <p>8:30 am Introductions, and meeting overview - <i>T. Hubing (Clemson)</i></p> <p>8:45 am Welcome to CU-ICAR - <i>I. Haque (Clemson)</i></p> <p>8:55 am NSF Presentation - <i>L. Hornak (NSF)</i></p>	<p>8:00 am Continental breakfast</p>
<p><b><u>Power Inverter Noise</u></b></p>	<p><b><u>NSF I/UCRC Business Meeting</u></b></p>
<p>9:15 am Application of imbalance difference model to circuit board and cable geometries - <i>H. Kwak (Clemson)</i></p> <p>9:40 am Active cancellation of common-mode currents on cables - <i>A. McDowell (Clemson)</i></p> <p>10:05 am Estimating and mitigating radiated emissions from PCB heatsinks - <i>X. He (Clemson)</i></p>	<p>8:30 am Review of Agenda and New Business</p> <p>Budget presentations from each university</p> <ul style="list-style-type: none"><li>- Missouri S&amp;T</li><li>- Clemson</li><li>- Houston</li><li>- Oklahoma</li></ul> <p>New Business</p>
<p><b>10:30 am Break</b></p>	<p><b>10:00 am Break</b></p>
<p><b><u>Signal Integrity, Power Integrity</u></b></p>	<p><b><u>Modeling</u></b></p>
<p>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&amp;T)</i></p> <p>11:30 am Crosstalk among multiple stripline traces crossing a split - <i>S. Wu (S&amp;T)</i></p>	<p>10:30 am Chamber modeling - <i>J. Chen (Houston)</i></p> <p>11:00 am Maximum emission calculator update - <i>T. Hubing (Clemson)</i></p> <p>11:30 pm Modeling EM coupling from an ESD gun to an IC - <i>J. Zhang (S&amp;T)</i></p>
<p><b>12:00 pm Lunch at CU-ICAR</b></p>	<p><b>12:00 pm Lunch at CU-ICAR</b></p>
<p>1:00 pm Modeling dense via arrays in multilayer printed circuit boards with a generalized multiple scattering method - <i>Y. Zhang (S&amp;T)</i></p> <p>1:30 pm Stochastic analysis for vias - <i>J. Chen (Houston)</i></p>	<p>12:45 pm Full-vehicle modeling - <i>H. Zeng (Clemson)</i></p> <p>1:15 pm Model segmentation for radiated immunity simulation - <i>A. Radchenko (S&amp;T)</i></p>
<p><b><u>Cable EMI</u></b></p>	<p><b><u>LIFE Form Review</u></b></p>
<p>2:00 pm Calculating EMI reduction with absorbing materials applied on cables - <i>M. Koledinstseva (S&amp;T)</i></p> <p>2:30 pm Estimation of maximum common-mode currents on a cable due to crosstalk - <i>C. Su (Clemson)</i></p> <p>3:00 pm Effect of water, oil and grease on cable connector impedance - <i>H. Zeng (Clemson)</i></p>	<p>1:45 pm Jeff Mayer (NSF)</p>
<p><b>3:30 pm Break</b></p>	<p><b><u>Novel Design Concepts</u></b></p>
<p><b><u>EMC Standards</u></b></p>	<p>2:15 pm RF design lab projects - <i>D. Pommerenke (S&amp;T)</i></p> <p>2:40 pm New capacitor technologies - <i>T. Hubing (Clemson)</i></p>
<p>4:00 pm The current state of C63 - <i>H. Refai (Oklahoma)</i></p> <p>4:30 pm Recommendation for wireless coexistence standard - <i>H. Refai (Oklahoma)</i></p>	<p><b>3:00 pm Break</b></p>
<p><b>5:00 pm Tour of CU-ICAR</b></p>	<p><b><u>Review of Center Research Results (Past 5 Years)</u></b></p>
<p><b>6:30 pm Dinner - Upcountry History Museum</b></p>	<p>3:30 pm Diagnosing and Troubleshooting Radiated Emissions Problems - <i>T. Hubing (Clemson)</i></p> <p>4:00 pm Diagnosing and Troubleshooting Transient Susceptibility Problems - <i>D. Pommerenke (MST)</i></p>
	<p><b>4:30 pm Adjourn</b></p>

## 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 Greenville-Spartanburg Airport “GSP” (~10 minutes)

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 Atlanta, Ga. (Hartsfield-Jackson Airport “ATL”) (~3 hours)

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”) (~1 hour and 40 minutes)

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.

## Hotels

There are several hotels in the area that are convenient to the Clemson ICAR Campus, including:

- The Marriott Hotel, (864) 297-0300, One Parkway East, Greenville, SC 29615
- The Embassy Suites Greenville, (864) 676-9090, 670 Verdae Blvd., Greenville, SC 29615
- The Courtyard by Marriott, (864) 213-9009, 115 The Parkway, Greenville, SC 29615
- Hampton Inn Greenville Woodruff, (868) 539-0036, 15 Park Woodruff Dr. Greenville, SC 29607
- Homewood Suites Greenville, (866) 539-0036, 102 Carolina Point Pkwy, Greenville, SC 29607

There are also several nice hotels downtown (about 20 minutes by car from ICAR), including:

- The Westin Poinsett Greenville, 866-539-0036, 120 South Main St, Greenville, SC 29601
- Hampton Inn & Suites Greenville Downtown, 866-539-0036, 171 Riverplace, Greenville, SC 29601

## Dinner on Monday evening, November 8

A few of us are planning to meet informally 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@clemson.edu](mailto:cathcar@clemson.edu)) know if you are planning to come. This will allow her to give the restaurant a reasonably accurate count of the number of people so that they can accommodate our group. Soby's, 207 S. Main, Greenville, SC 29601

## Dinner on Tuesday evening, November 9

On Tuesday evening, we will have dinner at the *Upcountry History Museum* (<http://www.upcountryhistory.org/>) in Downtown Greenville. The dinner will be catered by *Smoke on the Water* (<http://www.saucytavern.com/>), a restaurant that features authentic southern cuisine. Directions will be provided at the meeting.