

**South Carolina Chapter  
American Statistical Association  
46th Annual Meeting**

**SC-ASA Palmetto Symposium**



**Friday, March 24th, 2017**

**Discovery Building  
University of South Carolina  
Columbia, SC 29208**



## **Schedule**

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<b>10:00 AM</b>	<b>Introductions</b>
<b>10:15 AM</b>	<b>Student presentations</b>
<b>11:45 AM</b>	<b>Networking and lunch</b>
<b>12:45 PM</b>	<b>SC-ASA business meeting</b>
<b>1:00 PM</b>	<b>Student presentations</b>
<b>2:00 PM</b>	<b>Short recess</b>
<b>2:30 PM</b>	<b>Invited speaker</b>
<b>3:30 PM</b>	<b>Student awards</b>

## **Invited Presentation**

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**Raymond Carroll, Texas A&M**  
Professor of Statistics,

**Title: Building dietary index scores that are informed by  
disease data using data integration**

**Abstract: Nutritionists interested in diet and health (cancer, cardiovascular disease, etc.) have developed what I call Global Healthy Diet Indices. I will focus on the Healthy Eating Index – 2005 (HEI-2005), which is an index of 12 component scores for a healthy diet that was built to conform to the USDA 2005 Dietary Guidelines. This total score, with a minimum possible value of 0 (not really possible, even Americans cannot get a 0) to 100 (impossible as well, no one is perfect), is then used to related diet to many health outcomes: various cancers, morbidities and mortality, via logistic and Cox regression.**

**The various dietary indices are built on knowledge of the biology of diet and health, but are actually not informed by how well they predict disease in data. I show how to construct a new score that is informed by diseases, and can be used as a global index. The technical aspects of the problem are extremely interesting to statisticians only, so that part, while in evidence, will not be emphasized. The differences in the scores that are based on cancer data, and those based on a thought exercise, are interesting. I will also contrast global indices with indices built for individual disease (colorectal cancer, lung cancer), and show that, while interesting, such "if I am worried about disease A, what should I do, but what about disease B?" differ wildly across disease, and are of little public health interest.**

## **Students' Presentations**

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### **Morning session:**

- 1)
- 2)
- 3)
- 4)
- 5)

### **Afternoon session:**

- 1)
- 2)
- 3)
- 4)

## **Did you know?**

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The American Statistical Association, a scientific and educational society founded in Boston in 1839, is the second-oldest, continuously operating professional society in the United States. For 169 years, the ASA has provided its members and the public with up-to-date, useful information about statistics. The ASA has a proud tradition of service to statisticians, quantitative scientists, and users of statistics across a wealth of academic areas and applications.

## **ASA Mission**

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The ASA mission is to promote excellence in the application of statistical science across the wealth of human endeavor, specifically to:

- Support excellence in statistical practice, research, journals, and meetings
- Work for the improvement of statistical education at all levels
- Promote the proper application of statistics
- Anticipate and meet member needs
- Use the discipline of statistics to enhance human welfare
- Seek opportunities to advance the statistics profession

## **Organizing Committee**

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The SC ASA Executive Committee organized the meeting.

Chris McMahan, PhD, Clemson University  
Alexander McClain, PhD, USC  
Bethany Wolf, PhD, MUSC  
Dewei Wang, PHD, USC