

# SAMSI/CRSC Undergraduate Workshop May 18 - May 23, 2008

<http://www.ncsu.edu/crsc/events/ugw08/index.php>

(All sessions are in Harrelson G100 unless otherwise noted.)

## Sunday, May 18

7:00 Welcoming Reception in Honors Village Commons Multipurpose Room

## Monday, May 19

8:30 Meet participants at Becton Hall. Transport to SAMSI.

9:10 Introduction to SAMSI, followed by presentations from current SAMSI programs.

9:15 Environmental Sensor Networks (DAVID BELL)

10:00 Risk Analysis (SOURISH DAS)

10:45 *Break*

11:00 Random Media (DR. ELAINE SPILLER)

11:45 *Lunch* at SAMSI

12:30 Vans transport participants to Harrelson Hall

1:15 Introduction and Background (DR. RALPH SMITH)

1:45 Introduction to the Forward Problem: Solving the Harmonic Oscillator System  
(DR. ELAINE SPILLER)

2:45 *Break-Refreshments/Drinks available in HA 326*

3:00 Brief Introduction to the Computing System and MATLAB (DR. WIEGANG ZHONG)

4:30 Vans take participants to Lake Crabtree

5:00 Dinner at Lake Crabtree

## Tuesday, May 20

9:00 Linear Inverse Problems: A MATLAB Tutorial. (QIN ZHANG)

10:30 *Break-Refreshments/Drinks available in HA 326*

10:45 Introduction to Basic Statistics and Probability  
(JUSTIN SHOWS AND BETSY ENSTROM)

12:15 *Lunch*

1:15 Introduction to Statistical Inference

(DR. VERED MADAR, DR. GUANG CHENG, EVANGELOS EVANGELOU, AND JAEUN CHOI)

2:45 *Break–Refreshments/Drinks available in HA 326*

3:15 Regression and Least Squares: A MATLAB Tutorial (DR. MICHAEL PORTER)

### **Wednesday, May 21**

9:00 Rotating Sessions (Cox Hall)

- Vibrating Beam Data Collection at CRSC Laboratory  
(ADAM ATTARIAN AND DR. RALPH SMITH)
- Graduate School Panel
  - DR. ERNIE STITZINGER, MATHEMATICS DEPARTMENT, NCSU
  - DR. KIM WEEMS, STATISTICS DEPARTMENT, NCSU
- Career Panel (FACILITATOR: DR. CAMMEY COLE MANNING)
  - DR. KAREN CHISWELL, GLAXOSMITHKLINE
  - DR. EMILY LADA, SAS

12:00 *Box Lunches*

1:15 Reflection on Modeling and Data Collection

(DAVID BELL AND DR. ELAINE SPILLER)

2:15 *Break–Refreshments/Drinks available in HA 326*

2:30 Nonlinear Optimization and its Relationship to Statistical Inverse Problem (MARTIN HELLER)

4:00 Teams Work on Inverse Problem (ALL)

### **Thursday, May 22**

9:00 Statistical Analysis of Vibrating Beam Data (DR. GENTRY WHITE)

10:00 *Break–Refreshments/Drinks available in HA 326*

10:15 Alternative Beam Model (DR. RALPH SMITH)

11:15 Teams Work on Inverse Problem (ALL)

12:30 *Lunch*

1:30 What could we do better? Alternative Statistical Models

(DR. JAYANTA PAL, QIN ZHANG, AND MARTIN HELLER)

2:30 *Break–Refreshments/Drinks available in HA 326*

3:00 Teams Work on Inverse Problem; Begin to Prepare Reports (ALL)

5:00 Dinner Break

6:30 Bowling (Meet under Harrelson Hall)

**Friday, May 23**

9:00 Presentations and Discussion (ALL)

10:30 *Break-Refreshments/Drinks available in HA 326*

10:45 Presentations and Discussion(ALL)

11:45 Closing Remarks & Workshop Evaluation

(DRS. CAMMEY COLE MANNING AND RALPH SMITH)

12:00 *Lunch*

1:00 Participants Depart for Home