

**FIELD BIOLOGY**  
**ROOM 106 HOLLINGS SCIENCE CENTER**  
**PRESIDING: TRAVIS KNOWLES, FRANCIS MARION UNIVERSITY**

<b>TIME</b>	<b>TITLE</b>
8:15-8:30 AM	Comparison of the Toxic Effects of the Organophosphate Dichlorvos on Grass Shrimp ( <i>Palaemonetes pugio</i> ) and Hard Clams ( <i>Mercenaria mercenaria</i> ) faculty sponsor: John E. Weinstein      scas author: John E. Weinstein The Citadel <b>Presenter: David M. DeLoach</b>
8:30-8:45 AM	Spatial and Temporal Variation in Suspended Bacterial Populations in a Potentially Contaminated Residential Run-off Stream System faculty sponsor: Kirt Moody      scas author: Roger Schmidt Columbia College <b>Presenter: Erin Mays</b>
8:45-9:00 AM	Antimicrobial Activity of Rose and Lemon Scented Essential Oils faculty sponsor: Dr N. Dwight Camper      scas author: Dr N D Camper Clemson University <b>Presenter: Christine C Murphy</b>
9:00-9:15 AM	Prevalence and Intensity of Infection of <i>Fascioloides magna</i> (Echinostomiformes: Fasciolidae) in the White-tailed Deer ( <i>Odocoileus virginianus</i> ) in South Carolina faculty sponsor: Edna Steele      scas author: Edna Steele Converse College <b>Presenter: Gretchen Williams</b>
9:15-9:30 AM	Chicken Embryo Model For Testing Environmental Toxins. Faculty sponsor: Dr. Harris      scas author: Terrell Gibson Morris College <b>Presenter: Terrell Gibson</b>
9:30-9:45 AM	Phototoxicity of Sediment-Associated Fluoranthene to the Grass Shrimp, <i>Palaemonetes pugio</i> faculty sponsor: Dr. John E. Weinstein      scas author: John E. Weinstein The Citadel <b>Presenter: Keane Phillips</b>

9:45-10:00 AM

The Effect of pH on Seedling Growth of Crop Species

faculty sponsor: Dr. Ajoy G. Chakabarti

scas author: Dr. Ajoy G. Chakabarti

South Carolina State University

**Presenter: Simone Boyce**

10:00-10:15 AM

Non-native Invasive Terrestrial Plant Species of Hitchcock Woods, Aiken, SC

faculty sponsor: Harry E. Shealy, Jr. scas author: Andrew Dyer

University of South Carolina - Aiken

**Presenter: Lauren M. Booth**

**CELLULAR BIOLOGY**  
**ROOM 112 HOLLINGS SCIENCE CENTER**  
**PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:15-8:30 AM	A Novel 3-D Culture System for the Study of Cardiac Myocyte Development faculty sponsor: Richard L Goodwin      scas author: Heather Evans University of South Carolina School of Medicine <b>Presenter: Heather Evans</b>
8:30-8:45 AM	Melatonin: The First Anti-Cancer Chronobiotic scas author: WJM Hrushesky, MD Dorn VA Medical Center <b>Presenter: William JM Hrushesky, MD and Pat Wood, MD, PhD</b>
8:45-9:00 AM	Recognition of Non-Self in the Crayfish, <i>Procambarus clarkii</i> faculty sponsor: Larry J. McCumber, Tim Shannon, and David J. Stroup scas author: Larry Joe McCumber Francis Marion University <b>Presenter: Michelle Imlay</b>
9:00-9:15 AM	Neural Response and Hand Kinematics in the Posterior Parietal Cortex. Faculty sponsor: Esther Gardner      scas author: Rush H. Oliver Benedict College <b>Presenter: Patrice Pearce</b>
9:15-9:30 AM	Effective Zinc Induction of Promotor Response in Breast Cancer Cells. Faculty sponsor: Lucia Pirisi-Creek      scas author: Rush H. Oliver Benedict College <b>Presenter: Nikida Cooper</b>
9:30-9:45 AM	The Effects Of Ethanol On Chloral Hydrate Metabolism In Rat Hepatocytes. Faculty sponsor: David C. McMillan      scas author: Rush Oliver Benedict College <b>Presenter: Neville Bain</b>
9:45-10:00 AM	Effects of Epidermal Growth Factor on Granulosa Cell Proliferation faculty sponsor: Sandra F. Larson      scas author: Sandra F. Larson Furman University <b>Presenter: Ian Belle</b>

- 10:00-10:15 AM Colocalization of Epidermal Growth Factor Receptor and Proliferating Cell Nuclear Antigen in Bovine Ovaries  
faculty sponsor: Sandra F. Larson scas author: Sandra F. Larson  
Furman University  
**Presenter: Kevin N. Blackmon**
- 10:15-10:30 AM Exposure of Cells to Nanosecond Pulsed Electric Fields (nsPEF)  
faculty sponsor: Dr. Michael Stacey scas author: Rupal Ramesh Shah  
Southern Wesleyan University  
**Presenter: Rupal Ramesh Shah**
- 10:30-10:45 AM Characterization of Microbial Communities in TCE-Contaminated Seep Zone Sediments  
faculty sponsor: Garriet W. Smith, Ph.D. scas author: Brian A. Nevius  
University of South Carolina Aiken  
**Presenter: Brian A. Nevius**
- 1:30-1:45 PM Mast Cell-Fibroblast Interactions in Myocardial Remodeling  
faculty sponsor: Wayne Carver scas author: Erin Massey  
University of South Carolina  
**Presenter: Erin Massey**
- 1:45 PM-2:00 PM The Study of Xenobiotic Transport in Cricket Malpighian Tubules  
faculty sponsor: Dr. Linda Jones and Dr. Karl Karnaky  
scas author: Linda Jones  
College of Charleston  
**Presenter: Jessica Daniels**

**MOLECULAR BIOLOGY I**  
**ROOM 239 HOLLINSG SCIENCE CENTER**  
**PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00–8:15 AM	Protein-Protein Interactions Among the Vaccinia Virus Late Transcription Factors faculty sponsor: Cynthia F. Wright and Stephanie Dellis scas author: Cynthia F. Wright <b>Presenter: William J. McCrary</b>
8:15-8:30 AM	Analysis of Protein Interactions Between Viral- and Host-Encoded Vaccinia Virus Late Transcription Factors faculty sponsor: Cynthia F. Wright and Stephanie Dellis scas author: Cynthia F. Wright College of Charleston <b>Presenter: Kyle C. Strickland</b>
8:30-8:45 AM	The Role of Drosophila Projectin in Sarcome Growth During Larval Development faculty sponsor: Agnes Ayme-Southgate scas author: Agnes Ayme-Southgate College of Charleston <b>Presenter: Kristen Williams</b>
8:45-9:00 AM	Investigation of the Region Within the Vaccinia Virus G8R Transcription Factor Responsible for Protein-protein Interactions scas author: Dr. Stephanie Dellis College of Charleston <b>Presenter: Stephanie Dellis</b>
9:00-9:15 AM	DNA-based Sex Determination of an African Gray Parrot, <u>Psittacus erithacus timneh</u> , Using the Polymerase Chain Reaction (PCR) faculty sponsor: Vernon W. Bauer      scas author: Vernon W. Bauer Francis Marion University <b>Presenter: Russell W. Harter</b>
9:15-9:45 AM	BREAK
9:45-10:00 AM	Photoreceptor Cell GFP Expression Driven by Salamander Green Rod/Blue Cone Opsin Promoter faculty sponsor: Alix Darden      scas author: Alix Darden Medical University of South Carolina

**Presenter: Ryan O. Parker**

- 10:00-10:15 AM Reconstruction and Computation of Biovolumes: Potential Problems  
faculty sponsor: Alan W. Decho scas author: Alexandru I. Petrisor  
University of South Carolina- Arnold School of Public Health- Dept. of  
Environmental Health Sciences  
**Presenter: Alexandru I. Petrisor**
- 10:15-10:30 AM Characterization of Cytoplasmic Males Sterility in the Tomato system,  
genus *Lycopersicon*.  
Scas author: Dwight Dimaculagnan  
Winthrop University  
**Presenter: Dwight Dimaculangan**
- 1:30-1:45 PM Investigation into Possible Point Mutations in the Inwardly Rectifying K<sup>+</sup>  
Channel Genes IRK1, IRK2, and HRK1 in a Population of Mental  
Retardation (MR) Patients  
faculty sponsor: Charles Schwartz scas author: Elizabeth Grant  
Erskine College  
**Presenter: Elizabeth Grant**
- 1:45-2:00 PM Molecular Cloning of Human JAK2 Gene  
faculty sponsor: Nian-yi Chen scas author: Nian-yi Chen  
Converse.College  
**Presenter: Leah Stokes and Sarah Murray**
- 2:15-2:30 PM Creating a Retroviral Expression Vector for Delivery of Ribozymes into  
Eukaryotic Cells  
faculty sponsor: Dr. William H. Jackson  
scas author: Dr. William H. Jackson  
University of South Carolina Aiken  
**Presenter: Natalia Surzenko**

**MOLECULAR BIOLOGY II**  
**ROOM 344 HOLLINGS SCIENCE CENTER**  
**PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00 –8:15 AM	Continued Isolation of the Salamander Red Rod Opsin Gene Through Screening of a Salamander Genomic Library faculty sponsor: Alix Darden, Ph.D.      scas author: Alix Darden The Citadel <b>Presenter: Joseph A. Siegel</b>
8:15-8:30 AM	Salamander Green Rod/Blue Cone Opsin Promoter Characterization: Creation of Deletion Mutations to Identify the Basal Region. Faculty sponsor: Alix Darden      scas author: Alix Darden The Citadel <b>Presenter: Stephen Goldfinch</b>
8:30-8:45 AM	In Silico Analysis of the Salamander Green Rod/Blue Cone Promoter faculty sponsor: Alix G. Darden      scas author: Alix G. Darden The Citadel <b>Presenter: John G. Speck</b>
8:45-9:00 AM	Sequencing the Gene for Salamander Blue Cone/Green Rod Opsin faculty sponsor: Alix Darden      scas author: Alix Darden The Citadel <b>Presenter: Matthew D. Verdin</b>
9:00-9:15 AM	Sarcomeric Assembly of Drosophila Projectin and the Role of the COOH-terminal Ig Domains faculty sponsor: Agnes Ayme-Southgate scas author: Agnes Ayme-Southgate College of Charleston <b>Presenter: Kathleen Kirven</b>
9:15-9:30 AM	Introduction of Recombinant Plasmids into LS2 Cells faculty sponsor: James R. Yates      scas author: James R. Yates University of South Carolina Aiken <b>Presenter: Stephanie Suarez</b>
9:30-9:45 AM	Amplification of LB400 Genomic Sequences faculty sponsor: James R. Yates      scas author: James R. Yates University of South Carolina Aiken <b>Presenter: Erin T. Jones</b>

- 9:45-10:00 AM Design and Synthesis of Hammerhead Ribozyme Targeted to Nucleotide 5127 of HIV-1 Vif  
scas author: William H. Jackson  
University of South Carolina Aiken  
**Presenter: Rebecca S. Napier**
- 10:00-10:15 AM Construction of HIV-1 tat Expression Vectors  
faculty sponsor: Dr. William H. Jackson  
scas author: William H. Jackson  
University of South Carolina Aiken  
**Presenter: Jacklyn C. Davis**
- 10:15-10:30 AM Design and Cloning of an anti-HIV-1 rev Hammerhead Ribozyme  
faculty sponsor: William H. Jackson scas author: William H. Jackson  
University of South Carolina Aiken  
**Presenter: Zachary D. Wilson**
- 10:30-10:45 AM Testing Anti-Tat Ribozymes by in vitro Cleavage Assay  
faculty sponsor: William H. Jackson, Jr.  
scas author: William H. Jackson, Jr.  
University of South Carolina Aiken  
**Presenter: Vanessa Guy**

**MATH, COMPUTER SCIENCE & STATISTICS  
ROOM 108 HOLLINGS SCIENCE CENTER  
PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00 –8:15 AM	Wireless Mobility faculty sponsor: Dr. Isaac Green      scas author: Isaac Green College of Charleston <b>Presenter: Marwa Shideed</b>
8:15-8:30 AM	Agile Methods faculty sponsor: Dr. Isaac Green      scas author: Isaac Green College of Charleston <b>Presenter: Vincent Cacioppo and Kent Johnson</b>
8:30-8:45 AM	Context-Aware Computing: Current State and Future Development faculty sponsor: Dr. Isaac Green      scas author: Isaac Green College of Charleston <b>Presenter: Richard Baldwin and Shaun Vincent</b>
8:45-9:00 AM	Software Configuration Management faculty sponsor: Dr. Isaac Green      scas author: Isaac Green College of Charleston <b>Presenter: James Niehaus and Nick Johnson</b>
9:00-9:15 AM	Database of Physlet-based Exercises for General Physics scas author: William Junkin Erskine College <b>Presenter: William (Bill) Junkin</b>
9:15-9:30 AM	Do Peer-Led Team Learning Workshops Improve Grades and Retention in Introductory Biology courses and Do Students Like Them? Faculty sponsor: Dr. Sharon L. Gilman      scas author: Sharon L. Gilman Coastal Carolina University <b>Presenter: Mr. Derek Clemmensen</b>
9:30-9:45 AM	Filtering Cross Site Scripting Fault Injections scas author: Jim Harris Georgia Southern University <b>Presenter: Jim Harris</b>

- 9:45-10:00 AM 3-D Software Design for Operator Training at Savannah River Site, SC  
faculty sponsor: Dr. Rao Li  
Westinghouse Savannah River Company, University of South Carolina at  
Aiken  
**Presenter: Bruce Pattison**
- 10:00-10:15 AM The Constrained Longest Common Subsequence Problem  
faculty sponsor: Dr. Rao Li scas author: Orson Nixon  
University of South Carolina Aiken  
**Presenter: Orson Nixon, Cheryl Collins**
- 10:15-10:30 AM Photographs of Project Star Student Spectroscope Spectra as a Teaching  
Aid in General Education Science Classes  
scas author: Terry R. Richardson  
College of Charleston Dept. of Physics and Astronomy  
**Presenter: Terry R. Richardson**
- 10:30-10:45 AM Detecting Patterns in Aircraft Flight Data Using Multiple Regression Time  
Series to Determine Spatial Disorientation  
scas author: Marwa Shideed  
College of Charleston  
**Presenter: Marwa Shideed**
- 1:30-1:45 PM Development and Deployment of an Individual-based Simulation of  
Population Genetics Under Complex Demographies  
faculty sponsor: Allan Strand scas author: Allan Strand  
College of Charleston  
**Presenter: James Niehaus**
- 1:45-2:00 PM Defining an Acceptable Glass Composition Region (AGCR) Through the  
Use of Compositional-Based Constraints: A Preliminary Assessment of  
Durability  
faculty sponsor: Thomas Reid scas author: Thomas Reid  
University of South Carolina  
**Presenter: Thomas Brewer**

**MEDICINE/PUBLIC HEALTH  
ROOM 116 HOLLINGS SCIENCE CENTER  
PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00 –8:15 AM	Improving Culture Medium for Assisted Reproductive Technology Procedures faculty sponsor: H. Lee Higdon III, Ph.D. scas author: William R. Boone, Ph.D. Department of Reproductive Endocrinology and Infertility, Greenville Hospital System <b>Presenter: Mary N. Egbuniwe</b>
8:15-8:30 AM	Vitrification of Mouse Embryos in a Closed System faculty sponsor: H. Lee Higdon III, Ph.D. scas author: William R. Boone, Ph.D. Department of Reproductive Endocrinology and Infertility, Greenville Hospital System <b>Presenter: Melissa A. Hansen</b>
8:30-8:45 AM	Does Seasonality Alter Intrauterine Insemination Outcomes: A Five-Year Study faculty sponsor: William R. Boone, Ph.D. scas author: William R. Boone, Ph.D. Department of Reproductive Endocrinology and Infertility, Greenville Hospital System <b>Presenter: J. Glenn Proctor</b>
8:45-9:00 AM	The Effect of Embryo Transfer Time on Pregnancy Rates in an ART Program faculty sponsor: H. Lee Higdon III, Ph.D. scas author: William R. Boone Greenville Hospital System and Clemson University <b>Presenter: Thomas P. McCoy</b>
9:00-9:15 AM	Kudzu: Boon or Bane for South Carolina? scas author: N. Dwight Camper Clemson University <b>Presenter: Sandra L. Gray</b>

**CHEMISTRY/BIOCHEMISTRY I  
ROOM 103 EDUCATION CENTER  
PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00–8:15 AM	The Preparation of Tetrahydroarylnaphthisoaxozoles and Related Fused-Ring Compounds from Dilithiated 1-Tetralone Oxime or Other Dilithiated Oximes and Select Substituted Benzaldehydes faculty sponsor: Dr. Charles F. Beam scas author: Dr. Charles F. Beam Dept. Chem. & Biochem., College of Charleston <b>Presenter: Ebony J. Hilton</b>
8:15-8:30 AM	Preparation of 3-Substituted 1,2-Benzisothiazole 1,1-Dioxides from Metalated Methyl 2-(Aminosulfonyl)benzoate and Polyolithiated Intermediates or Grignard Reagents faculty sponsor: Dr. Charles F. Beam scas author: Charles F. Beam Dept. Chem. & and Biochem, College of Charleston <b>Presenter: Sara B. Lioi</b>
8:30-8:45 AM	Preparation of 2-(1-Phenyl-1H-pyrazol-5-yl)benzenesulfonamides from Polyolithiated C(alpha),N-Phenylhydrazones and Methyl 2-(Aminosulfonyl)benzoate faculty sponsor: Dr. Charles F. Beam scas author: Charles F. Beam Dept. Chem. & Biochem., College of Charleston <b>Presenter: Laela M. Hajiaghamohseni</b>
8:45-9:00 AM	Preparation of Alkyl (1,1-Dioxido-1,2-benzisothiazol-3(2H)-ylidene)-3-oxo-butanoates from Dilithiated beta-Ketoesters or Lactones and Lithiated Methyl 2-(Aminosulfonyl)benzoate faculty sponsor: Dr. Charles F. Beam scas author: Dr. Charles F. Beam Dept. Chem. & Biochem., College of Charleston <b>Presenter: Nidhi S. Patel</b>
9:00-9:15 AM	Multiple Anion Synthesis of N-Carbomethoxypyrazoles and their Saponification to N-H Pyrazoles and Related Compounds faculty sponsor: Dr. Charles F. Beam scas author: Dr. Charles F. Beam Dept. Chem. & Biochem., College of Charleston <b>Presenter: Michelle A. Meierhoefer</b>

- 9:15-9:30 AM Molecular Dynamics Simulations to Explore the Effect of Mass Matching In Cluster Organic SIMS  
faculty sponsor: Kristin D. Krantzman scas author: Kristin D. Krantzman  
College of Charleston  
**Presenter: Sandra Harper**
- 9:30-9:45 AM Synthesis and Evaluation of the Number of Reduced Neoproaporphine Diastereomers Obtained  
faculty sponsor: Rick Heldrich  
College of Charleston  
**Presenter: Angela Grace Lovett**
- 9:45-10:00 AM Oxidation of Methanol on Supported Cu Nanoparticles  
faculty sponsor: Dr. Donna Chen  
scas author: Jing Zhou  
University of South Carolina  
**Presenter: Fred Parsons**
- 10:00-10:15 AM Crystal Growth, Structural Characterization, and Magnetic Properties of the Double Perovskites  $\text{Ln}_2\text{NaMO}_6$  ( $\text{Ln} = \text{La}, \text{Nd}$ ,  $\text{M} = \text{Ru}, \text{Os}$ ) from Hydroxide Fluxes  
faculty sponsor: Dr. Hans-Conrad zur Loye  
scas author: Hans-Conrad zur Loye  
The University of South Carolina  
**Presenter: William Rollins Gemmill**
- 10:15-10:30 AM Preparation and Characterization of Several Novel Inorganic/Organic Materials Containing Mixed Halide Anions of Bismuth (III)  
faculty sponsor: Dr. Hans-Conrad zur Loye  
scas author: Hans-Conrad zur Loye  
The University of South Carolina  
**Presenter: Andrea Mitchell Goforth**
- 10:30-10:45 AM The Synthesis of Functionalized Bis and Tris(4-Pentylpyrazolyl)methane and the Multitopic Complexes  
faculty sponsor: T. Christian Grattan scas author: T. Christian Grattan  
Winthrop University  
**Presenter: Michael Morant**
- 1:30-1:45 PM The Synthesis of Functionalized Tris(pyrazolyl)methane Ligands and Multitopic Complexes  
faculty sponsor: T. Christian Grattan scas author: T. Christian Grattan  
Winthrop University  
**Presenter: Jennifer O'Neal**

1:45-2:00 PM

Simultaneous Multielement Analysis of Wear Metals in Used Engine Oils  
by High Resolution Electrospray Mass Spectrometry

faculty sponsor: Cliff Calloway    scas author: Cliff Calloway

Winthrop University

**Presenter: Nisheeth Rai**

**CHEMISTRY/BIOCHEMISTRY II**  
**ROOM 317 HOLLINGS SCIENCE CENTER**  
**PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00 –8:15 AM	Polymer Bound Borohydrides: A Simple Method to Increase Loading and Stereoselectivity scas author: James R Blanton The Citadel <b>Presenter: James R Blanton</b>
8:15-8:30 AM	The Effect of Protein Skimmers on Metal Ion Levels in Seawater faculty sponsor: Kevin D. Crawford scas author: Kevin Crawford The Citadel - Chemistry Dept. <b>Presenter: Brian L. Williams</b>
8:30-8:45 AM	Progress Toward the Determination of Juvenile Hormone Titer Levels Using Gas Chromatography Mass Spectrometry faculty sponsor: Rush H. Oliver scas author: Rush H. Oliver Benedict College <b>Presenter: Brian Laing</b>
8:45-9:00 AM	BREAK
9:00-9:15 AM	Native Plants as Potential Sources of Antifungal Agents faculty sponsor: Dr. Frank H. Bellevue III scas author: Frank H. Bellevue III Morris College <b>Presenter: Delmeshia Pringle</b>
9:15-9:30 AM	Calcium Analysis in the Undergraduate Laboratory faculty sponsor: Dr. Frank H. Bellevue III scas author: Marcus Johnson Morris College <b>Presenter: Marcus Johnson</b>
9:30-9:45 AM	Computational Study of Group 14 ansa-Metallocenes faculty sponsor: Jason S. Overby scas author: Jason S. Overby College of Charleston Dept of Chemistry <b>Presenter: William J. Rieter</b>

- 9:45-10:00 AM      Ligand Design for Modelling Metalloenzyme Active Sites  
faculty sponsor: Jason S. Overby      scas author: Jason S. Overby  
College of Charleston      Dept of Chemistry  
**Presenter: William J. Rieter**
- 10:00-10:15 AM      Advances in the Synthesis of 2,2-Disubstituted Amino Acids to be Used in  
Connection with the Meyers ortho-Alkylation  
faculty sponsor: Justin K. Wyatt      scas author: Justin K. Wyatt  
College of Charleston  
**Presenter: M. Florencia Sassano**
- 10:15-10:30 AM      Synthesis of Derivatives for the Novel Antibiotic Cytosporone E to  
Improve Biological Activity  
faculty sponsor: Justin K. Wyatt      scas author: Justin K. Wyatt  
College of Charleston  
**Presenter: Nasar A. Siddiqi**
- 10:30-10:45 AM      Methods for Improving the Enantioselective Synthesis of the Antibiotic  
Cytosporone E  
faculty sponsor: Justin K. Wyatt      scas author: Justin K. Wyatt  
College of Charleston  
**Presenter: Nathan W. Duncan-Gould**

**GEOGRAPHY/GEOLOGY/METEOROLOGY  
ROOM 114 HOLLINGS SCIENCE CENTER  
PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00-8:15 AM	The Processes of Discovering Patterns in the Microclimate of the Etelman Observatory faculty sponsor: Dr. Lee Lindner      scas author: Dr. Lee Lindner College of Charleston <b>Presenter: Mark Walsh</b>
8:15-8:30 AM	Hierarchical Cellular Automaton Models of Earthquake Fault Interaction faculty sponsor: Laney Mills and Steven Jaume' scas author: Laney Mills College of Charleston, Physics and Astronomy and Geology and Environmental Sciences <b>Presenter: Mark D. Creech</b>
8:30-8:45 AM	Characterization Process of the Sanitary Landfill, Savannah River Site scas author: E. Blake Hart Westinghouse Savannah River Company <b>Presenter: E. Blake Hart</b>
8:45-9:00 AM	A Mystery Posed by a Laboratory Tornado faculty sponsor: Laney Mills      scas author: Laney Mills College of Charleston, Physics and Astronomy <b>Presenter: Ashley A. Fields</b>
9:00-9:15 AM	Sensitivity of the SHELDUS Database to Changes in NCDC Storm Data Reporting faculty sponsor: Dr. Susan Cutter      scas author: Matt Schmidlein University of South Carolina, Columbia <b>Presenter: Matt Schmidlein</b>
9:15-9:30 AM	Atmospheric Circulation Patterns Associated With Extreme Southeast United States Rainfall Events faculty sponsor: Dr. Cary J. Mock      scas author: Darren B. Parnell University of South Carolina, Columbia <b>Presenter: Darren B. Parnell</b>

- 9:30-9:45 AM Bahá'í in South Carolina: Evidence of a Middle Eastern Religion on a Southeastern Landscape  
faculty sponsor: Carl Dahlman scas author: Kevin N. Raleigh  
University of South Carolina  
**Presenter: Kevin N. Raleigh**
- 9:45-10:00 AM Geospatial Technology and State-Level Hazard Management  
faculty sponsor: Dr. Michael E. Hodgson  
University of South Carolina  
**Presenter: Jitka Kotelenska**
- 10:00-10:15 AM Point Pattern Analysis of the Space Shuttle Columbia Debris Cloud  
faculty sponsor: William Graf scas author: Tara Koman  
University of South Carolina  
**Presenter: Tara Koman**
- 10:15-10:30 AM Regional Geologic and Hydrologic GIS Coverages for use in Accelerated Clean-up and Siting Studies  
faculty sponsor: Dr. William Pirkle scas author: Timothy Pearson  
University of South Carolina Aiken  
**Presenter: Timothy Pearson**
- 10:30-10:45 AM Comparison of Lead Levels in Urban and Rural Soils  
scas author: Martha M.Griffin  
Columbia College  
**Presenter: Mary E. F. Lewis**
- 1:30-1:45 PM Polar Vortex Variability and its Surface Influence  
scas author: Varavut Limpasuvan  
Coastal Carolina University  
**Presenter: Varavut Limpasuvan and Kumar Jeev**
- 1:45-2:00 PM An Educational DVD: The Earth From Space  
faculty sponsor: Saul J. Adelman scas author: Saul J. Adelman  
The Citadel  
**Presenter: Alex S. Lee**

**PHYSICS/ASTRONOMY I**  
**ROOM 125 HOLLINGS SCIENCE CENTER**  
**PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00–8:15 AM	An Experimental Study of the Pulsating Flow of a Gas Near Critical Pressure Through a Capillary Into a Liquid faculty sponsor: Mikhail M. Agrest      scas author: Mikhail M. Agrest College of Charleston <b>Presenter: Lucas R. Lindsay</b>
8:15-8:30 AM	Plans for a Tri-County Light Pollution Assessment Conducted by Public Volunteers faculty sponsor: Terry R. Richardson scas author: Terry R. Richardson Dept. of Physics and Astronomy College of Charleston <b>Presenter: Dana Richards</b>
8:30-8:45 AM	Resonant Ultrasound Spectroscopy: Applications to MgB2 faculty sponsor: Dr. Alem Teklu College of Charleston <b>Presenter: Brad Knaus</b>
8:45-9:00 AM	A Two-Dimensional Representation of Holographic Data Storage faculty sponsor: Dr. Fred Watts      scas author: Fred Watts The College of Charleston <b>Presenter: Anwarel S. Ferguson</b>
9:00-9:15 AM	Morphological Effects on the Internal Luminosity Function faculty sponsor: Jon Hakkila      scas author: Jon Hakkila College of Charleston    Department of Physics and Astronomy <b>Presenter: Kevin Young</b>
9:15-9:30 AM	Measurement of Elastic Constants of Composite Materials Using Resonant Ultrasound Spectroscopy (RUS) faculty sponsor: Dr. Alem Teklu College of Charleston <b>Presenter: Jay Dandrea</b>
9:30-9:45 AM	Developing a Fluid Collection Technique for Malpighian Tubules faculty sponsor: Karl Karnaky PhD, Linda Jones PhD scas author: Linda Jones College of Charleston <b>Presenter: Stephanie Tully</b>

9:45-10:00 AM	<p>A Computer Representation of the Fractal Structure of the Kidney          faculty_sponsor: Laney Mills          scas author: Laney Mills          College of Charleston, Physics and Astronomy  <b>Presenter: Rebekah L Halkyard</b></p>
10:00-10:15 AM	<p>Correlations of Gamma-Ray Burst Morphology and The Internal          Luminosity Function          faculty sponsor: Dr. Jon Hakkila, Dr. Timothy Giblin          scas author: Stephen Fuller          College of Charleston  <b>Presenter: Stephen Fuller</b></p>
10:15-10:30 AM	<p>Network Access to Meteorological Instruments          faculty sponsor: Dr. James E. Payne                      scas author: James E. Payne          South Carolina State University  <b>Presenter: Rafael Arnette</b></p>
10:30-10:45 AM	<p>BREAK</p>
1:30-1:45 PM	<p>Projectile Motion with Air Friction          faculty sponsor: P.R. Briggs                      scas author: Russell O. Hilleke          The Citadel  <b>Presenter: Ricardo Flores</b></p>
1:45-2:00 PM	<p>Solar Powered Aircraft          faculty sponsor: Russell O. Hilleke                      scas author: Russell O. Hilleke          The Citadel  <b>Presenter: Aaron Sand</b></p>
2:00-2:15 PM	<p>Moving a Miniature Robot          faculty sponsor: R.O. Hilleke                      scas author: Russell O. Hilleke          The Citadel  <b>Presenter: Bart Coursey</b></p>
2:15-2:30 PM	<p>Fluorescence Spectroscopy          faculty sponsor: J.C. Berlinghieri                      scas author: Russell O. Hilleke          The Citadel  <b>Presenter: Aaron Meadows</b></p>

**PHYSICS/ASTRONOMY II**  
**ROOM 126 HOLLINGS SCIENCE CENTER**  
**PRESIDING:**

<b>TIME</b>	<b>TITLE</b>
8:00–8:15 AM	BREAK
8:15-8:30 AM	Reflection Holography Using the Denisyuk Technique faculty sponsor: R. Seth Smith      scas author: R. Seth Smith Francis Marion University <b>Presenter: Debra R. Gibson</b>
8:30-8:45 AM	Individual Reproducibility of Manual Segmentation of CT Images for Skeletal Dosimetry faculty sponsor: Derek W Jokisch      scas author: DW Jokisch Francis Marion University <b>Presenter: Mark Wallace</b>
8:45-9:00 AM	N-Body Simulations of Disk Galaxy Interactions faculty sponsor: Jeannette Myers Francis Marion University <b>Presenter: Blane McCracken</b>
9:00-9:15 AM	Person to Person Variability of Manual Segmentation of CT Images for Skeletal Dosimetry faculty sponsor: Derek Jokisch      scas author: DW Jokisch Francis Marion University <b>Presenter: Nicholas Williams</b>
9:15-9:30 AM	The Effect of Ionizing Radiation on Extracellular Plasmid DNA scas author: DW Jokisch Francis Marion University <b>Presenter: Derek W Jokisch</b>
9:30-9:45 AM	Understanding the Global Positioning System faculty sponsor: Dr. David M. Peterson scas author: David M. Peterson Francis Marion University <b>Presenter: Erin S. Carter</b>
9:45-10:00 AM	Evaluation of Physics Algorithms in Commercial Computer Software faculty sponsor: Philip Fulmer      scas author: R. Seth Smith Francis Marion University <b>Presenter: Trevor Wright</b>

- 10:00-10:15 AM Measurement of Motor Position for a Radio Telescope  
faculty sponsor: Dr. James E. Payne scas author: James E. Payne  
South Carolina State University  
**Presenter: Mr. Marvin Fulton**
- 10:15-10:30 AM Solid State Photometry with LabVIEW  
faculty sponsor: Dr. James E. Payne scas author: James E. Payne  
South Carolina State University  
**Presenter: Deidrick Capers**
- 10:30-10:45 AM Frequency Identifications in the Light Variations of the Lambda Bootis  
Star HD 111604  
faculty sponsor: Robert J. Dukes, Jr. scas author: Dr. Robert J. Dukes, Jr.  
College of Charleston  
**Presenter: Sarah M. Sonnett**
- 1:30-1:45 PM Period Determination of Slowly Pulsating B Star HD21071  
faculty sponsor: Dr. Robert J. Dukes, Jr. scas author: Robert J. Dukes, Jr.  
College of Charleston  
**Presenter: Jennifer E. Andrews**
- 1:45-2:00 PM Global Properties of Three Barred Magellanic Spirals  
faculty sponsor: Eric Wilcots scas author: Kwayera Davis  
College of Charleston  
**Presenter: Kwayera Davis**
- 2:00-2:15 PM Radio Telescope Observations of Jupiter and Solar Radio Emissions  
faculty sponsor: Dr. Jeffrey Wragg scas author: Jeffrey Wragg  
College of Charleston  
**Presenter: Scott Cowen**
- 2:15-2:30 PM Projected Rotational Velocities of O-type Stars in the Large Magellanic  
Cloud  
faculty sponsor: Laura Penny scas author: Laura Penny  
College of Charleston  
**Presenter: Amanda J. Sprague**
- 2:30-2:45 PM First Results of the Digital All Sky Light Pollution Monitoring Program  
for Charleston County South Carolina  
faculty sponsor: Terr R. Richardson scas author: Terry R. Richardson  
Department of Physics and Astronomy, College of Charleston  
**Presenter: Maggie Reardon**

