2019 Celebration of Scholars:
Exposition of Faculty and Student Research, Scholarship and Creativity

Monday, August 19, 2019
11:30 am - 1:30 pm

Addlestone Library
First Floor
The purpose of Undergraduate Research and Creative Activities is to expand opportunities for undergraduate students and faculty to work collaboratively in scholarly work. Research and creative activities may be defined in different ways across disciplines, but in the context of this program these endeavors are defined as “any intellectual, inquiry-based project undertaken by the undergraduate student that advances the knowledge of the student in an academic discipline, immerses the student in the culture of the discipline, and leads to new scholarly insights or the creation of new works that add to the wealth of the discipline.”

Faculty-student collaboration in academic research and creative works is one of the most enriching and rewarding experiences on an undergraduate campus. In fact, this activity is so important that it is becoming one of the standards of excellence by which nationally pre-eminent undergraduate institutions are measured. It is hoped that the faculty-student teams who work on these projects will continue their collaborative efforts into the ensuing academic year and beyond. It is also expected that the teams participating in projects funded by the URCA program will serve as ambassadors of excellence beyond the College of Charleston campus.

Application Deadlines for Academic Year 2019-2020

Research Presentation Grants

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<th>RPG Deadlines</th>
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<td>August 15 - October 31</td>
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Major Academic Year Support Grants

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<th>MAYS Deadlines</th>
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<td>August 30</td>
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Summer Undergraduate Research with Faculty Grants

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<th>SURF Deadline</th>
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<td>February 6</td>
<td>May 12 - August 22</td>
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SURF INFORMATION SESSIONS

Sessions will be held in Berry Residence Hall 104

Wednesday, January 8, 4:00-5:00 pm and Thursday, January 9, 4:00-5:00 pm

Contact us:
Office: 6 Green Way, 2nd Floor
Phone: 843.953.6592
Email: urca@cofc.edu

For updates and information:
Follow us on Facebook, Instagram and Twitter - @cofcurca
Faculty - join the URCA group on Yammer

Grant applications and guidelines can be found on our website: urca.cofc.edu
1. *Monitoring the De Novo Development of a Halophile Bloom Using Next Generation DNA*
   - **Student:** Allyson Pace (Major: Biology; Project Funding: SSM)
   - **Faculty Mentor:** Matthew Rhodes (Biology)

2. *The Effect of Fetal Exposure of DOSS to the Mouse Gut Microbiome*
   - **Student:** Stephanie Hustad (Major: Biology; Project Funding: SURF)
   - **Faculty Mentor:** Matthew Rhodes (Biology)

3. *Long Term Effects of Adult Exposure to DOSS on the Mouse Gut Microbiome*
   - **Student:** Manuela Marquez-Cadavid (Major: Biology; Project Funding: SSM)
   - **Faculty Mentor:** Matthew Rhodes (Biology)

4. *The Silence and Voices Surrounding Abortion Stories in Ireland*
   - **Student:** Mackenzie Pelletier (Major: Public Health; Project Funding: SURF)
   - **Faculty Mentors:** Beth Sundstrom (Communication) and Cara Delay (History)

5. *Time-dependence of the Formation of Aqueous Colloids of the Poly (3-hexylthiophene) Polymer*
   - **Student:** Devin Sharp (Major: Chemistry; Project Funding: SSM)
   - **Faculty Mentor:** David Boucher (Chemistry & Biochemistry)

6. *An Exploration of Relations Between Autobiographical Remembering and Cognitive Biases*
   - **Student:** Hunter Kirkpatrick (Major: Psychology; Project Funding: SURF)
   - **Faculty Mentor:** Gabrielle Principe (Psychology)

7. *The Effects of Burns on Swallowtail Butterfly Population Recovery*
   - **Student:** Suzanna Ellison (Major: Biology; Project Funding: SURF)
   - **Faculty Mentors:** Jean Everett (Biology) and Brian Scholtens (Biology)

8. *Augmented Instruments and Designing Gestural Languages for Music*
   - **Student:** Pan Brougham-Cook (Major: Computing in the Arts; Project Funding: SSM)
   - **Faculty Mentor:** Bill Manaris (Computer Science)

9. *Teaching the Life and Works of Eudora Welty*
   - **Student:** Emma Looby (Major: English; Project Funding: SURF)
   - **Faculty Mentor:** Julia Eichelberger (English)

10. *Welty-Lyell Correspondence*
    - **Student:** Samantha Sommers (Major: English; Project Funding: SURF)
    - **Faculty Mentor:** Julia Eichelberger (English)

11. *Preparation, Characterization, and Conformational Analysis of 1-Sila-1-isocyanocyclopent-2-ene and its Fluoro Analogue*
    - **Student:** Austin Clark (Major: Chemistry; Project Funding: SURF)
    - **Faculty Mentor:** Gamil Guirgis (Chemistry & Biochemistry)
12. *Investigation of the B52 Protein in Honeybee Flight Muscles*  
   **Student:** Matthew Magee (Major - Biology; Project Funding - SURF)  
   **Faculty Mentor:** Agnes Ayme-Southgate (Biology)

13. *Growing up Salty: The Effects of Salinity on Tadpole Development*  
   **Student:** Gabi Tutelo (Major - Marine Biology; Project Funding - SSM)  
   **Faculty Mentor:** Allison Welch (Biology)

14. *Habitat Degredation and Anaxyrus terrestris: The Effect of Increased Salinity on Tadpole Growth and Activity*  
   **Student:** Bella Rupert (Major - Biology; Project Funding - SURF)  
   **Faculty Mentor:** Allison Welch (Biology)

15. *A 3D Imagining System for Screening and Diagnosing Cervical Cancer*  
   **Student:** Quinn Williams (Major - Physics & Astrophysics; Project Funding - Physics Dept. & Pensievision)  
   **Faculty Mentor:** Joe Carson (Physics & Astronomy)

16. *Investigating the Impact of Episodic Stellar Activity on Planet Formation and Evolution*  
   **Student:** Lucy Williamson (Major – Physics & Astrophysics; Project Funding - SURF)  
   **Faculty Mentor:** Joe Carson (Physics & Astronomy)

17. *Utilizing Image Processing Techniques in Search of Directly Imaged Exoplanets*  
   **Students:** Blake Mino (Major - Physics; Project Funding - SC Space Grant Consortium)  
   Austin Purtell (Major - Computer Science; Project Funding - SSM)  
   **Faculty Mentor:** Joe Carson (Physics & Astronomy)

18. *Alluvial Fan Evolution in the Santee River Basin Since the Last Glacial Maximum*  
   **Student:** Erika Gainey (Major - Geology; Project Funding - SURF)  
   **Faculty Mentor:** Scott Harris (Geology & Environmental Geosciences)

19. *Tarot Portrait Print Series*  
   **Student:** Jess Davison (Major - Studio Art; Project Funding - SURF)  
   **Faculty Mentor:** Barbara Duval (Studio Art)

20. *Analysis of Feeding Ecology and Potential Herbivory in Bonnethead Sharks* (*Sphyrna tiburo*)  
   **Student:** James Strange (Major - Marine Biology; Project Funding - SURF)  
   **Faculty Mentors:** Gorka Sancho (Biology) and Bryan Frazier (DNR)

21. *Modeling Shifts in Time Perception Experienced under Microgravity*  
   **Student:** Tristan Aft (Major - Mathematics; Project Funding - Palmetto Academy)  
   **Faculty Mentor:** Sorinel Oprisan (Physics & Astronomy)

22. *Direct Topological Reconstruction of Neuronal Network Weights from Calcium Imaging*  
   **Student:** Xandre Clementsmith (Major - Data Science & Psychology; Project Funding - INBRE)  
   **Faculty Mentor:** Sorinel Oprisan (Physics & Astronomy)
23. **Phase Locking in AII-AII Neural Networks**  
   **Student:** Braylin Williams (Major - Physics; Project Funding - INBRE)  
   **Faculty Mentor:** Sorinel Oprisan (Physics & Astronomy)

24. **Something Borrowed, Something Dead: The Psychic Love Story of Mrs. W.B. Yeats and its Place in the Tradition of Modernist L’écriture Feminine**  
   **Student:** Audrey Robinovitz (Majors – English & Studio Art; Project Funding - SURF)  
   **Faculty Mentor:** Joe Kelly (English)

25. **Narcissism and Emerging Adulthood**  
   **Student:** Casey Roche (Major - Psychology; Project Funding – SURF & Psychology Dept.)  
   **Faculty Mentor:** Amy Kolak (Psychology)

26. **Combustion Fronts and Stability via Differential Equations**  
   **Student:** Choral Linhart (Major - Mathematics; Project Funding - SSM)  
   **Faculty Mentor:** Stephanie Lafortune (Mathematics)

27. **Relationship Between Recombination Rates and Transposable Elements**  
   **Student:** Britt Soyebo (Major - Public Health; Project Funding - NSF)  
   **Faculty Mentor:** Laurie Stevison (Auburn University - Biology)

28. **The Long-term Evolution of Three Classical Novae**  
   **Student:** Ashley Dowd (Major - Astrophysics; Project Funding - SSM)  
   **Faculty Mentor:** Ashley Pagnotta (Physics & Astronomy)

29. **Synthesis of Amines by Nucleophilic Ring Opening of Aziridines**  
   **Student:** Andrew Bogatkevich (Major - Biochemistry; Project Funding - INBRE)  
   **Faculty Mentor:** Tim Barker (Chemistry & Biochemistry)

30. **Reaction between Benzylboronic Esters and Alkyl Halides**  
   **Student:** Wyatt Russell (Major - Chemistry; Project Funding - SSM)  
   **Faculty Mentor:** Tim Barker (Chemistry & Biochemistry)

31. **Reaction of Alkylboronic Esters with Epoxides**  
   **Student:** Phia Gierszal (Major - Biochemistry; Project Funding - INBRE)  
   **Faculty Mentor:** Tim Barker (Chemistry & Biochemistry)

32. **Functional Trait Responses to Temperature and Soil-Nutrient Environments of Arabidopsis thaliana Knockout Mutants**  
   **Student:** Jami Lee (Major - Biology; Project Funding - USDA-REEU, INBRE & SSM)  
   **Faculty Mentor:** Courtney Murren (Biology)

33. **Frequency and Context of Social Media Use and its Relationship with Mental Health Outcomes**  
   **Student:** Kennedy Toole (Major - Public Health; Project Funding – SURF & Sociology Dept.)  
   **Faculty Mentors:** Sarah Hatteberg (Sociology & Anthropology) and Christy Kollath-Cattano (Sociology & Anthropology)
34. *Math and Computing Go to the Movies for Elementary School Curriculum*  
   **Student:** Katie Chea (Major - Computer Information Systems; Project Funding - SSM)  
   **Faculty Mentor:** William Bares (Computer Science)

35. *Progress Toward Antimicrobial Poly(caprolactone) Materials*  
   **Student:** Harrison Koller (Major - Biochemistry; Project Funding - INBRE)  
   **Faculty Mentor:** Brooke Van Horn (Chemistry & Biochemistry)

36. *LIM Domain Proteins as Putative Mediators of the Functional Localization of the RNAi*  
   **Student:** Maddie Davis (Major - Biology; Project Funding - INBRE)  
   **Faculty Mentor:** Antonis Kourtidis (MUSC - Department of Regenerative Medicine and Cell Biology)

37. *Forced Degradation of Acetaminophen under High Heat, Humidity and Radiation*  
   **Student:** Fabio Najjar (Major - Biochemistry; Project Funding - Dr. W. Frank Kinard)  
   **Faculty Mentor:** Wendy Cory (Chemistry & Biochemistry)

38. *Pharmaceutical Degradation of Loratadine*  
   **Student:** Erica Lawson (Major - Chemistry; Project Funding - INBRE)  
   **Faculty Mentor:** Wendy Cory (Chemistry & Biochemistry)

39. *Investigating Aged and Irradiated Medicine Tablets for NASA Space Mission Planning*  
   **Student:** Niamh Cahill (Major - Biochemistry; Project Funding - SURF)  
   **Faculty Mentor:** Wendy Cory (Chemistry & Biochemistry)

40. *Transmittance of Laser Light Through Common Wound Coverings*  
   **Student:** Addison Burger (Major - Physics; Project Funding - SSM)  
   **Faculty Mentor:** Linda Jones (Physics & Astronomy)

41. *Modeling, Simulation and Data Analysis of Mirai Worm Propagation*  
   **Student:** Wes Ford (Major - Computer Science; Project Funding - SSM)  
   **Faculty Mentor:** Xenia Mountrouidou (Computer Science)

42. *Data Generation and Automation for Internet of Things Security Testing*  
   **Student:** Hillary McLaurin (Major - Computer Information Systems; Project Funding - SSM)  
   **Faculty Mentor:** Xenia Mountrouidou (Computer Science)

43. *Active Treatment of Water in Stormwater Retention Ponds Using Filtration Materials*  
   **Student:** Hailey Connell (Major - Geology; Project Funding - SSM)  
   **Faculty Mentor:** Vijay Vulava (Geology & Environmental Geosciences)

44. *Passive Treatment of Water in Stormwater Retention Ponds Using Oysters*  
   **Student:** Shannon Ware (Major - Geology; Project Funding - SSM)  
   **Faculty Mentor:** Vijay Vulava (Geology & Environmental Geosciences)

45. *Metal Catalyzed Coupling in the Synthesis of Bis-Para-Anisyl Alkanes*  
   **Student:** Drew Pampu (Major - Biochemistry; Project Funding - SSM)  
   **Faculty Mentor:** Rick Heldrich (Chemistry & Biochemistry)
46. Clustering of Laboratory Generated Glass Bead Aerosols with an Optical Particle Counter  
   Student: Chris Blouin (Major - Physics; Project Funding - SSM)  
   Faculty Mentor: Michael Larsen (Physics & Astronomy)  

47. An Improved Processing Algorithm for a High Resolution Rain Measurement Device  
   Student: Chris Blouin (Major - Physics; Project Funding - NSF)  
   Faculty Mentor: Michael Larsen (Physics & Astronomy)  

48. Atomic Force Microscopy of Treated Mica Surfaces  
   Student: Pearce Hamilton (Major - Physics; Project Funding – NSF & Physics Dept.)  
   Faculty Mentor: Michael Larsen (Physics & Astronomy)  

49. Development of Calibration Methods for Single Drop Rain Sensors  
   Student: Pearce Hamilton (Major - Physics; Project Funding - NSF & Physics Dept.)  
   Faculty Mentor: Michael Larsen (Physics & Astronomy)  

50. A Social Network Analysis of Obesity in Northern Peru  
   Student: Miranda Badolato (Major - Exercise Science; Project Funding - SURF)  
   Faculty Mentor: Kathleen McInvale (Health & Human Performance)  

51. Statistical Correlation of Tropical Cyclone Impacts on the South Atlantic United States Coastline  
   Student: William Holden (Major - Meteorology; Project Funding - SSM)  
   Faculty Mentor: Bernhard Lee Linder (Physics & Astronomy)  

52. Reward Frustration–Stress Produces Sex Differences in Ethanol Consumption in Rats  
   Student: Miranda Peecher (Major - Psychology; Project Funding - SURF)  
   Faculty Mentor: Chad Galuska (Psychology)  

53. Sorption Behavior of Polycyclic Aromatic Hydrocarbons to Tire Materials  
   Student: Gracie Eldridge (Major - Geology; Project Funding - SURF)  
   Faculty Mentor: Barbara Beckingham (Geology & Environmental Geosciences)  

54. Cold Tolerance of Larvae in the Poleward Invading Porcelain Crab Petrolisthes armatus  
   Student: Megan Treahy (Major - Biology; Project Funding - Grice Marine Lab)  
   Faculty Mentor: Robert Podolsky (Biology)  

55. Expression and Purification of the eNOS(HD) R367k Mutant for Activity Assays  
   Student: Skye Jacobson (Major - Biochemistry; Project Funding - SURF)  
   Faculty Mentor: Amy Rogers (Chemistry & Biochemistry)  

56. Real Time Analysis of Network Data  
   Student: Amanda Guinyard (Major - Computer Science; Project Funding - SSM)  
   Faculty Mentor: Kris Ghosh (Computer Science)  

57. Source Code Analysis for Authorship  
   Student: Erin Murphy (Major - Data Science; Project Funding - SSM)  
   Faculty Mentor: Kris Ghosh (Computer Science)
58. **Two-Scale Factor Universality of O₂ and H₂**  
**Student:** Dereck Morgado (Major - Physics & Astrophysics; Project Funding - NASA Space Grant Consortium)  
**Faculty Mentor:** Ana Oprisan (Physics & Astronomy)

59. **Multi-Scale Decomposition of Density Fluctuations Images in Microgravity**  
**Student:** Dereck Morgado (Major – Physics & Astrophysics)  
**Faculty Mentor:** Ana Oprisan (Physics & Astronomy)

60. **Biophysical Characterization of Ghrelin and its Fragments**  
**Student:** Emily McGee (Major - Biochemistry; Project Funding - INBRE)  
**Faculty Mentor:** Michael Giuliano (Chemistry & Biochemistry)

61. **Bilayer Interactions of the Endogenous Opioids**  
**Student:** Dashiell Jay (Major - Biochemistry; Project Funding - INBRE)  
**Faculty Mentor:** Michael Giuliano (Chemistry & Biochemistry)

62. **Colonizer Biodiversity Along the East Pacific Rise**  
**Student:** Sarge Patel (Major - Biology; Project Funding - SSM)  
**Faculty Mentor:** Heather Fullerton (Biology)

63. **Molecular Detection of Fecal Coliforms and Human Pathogens in Charleston Waterways**  
**Student:** Victoria Wilcox (Major - Biology; Project Funding - SSM)  
**Faculty Mentor:** Heather Fullerton (Biology)

64. **Bio-Based Materials to Synthesize a Novel Surfactant Used in the Production of Polyurethane Foams**  
**Student:** Connor Crull (Major - Biology; Project Funding - SURF)  
**Faculty Mentors:** Neal Tonks (Chemistry & Biochemistry) and Rick Heldrich (Chemistry & Biochemistry)

65. **Synthesis and Analysis of Biologically Compatible Drug Infused Polymers**  
**Student:** Kristen Weeks (Major - Biochemistry; Project Funding - INBRE)  
**Faculty Mentor:** Neal Tonks (Chemistry & Biochemistry)

66. **Developing the Lighting Design Process**  
**Student:** Jordan Benton (Major – Theatre and Dance; Project Funding - SURF)  
**Faculty Mentor:** Jesse Portillo (Theatre and Dance)

67. **Visualizing Deep Learning Networks Trained with Brain Connectome Data**  
**Student:** Drew Moore (Major - Computer Information Systems; Project Funding - SSM)  
**Faculty Mentor:** Brent Munsell (Computer Science)

68. **Assessing the Source(s) of Mercury Across the Paleocene-Eocene Thermal Maximum**  
**Student:** Clara Meier (Major – Geology; Project Funding - SURF)  
**Faculty Mentor:** Theodore Them (Geology & Environmental Geosciences)
69. Effects of Aboitic Stresses on *Arabidopsis thaliana* in the WRKY6 and WRKY23 Mutants  
   **Student:** Gracen Mitrick (Major – Biology; Project Funding - INBRE)  
   **Faculty Mentor:** Matt Rutter (Biology)

70. Studying Root and Fungal Interactions Between *A. thaliana* and *P. indica*: Development of Protocols for Cultivating Plant and Fungus on Agar Media For 3D Imaging Using MRI  
   **Student:** Juan Barcenas (Major – Biology; Project Funding - REU)  
   **Faculty Mentors:** Matt Rutter (Biology) and Courtney Murren (Biology)

71. Effect of Chemogenetic Inhibition of Corticostriatal Neurons on Cocaine Cue–induced Fos Expression  
   **Student:** Mary Nan Leath (Major - Biology)  
   **Faculty Mentor:** Michael Scofield (MUSC - Anesthesiology)

72. Atmospheric Loss from Hot Jupiter–Like Planets Around Active Stars  
   **Student:** Andrew Myers (Major - Astrophysics; Project Funding - Physics & Astronomy Dept.)  
   **Faculty Mentors:** Ana Uribe (Physics & Astronomy) and Joe Carson (Physics & Astronomy)

73. Origin of the Westward Drift of the Lithosphere  
   **Student:** Aidyn Trubey (Majors - Geology & Math; Project Funding - SSM)  
   **Faculty Mentor:** Erin Beutel (Geology & Environmental Geosciences)

74. Synaptic Reorganization after Peripheral Nerve Injury.  
   **Students:** Vernon Kennedy (Major - Biology; Project Funding - NIH)  
   Shynese Wilson (Major - Biology; Project Funding - NIH)  
   **Faculty Mentor:** Jennifer Wilhelm (Psychology)

75. Determination of Mechanical Properties of Molybdenum Disulfide, Rhenium Diselenide, Rhenium Disulfide and Hexagonal Boron Nitride  
   **Student:** Max Rabe (Major - Physics; Project Funding - SSM)  
   **Faculty Mentor:** Alem Teklu (Physics & Astronomy)

76. Sample Production and the Effects of Photoreduction on Graphene Oxide  
   **Students:** Cameron Green (Major - Physics; Project Funding - SSM)  
   George Riser (Major - Physics; Project Funding - SSM)  
   **Faculty Mentor:** Alem Teklu (Physics & Astronomy)

77. Multi–Agent Automated Tracking for Characterizing Animal Behavior  
   **Student:** Luke Stageberg (Major - Mathematics; Project Funding - NSF)  
   **Faculty Mentor:** Jason Vance (Biology)

78. Maximal Flight Performance in the Stalk Eye-Fly, *Teleopsis dalmanni*  
   **Student:** Billy McCamy (Major - Exercise Science; Project Funding - NSF)  
   **Faculty Mentor:** Jason Vance (Biology)

79. Phylogenetic Patterns in Lizard Pelvis Shape  
   **Student:** Shayna Faust (Major - Biology)  
   **Faculty Mentor:** Eric McElroy (Biology)
80. *Non-invasive Photographic Identification to Identify Individuals of the Texas Horned Lizard (Phrynosoma cornutum)*
   
   **Student:** Kaitlyn Dalrymple (Major - Biology; Project Funding - SSM)
   
   **Faculty Mentor:** Eric McElroy (Biology)

81. *Interactions Between Heme Biosynthetic Proteins in Mitochondria*
   
   **Student:** Hannah Addis (Major - Biochemistry; Project Funding - INBRE)
   
   **Faculty Mentor:** Jennifer Fox (Chemistry & Biochemistry)

82. *Predicting Reactivity of Homologous Sulphohydrolases via Bioinformatics*
   
   **Student:** Abigail Reeves (Major - Biochemistry; Project Funding - INBRE)
   
   **Faculty Mentors:** Jennifer Fox (Chemistry & Biochemistry) and Marcello Forconi (Chemistry & Biochemistry)

83. *Investigating the Mechanism of Eukaryotic Heme A Synthase*
   
   **Student:** Mason Huebsch (Major - Chemistry; Project Funding - INBRE)
   
   **Faculty Mentor:** Jennifer Fox (Chemistry & Biochemistry)

84. *Sponge Babies: Larval Survey of Caribbean Sea Sponges*
   
   **Student:** Abby Stephens (Major - Marine Biology; Project Funding - SSM)
   
   **Faculty Mentor:** Christopher Freeman (Biology)

85. *The Sponge Loop: An Investigation of Detritus Production by Caribbean Sponges*
   
   **Student:** Samantha Czwalina (Major - Biology; Project Funding - SURF)
   
   **Faculty Mentor:** Christopher Freeman (Biology)

86. *Synthesis of 3-deutero-5-nitrobenzisoxazole*
   
   **Student:** Elizabeth Smolenski (Major - Biochemistry; Project Funding - INBRE)
   
   **Faculty Mentors:** Marcello Forconi (Chemistry & Biochemistry) and Rick Heldrich (Chemistry & Biochemistry)

87. *Modification of Thiols via Nucleophilic Aromatic Substitution*
   
   **Student:** Jaclyn Dunne (Major - Biology; Project Funding - INBRE)
   
   **Faculty Mentors:** Marcello Forconi (Chemistry & Biochemistry) and Michael Giuliano (Chemistry & Biochemistry)

88. *Introduction of Fluoroaromatic Probes into Proteins and Peptides*
   
   **Student:** James Linzel (Major - Chemistry; Project Funding - INBRE)
   
   **Faculty Mentor:** Marcello Forconi (Chemistry & Biochemistry)

89. *Longitudinal Assessment of Weight Fluctuations Following Renal and Pancreatic Transplantation*
   
   **Student:** Karlee Stinson (Major - Exercise Science; Project Funding - SURF)
   
   **Faculty Mentor:** John Sieverdes (Health & Human Performance)

90. *An Effective and Flexible Intrusion Detection System Based on Machine Learning*
   
   **Student:** Barber Carson (Major - Computer Science; Project Funding - SSM)
   
   **Faculty Mentor:** Mukesh Kumar (Mathematics)
91. *A Robust, Highly Accurate and Efficient Isogeometric Collocation Method for Phase Field Models*
   **Student:** Michael Lanier (Major - Mathematics; Project Funding - SURF)
   **Faculty Mentor:** Mukesh Kumar (Mathematics)

92. *Depletion of Serotonin Regulates Leptin's Ability to Reduce Food Intake*
   **Student:** Katie Jimenez (Major - Psychology; Project Funding - NSF)
   **Faculty Mentor:** Claudia Grillo (USC - Department of Pharmacology, Physiology & Neuroscience)

93. *The Effect of Intranasal Leptin Administration on Feeding Behavior and Neuronal Activation*
   **Student:** Jesseca Crawford (Major - Biology; Project Funding - NSF)
   **Faculty Mentor:** Claudia Grillo (USC - Department of Pharmacology, Physiology & Neuroscience)

94. *Interactions of Type I X-ray Bursts with Thin Accretion Disks*
   **Student:** Aidan Blankenship (Major – Astrophysics & Physics; Project Funding - SURF)
   **Faculty Mentor:** Chris Fragile (Physics & Astronomy)

95. *Quasi-Periodic Oscillations from a Precessing, Hot, Thick, Torus Like Flow*
   **Student:** Erika Hamilton (Major – Physics; Project Funding - NSF)
   **Faculty Mentor:** Chris Fragile (Physics & Astronomy)

96. *Magneto Rotational Instability in Magnetically Polarized Disks*
   **Student:** Bridget Ierace (Major - Astrophysics; Project Funding - SSM)
   **Faculty Mentor:** Chris Fragile (Physics & Astronomy)

97. *X-ray Variability: Bridging Simulations and Observational Data*
   **Student:** Trey Nguyen (Major - Astrophysics; Project Funding - NSF)
   **Faculty Mentor:** Chris Fragile (Physics & Astronomy)
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