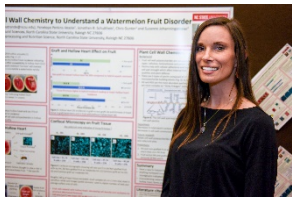
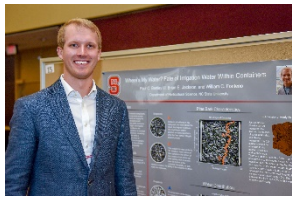
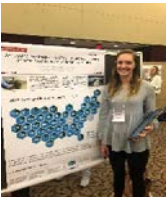

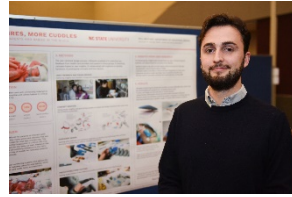


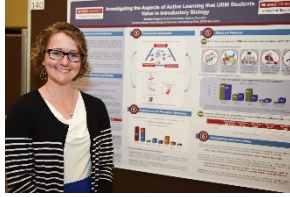

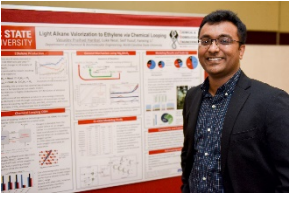
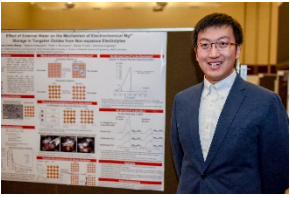





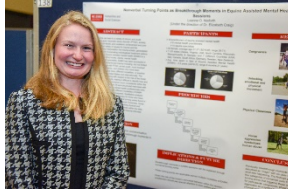
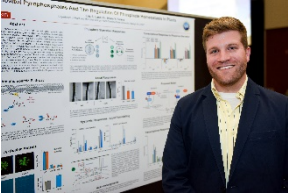
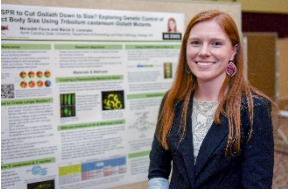
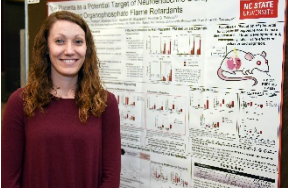
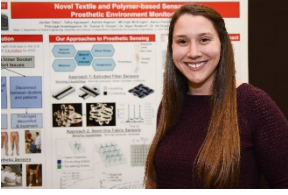
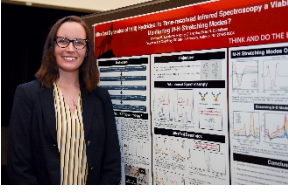
Fourteenth Annual Graduate Student Research Symposium

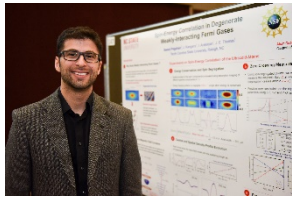
Congratulations to the winners of the Fourteenth Annual Graduate Student Research Symposium!

Each year, the Symposium showcases the outstanding quality and diversity of graduate-level research at NC State. The Symposium was held on March 20, 2019 at the McKimmon Center. First-, second-, and third-place winners have been announced in eight categories.

AGRICULTURAL SCIENCES & NATURAL RESOURCES	
	<p>1st Place: Marlee Trandel - Horticultural Science</p> <p>Exploring Cell Wall Chemistry to Understand a Watermelon Fruit Disorder</p>
	<p>2nd Place: Paul Bartley III - Horticultural Science</p> <p>3-Dimensional Characterization of Plant Roots and Their Environment with X-ray Microtomography</p>
	<p>3rd Place: Megan Coffey - Geospatial Analytics</p> <p>Assessing the Frequency of Cyanobacterial Blooms in Waterbodies Across the United States</p>
DESIGN	
	<p>1st Place: Alysa Buchanan - Graphic Design</p> <p>Supporting Soldier Mental Health While on Deployment: A System of Designed Interventions</p>
	<p>2nd Place: Will Reuther - Industrial Design</p> <p>Designing Wireless Vital Sign Monitors that Reduce Environmental Distractions and Promote Family-child Interaction for Babies in the Neonatal Intensive Care Unit (NICU)</p>
	<p>3rd Place: Joachim Gawryolek - Industrial Design</p> <p>Exploring the Need for a Creative-led Community and New Approaches to Develop an Inclusive Environment for Creative Life in a Public Space</p>

EDUCATION	
	<p>1st Place: Megan Ennes - Science Education</p> <p>Beyond the Child: Building Science Capital and Parent Science Habitus Through Family STEM Programs</p>
	<p>2nd Place: Michelle Nugent - Science Education</p> <p>Investigating the Aspects of Active Learning that URM Students Value in Introductory Biology</p>
	<p>3rd Place: Sarah Egan Warren - Educational Leadership, Policy and Human Development</p> <p>Former Ballet Dancers' Transfer of 21st Century Skills to Careers as Data Analysts</p>
ENGINEERING	
	<p>1st Place: Vasudev Haribal - Chemical and Biomolecular Engineering</p> <p>Light Alkane Valorization to Ethylene via Chemical Looping</p>
	<p>2nd Place: Ruocun Wang - Materials Science and Engineering</p> <p>Effect of Adscititious Water on the Mechanism of Mg²⁺ Intercalation in Tungsten Oxides from Non-aqueous Electrolytes</p>
	<p>3rd Place: Landon Mackey - Electrical Engineering</p> <p>Protecting Distributed Renewable Energy Resources with Direct Current Circuit Breakers</p>
HUMANITIES	
	<p>1st Place: Amanda Finn - Public History</p> <p>Land, Legacy, and Language: Bridging the Public History Gap through Family History</p>

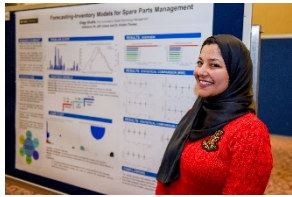
	<p>2nd Place: Marissa Morgan - English</p> <p>Azealia Banks vs. Cardi B: The Great Debate, Evolved</p>
	<p>3rd Place: Leanne Nieforth - Communication</p> <p>A Proposed Process Behind the Breakthrough Moments in Equine Assisted Mental Health Sessions</p>
<p>LIFE SCIENCES</p>	
	<p>1st Place: Eric Land - Plant Biology</p> <p>Inositol Pyrophosphates and the Regulation of Phosphate Homeostasis in Plants</p>
	<p>2nd Place: Meredith Favre - Entomology</p> <p>Using CRISPR to Cut Goliath Down to Size? Exploring Genetic Control of Insect Body Size using Tribolium castaneum Goliath Mutants</p>
	<p>3rd Place: Kylie Rock - Toxicology</p> <p>The Placenta as a Potential Target of Neuroendocrine Disruption: Effects of Brominated and Organophosphate Flame Retardants</p>
<p>MATHEMATICAL AND PHYSICAL SCIENCES</p>	
	<p>1st Place: Jordan Tabor - Fiber and Polymer Science</p> <p>Novel Textile and Polymer-based Sensors for Prosthetic Environment Monitoring</p>
	<p>2nd Place: Chelsea Taliaferro - Chemistry</p> <p>Ultrafast Dynamics of Ir(III) Hydrides: Is Time-resolved Infrared Spectroscopy a Viable Technique for Monitoring M-H Stretching Modes?</p>



3rd Place: Saeed Pegahan - Physics

[Spin-energy Correlation in Degenerate Weakly-interacting Fermi Gases](#)

SOCIAL SCIENCES AND MANAGEMENT



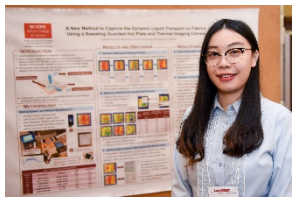
1st Place: Engy Shafik - Textile Technology Management

[Forecasting-Inventory Models for Spare Parts Management](#)



2nd Place: Danielle Lawson - Parks, Recreation and Tourism Management

[Adolescents as Climate Communicators: New Methods for Engaging Everyone in the Climate Change Conversation](#)



3rd Place: Juechen He -Textile Technology Management

A New Method to Capture the Dynamic Liquid Transport on Fabrics Using a Sweating Guarded Hot Plate and Thermal Imaging Camera