



*2023 Research and Creative  
Achievement Week*

*Awards Luncheon*

*April 10, 2023*

Thank you to our Luncheon Sponsor  
NC Biotechnology Center®

# BUFFET LUNCHEON

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## **Welcome**

Dr. Kathleen Cox, Interim Dean, Graduate School  
Dr. Sharon Paynter, Acting Chief Research and Engagement Officer

## **Opening Remarks**

Dr. Robin N. Coger, Provost & Senior Vice Chancellor for Academic Affairs

## **Distinguished Graduate Faculty Mentor Awards Thesis and Dissertation Awards**

Dr. Kathleen T. Cox, Interim Dean  
The Graduate School

## **RCAW Postdoctoral Scholar Awards**

Dr. Jaimie DeWitt, Interim Director of Postdoctoral Affairs  
Division of Research, Economic Development, and Engagement

## **RCAW Graduate Awards**

Dr. Michelle F. Eble, Faculty Fellow  
The Graduate School

## **RCAW Undergraduate Awards**

Dr. Tuan Tran, Director of Undergraduate Research  
Division of Research, Economic Development, and Engagement

## **Capture 180 Awards**

Dr. Tuan Tran, Director of Undergraduate Research  
Division of Research, Economic Development, and Engagement

## **“Capturing the Art of Science” Laser Technology Applications Group (TAG)**

Dr. Karen Litwa, Co-Chair, Laser TAG  
Department of Anatomy and Cell Biology

## **Closing Remarks**

Dr. Kathleen Cox, Interim Dean  
The Graduate School

# Thank You to Our Mentors!

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Abdel-Rahman, Abdel-Rahman  
Ables, Elizabeth Tweedie  
Agarwala, Ranjeet  
Aileru, Azeez  
Akhnoukh, Amin Kamal  
Alexander, Marina  
Alexander, Patrice Elaine  
Allen, William E  
Anderson, Eric Shawn  
Asch, Rebecca G  
Autry, Cari Elaine  
Babatunde, Oyinlola Toyin  
Baker, Michael Drew  
Banerjee, Sambuddha  
Beierlein, Jaclyn J  
Bell, Natasha Lynn  
Beltran-Huarac, Juan  
Black, Kristin Zeneo  
Blake, Beth A  
Blakeslee, April Monica Houghton  
Briley, Patrick Minton  
Broskey, Nicholas Thomas  
Bryson, Sara  
Cai, Sunny  
Caiola, Courtney Ellis  
Castles, Ricky  
Caswell, Nicole Irene  
Chalcraft, David R  
Christensen, Timothy W  
Clemens, Stefan  
Cofie, Leslie E  
Das, Bhibha Mayee  
de Castro Bras, Lisandra E  
De Jesus Toderick, Elizabeth  
DeVile, Kenneth  
DeWitt, Jamie C  
DeWitt, Regina  
Dias, Nancy  
Dickerson, Anne  
Didonna, Alessandro  
Dillon, Margaret Ann  
Dixon, Helen Marie  
Dolbier, Christyn  
Domire, Zachary J  
Donica, Denise  
Doyle-Mekkes, Jessica Bligh  
Duba, Kurabachew Simon  
Durland, Alexander Nathaniel  
Eagle, John Scott  
Eble, Michelle F  
Egan, Kathleen Louise  
Elliott, Daniel Wayne  
Eppler, Marion A  
Ewen, Charles R  
Farrow, John Matthew  
Fazzone, Patricia Anne  
Fernandez, Madeline  
Field, Erin Kirby  
Filho, Faete  
Fisher-Wellman, Kelsey Howard  
Fletcher, James C  
Frost, Erin Anne  
Furner, Zhan Zhang  
Gantt, Laura T  
Garcia, Brandon L  
George, Stephanie  
Geraldeli, Saulo  
Golden, Jean Ann  
Goodwillie, Carol  
Graber, Theodore G  
Grace-McCaskey, Cynthia A  
Grady, Maureen M  
Gregory, Kristen Howell  
Habeeb, Christine  
Hannan, Johanna  
Hargrove, Jarvis Lamar  
Harris, Michael Lee  
Hegde, Archana

Herndon, Nic  
Holt, Yolanda Feimster  
Horsman, Eric  
Hu, Xin-Hua  
Huang, Hu  
Huang, Jinling  
Huang, Yilei  
Hudson, Nathan E  
Huener, Thomas Joel  
Hughes, Robert Murray  
Humphrey, Charles Pittman  
Hur, Mi-Sook  
Hvastkovs, Eli Gerald  
Irons, Paige Latham  
Irwin, Megan Rebecca  
Issa, Fadi Aziz  
Iverson, Guy Joseph-Gene  
Johnson, Erika Katherine  
Johnson, Sarah Elizabeth  
Jung, Jae Won  
Kain, Donna Jean  
Kane, Melinda D  
Katwa, Laxmansa C  
Kearney, Gregory Dale  
Keiper, Brett  
Koch, Peter J  
Komoski, Mary Catherine  
Kulas, Anthony  
Lamb, Richard Lawrence  
Lamson, Angela Lynn Smith  
Larsen, Deirdre Helen Suzanne  
Larson, Kim L  
Lazure, Timothy  
Lee, Jinkun  
Lee, Jonathan Michael  
Lee, Joseph G  
Lee, Myon Hee  
Lee, Tammy D  
Lemasson, Isabelle  
Lesko, Charles John  
Levi Altstaedter, Laura  
Lewis, Travis Earl  
Lim, Kwang Hun  
Lin, Ziwei

Linder, Julie Michelle  
Litwa, Karen Ann  
Loudon, James Ernest  
Malkin, Michelle L  
Mallinson, David J  
Matthews, Jennifer Cremeens  
May, Linda Elizabeth  
Mayo, Margaret Rogers  
Mazow, Laura B  
McClung, Joseph Matthew  
McIntyre, Amy Elizabeth  
McMillan, Amy  
McRae, Susan B  
Meardon, Stacey Augusta  
Medina, Almitra  
Meher, Akshaya Kumar  
Miles, Gera S  
Miller, James Kirk  
Milton, Morgan Eilise  
Mitra, Siddhartha  
Mizelle, John Christopher  
Moore, Shawn Anthony  
Moss, Mark Eric  
Moysey, Stephen  
Mukherji, Anuradha  
Muller-Borer, Barbara Jean  
Murashov, Alexander K  
Murphy, Larkin Dewey  
Murray, Nicholas P  
Nassehzadeh-Tabrizi, Moha  
Nimmo, Mary Jo Bankhead  
Normoyle, Catherine Lucille  
O'Reilly, Dennis M  
Offenbacher, Adam Richard  
Owens, Tosha Lynn  
Page, Sarah  
Pan, Xiaoping  
Park, Yoo Min  
Peach, Matthew Sean  
Peralta, Ariane Legaspi  
Perry, Jamie L  
Pickard, John L  
Pokhrel, Lok R  
Popoviciu, Ciprian

Quick, Linda Ann  
Raupp, Jason Thomas  
Reinsmith-Jones, Kelley K  
Reisch, John T  
Richardson, Mark Douglas  
Richman, Alice Rose  
Robbins, Thomas R  
Robinson, Zachary  
Roop, Roy M  
Roper, Rachel L  
Rothermich, Kathrin  
Rupp, Nicholas G  
Ryan, Teresa Jean  
Saeed, Syed A  
Sastre, Lauren Rogers  
Schmidt, Cameron Alan  
Schwalbe, Ruth  
Sears, Samuel F  
Shearman, Sachiyo M  
Shewchuk, Brian M  
Shinpaugh, Jefferson  
Smith, Aimee West  
Soule, Eric Kendall  
Sousan, Sinan  
Spain, Renee O  
Spuches, Anne M  
Stiller, John W  
Summers, Kyle  
Surkar, Swati Manoharrao

Swain, Amy Elizabeth  
Swift, Alison D  
Szatmari, Erzsebet Maria  
Taylor, Alan  
Tedesco, Laureen  
Tempel, Thomas R  
Thompson, Beth  
Ticknor, Anne Swenson  
Tisnado, James R  
Tran, Tuan D  
Tulis, David Anthony  
Tumin, Dmitry  
Vadati, Alex  
Vance Chalcraft, Heather D  
Vermiglio, Andrew J  
Wagner, Jennie Maria-Nora  
Walcott, Christy Mangione  
Walker, Joi Phelps  
Wells, Angela Franks  
Wheeler, Michael D  
White, Kevin Robert  
Willson, John David  
Wrenn, Melissa Joy  
Wu, Rui  
Yang, Li  
Zhang, Baohong  
Zhu, Yong  
Zipf, Karin L

# 2023 ECU DISTINGUISHED GRADUATE FACULTY MENTOR AWARDS

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This award is given annually to recognize East Carolina University faculty members who exemplify outstanding commitments to academic, professional, and personal development of graduate students through mentoring and advising. One award for mentoring master's students and one award for mentoring doctoral students is given each year. The selection committee of faculty and graduate students considers traditional and innovative ways in which faculty members mentor graduate students. The selection committee considers evidence of success as an outstanding mentor; guiding students in their intellectual growth; helping them develop independent research interests; and fostering their development of communication, interpersonal, research, and professional skills.

# ECU DISTINGUISHED GRADUATE FACULTY MENTOR AWARD DOCTORAL CATEGORY

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## **Dr. Travis Lewis**

Department of Educational Leadership  
College of Education



Dr. Lewis is an assistant professor in the Department of Education Leadership program where he serves as the EdD program director. Dr. Travis Lewis earned his doctorate in education with a specialization in educational leadership from East Carolina University. His research focuses on the influence of school leadership practices on K-12 teacher recruitment and retention. His background in both counseling and in school leadership provides the students with a safe and generative space to design and cultivate the action-orientated projects that make contributions to their school districts as well as help them achieve their professional goals.

Dr. Lewis is recognized for his commitment to providing doctoral students with “affirming, supportive, informative, efficient, and empathetic” interactions as they complete their program successfully. One student wrote that Dr. Lewis “praises the hard work of his students. He acknowledges real life challenges and balances empathy with goal completion.” The faculty who nominated Dr. Lewis wrote that his advocacy for students “is grounded in equity and social justice,” and he ensures that students are “challenged academically and professionally...by offering supportive direction, evaluation, guidance, and feedback.” Dr. Lewis consistently puts his students first and does all he can to maintain the high caliber doctoral program in education at ECU.

# ECU DISTINGUISHED GRADUATE FACULTY MENTOR AWARD MASTER'S CATEGORY

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## **Dr. Keith Richards**

School of Communication

College of Fine Arts and Communication



Dr. Keith Richards is Graduate Program Director and Associate Professor in the School of Communication, in the College of Fine Arts and Communication. He obtained his Ph.D. in Communication Studies from the University of Connecticut. As a leader of graduate education in the School of Communication, Dr. Richards has created materials and developed supportive practices for a large MA program with a wide variety of students and professionals. He is committed to developing both the academic and professional capacity of students that leads to their success.

Dr. Richards is recognized for his multidimensional mentoring style and commitment to mentoring students from early conversations during recruitment throughout the program phases, and beyond. One student nominator wrote that Dr. Richards “works tirelessly to enhance the graduate student experience” through his “guidance and advice on achieving academic success, career success, and overall growth.” One faculty nominator noted that “some of his deepest contributions to mentorship come from actively listening to student’s interests and needs and then working proactively to make sure those needs are met.” Dr. Richards works to foster a culture where a large and diverse group of graduate students feel welcomed and supported.



# ANNUAL THESIS AND DISSERTATION AWARDS

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The Graduate School and the Division of Research, Economic Development, and Engagement at East Carolina University sponsor thesis and dissertation awards to recognize and honor outstanding research and scholarship at the graduate level. Each recipient is recognized during Research and Creative Achievement Week. During the fall semester, each college is invited to nominate students for these awards.

## **Eligibility and Criteria for Selection**

Awards are presented in two categories for the 2023 Master's Theses Award: (1) Social Sciences, Business, and Education and (2) Life Sciences are presented in two categories for the 2023 Doctoral Dissertation Award: (1) Humanities and (2) Life Sciences

Thesis and dissertations are selected from specific previous years to meet requirements for nomination to regional and national competitions.

A selection committee composed of ECU Graduate Faculty reviewed nomination materials and considered the methodological and substantive quality of theses and dissertations, as well as their contributions to the student's chosen discipline and field of research. We thank the college-level and university-level committee members for their work in determining today's awardees.

# DOCTORAL DISSERTATION AWARD: HUMANITIES

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## **Alicia K. Hatcher**

PhD in Rhetoric, Writing, and Professional Communication

Thomas Harriot College of Arts and Sciences, Department of English

Dissertation title: “Performative symbolic resistance: examining symbolic resistance efforts of black professional athletes through a new methodological analytical framework”

Dissertation Director: Dr. Michelle Eble

This dissertation introduces the concept of Performative Symbolic Resistance (PSR) as a way to describe and analyze the individual acts and performed by activists in their efforts to bring awareness to and combat social injustices. I define Performative Symbolic Resistance (PSR) as the use of a specific nonverbal motion(s) or act(s) as a languaging strategy to symbolize protest against a socially constructed system of oppression. This project situates Performative Symbolic Resistance (PSR) as 1) a denotative term used to name the strategy(ies) social activists use as they seek acknowledgement of and redress for social ills, 2) an illustrative term used to describe a strategy social activists use as they seek acknowledgement of and redress for social ills, and 3) an analytical tool that scholars of rhetoric and technical and professional communication (TPC) can use in their continued efforts to examine how performance, performativity, and symbolism are and can be used to engage in acts of resistance. It is based on the idea that an individual can use their physical body to perform resistance while simultaneously using specific spaces, and acts to 1) symbolize an idea or ideology and to 2) create or perpetuate a resistant rhetoric. I offer it as a tool that can be used 1) to acknowledge and privilege rhetorical acts by groups of people who are discounted and even demonized, and 2) to further decolonize the rhetoric often used to describe the acts of protestors and activists as they attempt to combat systemic and socially perpetuated oppressions.

<https://thescholarship.ecu.edu/handle/10342/9365>

# DOCTORAL DISSERTATION AWARD: LIFE SCIENCES

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## **Christopher Scott Moore**

PhD in Interdisciplinary Doctoral Program in Biology, Biomedicine, and Chemistry,  
Department of Biology

Dissertation title: "Trophically transmitted parasites as 'cross-taxon surrogates' of biodiversity in coastal environments"

Dissertation Director: Dr. April Blakeslee

Parasitism is a highly successful life history strategy, and estimates suggest that as much as 40% of life on earth is parasitic. Healthy ecosystems have high parasite diversity, which in turn reflects underlying patterns of host diversity. Cumulatively, these host-parasite interactions span multiple trophic levels and are sensitive to disturbance, making trophically transmitted parasites useful as conservation tools for addressing a multitude of applied and theoretical questions. The four chapters in this dissertation advance the theory and practice of using trophically transmitted parasites as cross-taxon surrogates of biodiversity. Parasite diversity in key host species was used to assess overall community diversity, habitat heterogeneity, and ecosystem restoration outcomes in the short-term (<1-year) and up to 25 years following the addition of structured habitat. Chapter 1 quantifies the population structure of the naked goby (*Gobiosoma bosc*), a species of fish that likely serves as a key host within host-parasite food webs in the Pamlico and Neuse rivers. There is extensive gene flow among populations of gobies, although there is also evidence of local adaptation as evidenced by the frequency of unique haplotypes. Interestingly, parasite diversity in these fish appeared to be greater in areas with intact natural habitat, in contrast to anthropogenically-modified areas, an observation that became the focus of Chapter 2. For this work, infra-communities of digenetic trematodes were sampled from the eastern mudsnail (*Ilyanassa obsoleta*), a key host for trematode parasites in intertidal marine environments. Trematode community richness, evenness (Pielou's), and diversity (Shannon, Simpson) were greater in snails sampled from natural shorelines with complex habitat (e.g., oyster reefs, saltmarsh cordgrass) as opposed to shorelines artificially reinforced with bulkhead structures. There were also important differences at the community-level that likely reflect underlying patterns of host diversity at different shoreline types. For example, the trematodes *Lepocreadium seterifoides* (LS) and *Zoogonus lasius* (ZL) were the most common species sampled across all sites, although they dominated parasites communities in artificial shorelines. Polychaetes serve as intermediate hosts for LS and ZL, taxa that are ubiquitous but more common in polluted or habitat-poor environments. On the other hand, the trematode HQ, which requires mollusks and shorebirds as hosts, was only found at sites with natural shorelines, suggesting that these areas are less disturbed and have a greater diversity of taxa serving as intermediate hosts. Chapters 3 and 4 expand on the role of habitat by testing the short and long-term response of the host-parasite

community to ecological restoration. Chapter 3 used parasite diversity in common intermediate hosts to assess how traditional forms of habitat restoration (e.g., shell bags) compared to novel methods (e.g., Oyster Catchers™) in the short-term (< 1-year) following restoration. Relative to areas with bare mud flats, most host-parasite taxa groups increased in response to the presence of structure, although habitat complexity (i.e., oyster density) mattered less than the overall volume of habitat added to the system. There were also clear shifts in the functional diversity of species present in the community from more generalist taxa (e.g., grass shrimp, naked gobies) to reef-resident organisms (e.g., striped blennies, snapping shrimp). However, in the short-term following restoration it can be difficult to determine whether organisms are responding to the presence of added structure or the disturbance posed by the restoration itself. Chapter 4 used parasite diversity as a tool to evaluate long-term patterns of community succession in restored oyster reefs (5 to 22 years old). In general, the diversity of free-living taxa was highly variable and did not differ among New-Restored (<10 years), Old-Restored (>20 years), and Natural reefs. Conversely, parasite diversity increased with elapsed time post-restoration, and parasite communities in older restored reefs were more similar to those found in natural reefs. In addition, oyster toadfish (*Opsanus tau*) were identified as a key host species capable of facilitating parasite transmission and trophic ascent in oyster reefs food webs. According to the parasite data, trophic complexity in restored oyster reefs required at least 10 years to resemble that found in natural reefs. Altogether, this dissertation adds to a growing body of evidence demonstrating how parasites can serve as conservation tools. It also advances the rationale for using trophically transmitted parasites as biodiversity surrogates. Surrogate species in biodiversity monitoring studies must be capable of predicting the presence of other, more elusive taxa. Preference should be given to taxonomic groups from different trophic levels, especially cross-taxon surrogates that represent the functional links between organisms. Trophically transmitted parasites are ideal cross-taxon surrogates of biodiversity and trophic complexity, particularly when parasite diversity can be quantified in one or more key host species. Complete abstract available at: <https://thescholarship.ecu.edu/handle/10342/10630>

# MASTER'S THESIS AWARD: LIFE SCIENCES

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## **Emory Wellman**

MS in Biology, Department of Biology

Thesis title: "Using plant-bivalve inter-specific facilitation to enhance coastal restoration"

Thesis Director: Dr. Rachel K. Gittman

Salt marshes and oyster reefs are critical ecosystems which are being lost or degraded at an alarming pace around the world. Current restoration efforts are insufficient to compensate for past and current habitat degradation, with restoration often ending in failure or only partial recovery. Increasingly, ecologists are calling for the inclusion of facilitation in coastal restoration efforts as a method to bolster success. Facilitation is a positive interaction in which a habitat modifier reduces local abiotic or biotic stressors, allowing organisms which were previously excluded to persist. Inter-specific positive interactions are predicted to be particularly important in areas of high physical stress. In North Carolina, fringing oyster reefs and salt marsh vegetation facilitate each other's growth and persistence through attenuation of wave energy and substrate stabilization. These positive interactions represent a promising method to address pressing issues in coastal restoration, specifically, marsh restoration in environments stressed by high wave energy and excessive nutrient enrichment. To date, coastal restoration has largely failed to incorporate the benefits of positive interactions, despite research indicating that such facilitation may increase restoration success. I examined the ability of oyster reefs to mitigate hydrodynamic and nutrient enrichment stress on marsh vegetation (smooth cordgrass, *Spartina alterniflora*) in two studies at an eroding salt marsh in Beaufort, North Carolina. In Study 1, I constructed restored oyster reefs from two restoration substrates (Oystercatcher, OC; and shell bags, SB) on low- and high-energy shorelines, and compared their abilities to mitigate shoreline retreat, accrete and retain marsh sediment, and promote robust oyster communities. In Study 2, I investigated whether oyster reef presence can mitigate detrimental impacts of nutrient over-enrichment by transplanting and experimentally fertilizing *S. alterniflora* at a subset of the OC reef sites, comparing their growth and survival to that at control non-reef sites. Study 1 took place from May 2018 to August 2020, while Study 2 occurred in Summer 2019, with each study period including at least one extreme storm event (i.e. hurricane or tropical storm). In Study 1, constructed reefs mitigated marsh retreat on both shorelines, with the OC reefs outperforming SB reefs on the high-energy shoreline. SB reefs on that shoreline were severely damaged by storm events, while OC reefs on both shorelines exhibited steady oyster recruitment and growth. OC reefs hosted higher densities of larger oysters. In Study 2, transplanted vegetation experienced high rates of mortality, which were impacted by a complex interaction between elevation, fertilization, and reef presence. Unsurprisingly, the most waterward portions of plots experienced greatest elevation loss. Reef presence fostered both higher plant survival and higher shoot density, while clonal expansion was greater at control sites. Shoot density decreased over the course of the study, while clonal expansion peaked in late July before also declining. Overall, any

effect of fertilization was swamped by the high hydrodynamic stress impacting transplanted vegetation. Conventional restoration approaches are often ineffective in areas of high stress. I highlight the ways in which deliberate decisions regarding oyster reef substrate and siting can maximize protection to salt marsh edges, and critical considerations for future research regarding mitigation of nutrient over-enrichment in threatened salt marsh systems. Harnessing of inter-specific facilitation between native foundation species represents a promising avenue to restore and protect these critical habitats. <https://thescholarship.ecu.edu/handle/10342/9377>

## MASTER'S THESIS AWARD: SOCIAL SCIENCES, BUSINESS, AND EDUCATION

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**Gwyneth M. Schuler**

MS in Recreation Sciences, Department of Recreation Sciences

Thesis title: “#oldnews: Diffusion of Pro-Conservation Behaviors and Social Media in Wildlife Tourism”

Thesis Director: Dr. Jeffrey Skibins

Wildlife tourism, i.e., tourism that involves interactions with wildlife, is extremely popular and can occur in in situ (e.g., parks and protected areas) or ex situ (e.g., zoos and aquariums) settings. Annually, more than 12 million trips are taken for wildlife tourism purposes across the globe, and over 4 million people visit wildlife tourism venues in Eastern North Carolina alone. Wildlife tourism has been justified on the grounds that it produces a net-positive impact on wildlife conservation by encouraging tourists to participate in pro-conservation behaviors (PCB). Because tourists may hold unique feelings towards individual PCB, it is important to understand how wildlife tourists' perceived efficacy of PCB (PEPCB) varies amongst behaviors. It is also important to understand how experiential and personality factors influence the formation of PEPCB. However, empirical data on the factors that influence wildlife tourists' PEPCB are lacking. This study used the Diffusion of Innovations model to explore (a) how engagement with interpretation, attitudes, and past participation in PCB influence tourists' perceived efficacy of PCB, and (b) the role of social media as an emerging PCB. Tourists (N = 475) at seven wildlife tourism venues across North Carolina were surveyed. Engagement with interpretation, attitudes, and past participation in PCB were found to have no influence on perceived efficacy of PCB. Posting on social media emerged as a unique PCB in this study, and past participation in this behavior significantly increased perceptions of its efficacy. Results indicate that PCB may be diffused throughout the community; the only exception are PCB related to social media, which may still be considered innovations and warrant further study.

<https://thescholarship.ecu.edu/handle/10342/9049>

# 2023 RESEARCH & CREATIVE ACHIEVEMENT WEEK AWARDS

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ECU Research and Creative Achievement Week provides students with an excellent opportunity to practice their presentation skills and meet other creative scholars at ECU with similar interests.

East Carolina University undergraduate, graduate, and postdoctoral scholars are invited to present their research to fellow students, scholars, colleagues, faculty, and the local community in a professional, conference-style setting. We define research as an original systematic investigation and/or original creative activity designed to develop or contribute to general knowledge or culture.

Students and scholars may present their research in any one of the following categories.

Biomedical Sciences  
Business  
Community Engagement  
Diversity, Equity, and Inclusion  
Education  
Engineering, Technology, & Computer Science  
Fine Arts, Visual Art, and Design  
Human Health  
Humanities  
Interdisciplinary Innovation  
Natural Sciences  
Social Sciences

# POSTDOCTORAL SCHOLAR AWARDS

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## Podium Presentation Award

**Dr. Ian Barton**

Department of Microbiology and Immunology  
Brody School of Medicine  
Mentor: R. Martin Roop II

*“Silencer/Counter-Silencer Interactions Coordinate Virulence Gene Expression in Brucella spp.—  
Role of Zn-Finger Protein MucR as an H-NS-like Gene Regulator”*

## Poster Award

**Dr. Raphael Aruleba**

Department of Physiology  
Brody School of Medicine  
Mentor: Kelsey Fisher-Wellman

*“Probing melanoma CD8+ T-cell mitochondrial dynamics and exhaustion:  
A possible way forward to improve patient therapy outcomes”*



# GRADUATE STUDENT AWARDS

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## Podium Presentation Awards

### Biomedical Sciences

Julian Alexandre Gordon

Mentor: Dr. Matthew Peach

*“GammaTile Brachytherapy with 5-Aminolevulinic Acid Fluorescence-Guided Resection in an Adolescent with High Grade Glioma”*

### Community Engagement, Diversity, Equity, and Inclusion, Education

Emma Teed

Mentor: Dr. Heather D. Vance Chalcraft

*“Public education of monitoring and maintaining local waterways through participation in the Earth Echo Water Challenge”*

### Engineering, Technology, and Computer Sciences

Kaitlyn Southern

Mentor: Dr. Stephanie George

*“Computational Modeling of Arteriovenous Fistula Hemodynamics in Pulmonary Hypertension Patients”*

### Fine Arts, Visual Arts, and Design

Morgan Zichettella

Mentor: Dr. Angela Wells

*“River Rat”*

### Human Health

Arvind Mallikarjunan

Mentor: Dr. Samuel Sears

*“Nanbar Health; Empowering Patients, Supporting Providers, and Discovering Connections to Transform Healthcare”*

**Humanities & Social Sciences**

Sarah Bess McCullouch

Mentor: Dr. Erin Clark Frost

*“Optics of Implication: Rhetorical Performance in Zoom Quarterly Earnings Webinar”*

**Natural Sciences**

Todd Mendenhall

Mentor: Dr. Ziwei Lin

*“Assessing Parton Transport with an Exact Solution of the Relativistic Boltzmann Equation”*

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# GRADUATE STUDENT AWARDS

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## Poster Awards

**Biomedical Sciences**

Mary Donovan

Mentor: Dr. Abdel-Rahman Abdel-Rahman

*“Ethanol-induced right ventricular hypertrophy and pulmonary hypertension:  
The Role of pro-inflammatory signaling”*

**Community Engagement, Diversity, Equity, and Inclusion, Education**

Abigail Prosser

Mentor: Dr. Kristen Gregory

*“Teacher Perceptions on Teaching International Students”*

**Engineering, Technology, and Computer Sciences**

Farnoosh Koleini

Mentor: Dr. Moha Nassehzadeh-Tabrizi

*“Cancer subtype detection using tensor decompositions and artificial neural networks”*

**Human Health**

Erin Kokinda

Mentor: Dr. Andrew J Vermiglio

*“The Effect of Male vs Female Voices in Speech Recognition in Noise”*

**Humanities & Social Sciences**

James Adam May

Mentor: Dr. Kelley K Reinsmith-Jones

*“Training ECU Writing Center Consultants in Suicide and Crisis Intervention Assessment and Response”*

**Natural Sciences**

Samuel Guy

Mentor: Dr. Adam Offenbacher

*“Recent Biochemical Advances in the Isolation of Cryptochrome”*

# UNDERGRADUATE STUDENT AWARDS

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## Podium Presentation Awards

**Biomedical Sciences**

Kyra Porter

Mentor: Dr. Elizabeth Ables

*“Characterizing the Subcellular Localization and Function of Citron Kinase in the Germline of Drosophila melanogaster”*

**Diversity, Equity, and Inclusion, Education, Social Sciences**

Emily Lagnese

Mentor: Dr. Michael Baker

*“Don’t Sit So Close to Me!: Life History, Disease Salience, and the Behavioral Immune System”*

**Engineering, Technology, and Computer Sciences**

Hannah Blackburn

Mentor: Dr. Teresa Ryan

*“Assessing Cloud Coverage with MATLAB Segmentation”*

**Fine Arts, Humanities, Visual Arts, and Design**

Emily Bronson

Mentor: Dr. Travis Lewis

*“Supportive School Administrative Leadership Practices for Beginning Teachers Retention”*

**Human Health**

Luke Thomas

Mentor: Dr. Eric Soule

*“Secondhand Electronic Cigarette Aerosol in Vehicles Impacts Indoor Air Quality”*

**Natural Sciences**

Peyton Harrelson

Mentor: Dr. Carol Goodwillie

*“Investigating the Seed Bank of a Wetland Plant Community in a Long-Term Mowing and Fertilization Experiment”*

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# UNDERGRADUATE STUDENT AWARDS

## Poster Awards

**Biomedical Sciences**

Nandini Vishwakarma

Mentor: Dr. Laxmansa Katwa

*“The Hidden Role of Dopamine Receptors 1 and 3 in Cardiac Fibrosis”*

**Business**

Grant Smith

Mentor: Dr. Michael Harris

*“InHouse Call-Business Plan”*

**Community Engagement, Diversity, Equity, and Inclusion, Education**

Aurora Shafer

Mentor: Dr. Amy McMillan

*“Portfolio of Informative Materials for Prospective East Carolina University Students Seeking Accommodations from Disability Support Services”*

**Fine Arts, Humanities, Interdisciplinary Innovation**

Samantha Odell

Mentor: Dr. Larkin Murphy

“If I Had Known! Designing a Preparatory Course for Maximizing Study Abroad Experiences”

**Human Health**

Lydia LaFevors

Mentor: Dr. Jamie Perry

*“Improving the Quality of Nasopharyngoscopy Data for Management of Velopharyngeal Insufficiency:  
A Multisite Experience”*

**Human Health: Maternal and Child Health**

Katherine Whitehurst

Mentor: Dr. Yolanda Holt

*“The Impact of Dialogic Reading Techniques on Individuals with Autism”*

**Natural Sciences**

Anna Schulz

Mentor: Dr. Robert Hughes

*“Design and Application of an Immobilized Protein Kinase”*

**Social Sciences**

Shannon Dugan

Mentor: Dr. Laura Mazow

*“Aegean Frescoes and Their Correlating Myths”*

# CAPTURE 180 RESEARCH CHALLENGE

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**Grand Finalist and People’s Choice Award**

Sarah Elliott

Mentor: Dr. Lauren Sastre

*“Evaluation of Efficacy and Reception of Health Coaches in the Fresh Start Program”*

# Capturing the Art of Science

## ECU LaserTAG

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**Amanda Powell (First Place)**

Mentor: Dr. Elizabeth Ables

**Lauren Jung (Second Place)**

Mentor: Dr. Elizabeth Ables

**Todd Mendenhall (Second Place)**

Mentor: Dr. Zi-Wei Lin

**Lindsay Swain (Third Place)**

Mentor: Dr. Elizabeth Ables

# SPECIAL THANKS

## RCAW 2023 ARTIST

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Brittany Kernea

We would like to give a special thanks to the 2023 BFA student for their hard work and creativity. Brittany is an ECU School of Art and Design graphic design undergraduate student who designed the theme “New Discoveries” and created all the images to promote RCAW.

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Thank you for your interest in East Carolina University's  
RESEARCH & CREATIVE ACHIEVEMENT WEEK 2023.

View our website for the online version of our program.

<http://go.ecu.edu/RCAW>

We look forward to seeing you again next year for RCAW 2024!

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