



## **2024 Research and Creative Achievement Week**

**Awards Luncheon  
April 5, 2024**

# BUFFET LUNCHEON

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## **Welcome & Opening Remarks**

Dr. Kathleen Cox, Interim Dean, Graduate School

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

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

## **RCAW Graduate Student Awards**

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

## **RCAW Undergraduate Student 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. Robert Hughes and Dr. Karen Litwa, Co-Chairs, Laser TAG  
Department Anatomy and Cell Biology

## **Closing Remarks**

Dr. Kathleen Cox, Interim Dean  
The Graduate School

# Thanks to the Mentors, Moderators, and Judges

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Abdel-Rahman, Abdel A.  
Ables, Elizabeth Tweedie  
Agarwala, Ranjeet  
Ahn, Sungwoo\*  
Aileru, Azeez  
Akhnoukh, Amin Kamal  
Alam, M. M. Lekhon  
Allen, William E  
Anderson, Eric Shawn  
Anderson, Kimberly Leonard  
Anllo, Lauren Maria  
Asagbra, Oghale Elijah  
Asch, Rebecca G  
Aziz, Shahnaz  
Baker, Courtney Lynn  
Baker, Elizabeth\*  
Baker, Michael Drew  
Balanay, Jo Anne Goot  
Ballard, Sharon M  
Barber, Dennis Hubert  
Barton, Ian\*  
Bee, Beth Anne  
Beltran-Huarac, Juan^  
Bikmohammadi, Mina\*  
Blakeslee, April  
Blome, Meg\*  
Bodunrin, Aadam^  
Breedon, Roshaunda Lecole  
Brewer, Michael Scott  
Bright, Laura^  
Briley, Patrick Minton  
Brimhall, Andrew S  
Brisard, Benjamin\*  
Broskey, Nicholas Thomas  
Burns, Colin Sanderson  
Campbell, Lisa  
Carruthers, Lucy\*  
Carter, Tricia  
Cavanagh, John  
Chalcraft, David R  
Chambers, Crystal Renee  
Chen, Jinbo  
Chen, Runying  
Cho, Jungmin\*  
Christian, John C  
Clemens, Stefan  
Clifford, James\*  
Cofie, Leslie E  
Collins, John  
Cooke Bailey, Jessica\*  
Culbertson, Brian\*  
Culver, Stephen J  
Das, Bhibha Mayee  
DeWitt, Regina  
Dias, Nancy  
Dickerson, Anne  
Dolbier, Christyn  
Domire, Zachary J  
Drake, John Richard  
Driscoll, Virginia Darnell  
Dubis, Gabriel  
Eagle, John Scott  
Eble, Michelle F\*  
Eells, Jeffrey Brian  
Eldridge, Lori Ann  
Elliott, Daniel Wayne  
Ellis, Jessica  
Elmore, Cindy J

Eo, Seo*^	Hodgkins, Lawrence J
Etheridge, Randall^	Holt, Yolanda Feimster
Ewen, Charles R	Horsman, Eric*
Falasca, Mauro	Howard, Gregory Edward
Farrow, John Matthew*	Hu, Xin Hua
Field, Erin Kirby	Huang, Yilei
Fish, Matthew Taft	Hubbard, Glenn T
Forbes, Thompson	Hudson, Nathan E*
Hollingsworth	Hughes, Robert Murray*
Garcia, Brandon L	Hur, Misun
Gavin, Julie^	Hvastkovs, Eli Gerald
George, Stephanie	Issa, Fadi Aziz
Geraldeli, Saulo	Iverson, Guy^*
Geyer, Christopher	Janeiro, Colleen
Gilbert, Emma*	Jenkins, Rebecca*
Ginski, Joseph	Jensen, Jakob F
Gittman, Rachel Kelley	Johnson, Jerry Dennis
Godwin, William Wayne	Johnson, Sarah Elizabeth
Golden, Jeannie^	Johnson, Taylor^
Gonzalez, Monica Lyn	Jones, Brandon*
Goodwillie, Carol	Ju, Andrew W
Graber, Ted*	Katwa, Laxmansa C
Grace-McCaskey, Cynthia A	Keiper, Brett
Gregory, Jenny Crowder	Kennerly, Susan
Gregory, Kristen Howell*	Kim, Jaehyun
Gueye, Marama^	Komoski, Mary Catherine
Gupta, Nitin*	Koster, Maranke Irene
Gumann, Kaitlyn^	Kowalczyk, Christine Marie
Gunerathne, Suranga K*	Kulas, Anthony
Habeeb, Christine	Lagomasino, David
Haller, Robin Lynne	Lamson, Angela
Hannan, Johanna	Larsen, Deirdre
Hart, David Marvin*	Larson, Kim L
Harris, Patrick*	Lazure, Timothy
Heck, Nadine	Lecce, Scott Allen
Herndon, Nic	Lee, Jinkun
Hice, Haiden*	Lee, Mi Hwa
Hoey, Mackenzie*	Lee, Myon Hee

Lee, Tammy D  
Lemasson, Isabelle  
Levi Altstaedter, Laura  
Lewis, Travis Earl  
Lin, James\*  
Lin, Xi  
Lin, Ziwei  
Linder, Julie Michelle^\*  
Litwa, Karen Ann  
Lookabaugh, Sandra Leigh  
Loudon, James Ernest  
Love, Brian  
Loy, David P  
Lucakovich, Joseph\*  
Luterbach, Ken\*  
Majewski, Diane J  
Malkin, Michelle L  
Mallinson, David J  
Manda, Alex Kapolo  
Manno, Francis Anthony  
Michael  
May, Linda Elizabeth  
McCunney, Dennis^\*  
McIntyre, Amy Elizabeth  
McKinnon, Jeffrey  
McRae, Susan B  
Millea, Meghan  
Miller, Kirk\*  
Milton, Morgan Eilise^  
Mizelle, Elizabeth  
Mizelle, John Christopher  
Moore, Erin Whitney Grandy  
Morley, James Walter  
Morris, Sandra Marlene  
Mosier, Samantha L  
Moysey, Stephen  
Mruk, Karen  
Murray, Nicholas P

Myers, Kristen Anne  
Nall, Clark\*  
Narayan, Siddharth  
Nelson Harrow, Karson\*  
Nimmo, Mary Jo Bankhead\*  
Normoyle, Catherine Lucille  
O'Driscoll, Michael A  
Oakes, Lindsay\*  
Olabiyi, Ayodeji\*  
Offenbacher, Adam Richard^\*  
Opejin, Abdulahi^  
Osborne, Kim\*  
Pajski, Jason\*  
Pan, Xiaoping\*  
Pardi, Vanessa  
Pasetto, Silvana\*  
Passwater, Chelsea Cannon  
Pender, Jack Edward  
Peralta, Ariane Legaspi  
Perrucci, Daniel Victor  
Perry, Jamie L  
Perry, Megan A  
Pestaner, Mitzi Caroline  
Pokhrel, Lok R\*  
Polakowski, Nicholas  
Popke, Emil Jeffrey  
Popoviciu, Ciprian  
Powell, Shannon B  
Preston, Ron^  
Raedeke, Thomas D  
Randriampiry, Njina\*  
Richards, Keith\*  
Richards, Stephanie Lynn  
Richman, Alice Rose  
Richter, Steven Michael  
Roberson, Donna W  
Roeder, Lynn Michele  
Rogers, Rebekah

Roop, Roy M  
Rothermich, Kathrin\*  
Roy, Sourav\*  
Ruffin, Jocelyn Simone  
Rupp, Nick\*  
Russell, Kelli Strickland  
Ryan, Teresa Jean  
Sastre, Lauren Rogers  
Scemama, Jean-Luc\*  
Scheerman, Sachi\*  
Schmidt, Cameron Alan  
Schultz, Brandon Kyle  
Schwalbe, Ruth  
Sharer, Wendy  
Singh, Berwin\*  
Sirianni, Matthew J  
Smith, Aimee  
Sousan, Sinan  
Speicher, James Edward  
Speight, Chandra Lenelle  
Spuches, Anne M  
Stanley, Julia\*  
Stroud, Brandon\*  
Surkar, Swati Manoharrao  
Sylcott, Brian  
Szatmari, Erzsebet Maria\*  
Taylor, Alan  
Thompson, Beth  
Thompson, Brittany Myles  
Wright  
Thornton, Kendell C

Tisnado, James R  
Tran, Tuan D\*  
Tucker-McLaughlin, Mary\*  
Tulis, David Anthony  
Tutor, Robin Parker  
Vance Chalcraft, Heather D  
Vermiglio, Andrew J  
Vieira, Alexandre\*  
Wade, Eric  
Walcott, Christy Mangione  
Walenski, Matthew  
Walfield, Scott  
Watts, Mirian\*  
Weckesser, Gerald  
Wedge, Ryan Douglas\*  
Wells, Angela Franks  
White, Avian\*  
Willson, John David  
Wilson-Okamura, David  
Wolfe, Christopher Aaron  
Woodlief, Tracey Leigh  
Wu, Xian\*  
Xu, Lei  
Yang, Li  
Zeczycki, Tonya N  
Zhang, Baohong  
Zhang, Yan

**^Moderator**

**\*Judge**

# 2024 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. Angela Lamson**

Human Development and Family Science  
College of Health and Human Performance



Dr. Angela Lamson, PhD, LMFT, Nancy W. Darden Distinguished Professor in the Department of Human Development and Family Science currently serves as the Interim Assistant Vice Chancellor for Economic and Community Engagement. Dr. Lamson has served as the program director for the Medical Family Therapy (MedFT) doctoral program and Marriage and Family Therapy master's program. She also directed the ECU Family Therapy Clinic and served as the associate dean for research and graduate studies in the College of Health and Human Performance. In addition, she is on the Executive Committee for the Alliance of Military and Veteran Family Behavioral Health Providers at the national level. Dr.

Lamson's teaching, funding, and publications have been devoted to Medical Family Therapy and integrated care, particularly in the areas of trauma, chronic illness, loss, and compassion fatigue in the lives of individuals, couples, families, and providers. Her training and research initiatives have been housed in community health, primary care, specialty care, schools, and military bases. Dr. Lamson was honored with the 2020 Outstanding Contribution to Marriage and Family Therapy Award by the American Association for Marriage and Family Therapy and the ECU 2022 Research and Creative Activity Lifetime Achievement Award.

Dr. Lamson is recognized for her long-term commitment to supporting, empowering, and collaborating with doctoral students in the Medical Family Therapy (MedFT) Program. One student wrote that Dr. Lamson's "mentorship is defined by her deep investment in our growth and success. Her organized weekly writing groups, guidance in our career development, and steadfast support in our research and clinical endeavors demonstrate the significant and positive influence she has on our professional journey." Faculty wrote that her advocacy for students includes "meaningful conversations" that "promote their own self-care" and "academic excellence in the classroom and the research lab." Dr. Lamson ensures that students "build a research trajectory including publications, presentations, and grant proposals with community partners that promote mutually beneficial community engaged scholarship." Dr. Lamson's inclusionary mentoring practices clearly influence the success of the MedFT students and their work to transform the communities they serve.



# ECU DISTINGUISHED GRADUATE FACULTY MENTOR AWARD MASTER'S CATEGORY

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## **Dr. Christy Howard**

Department of Literacy Studies,  
English Education, and History Education  
College of Education



Dr. Christy Howard, PhD, Associate Professor in the Department of Literacy Studies, English Education, and History Education (LEHE) in the College of Education serves as the Director of LEHE Graduate programs and MAEd Reading/Literacy program coordinator. She teaches undergraduate and graduate literacy courses. Her research interests focus on culturally responsive literacy instruction, content area literacy, and the experiences of students and faculty of color. Her research has been published in several journals including *Language Arts*, *Journal of Literacy Research*, and *Literacy Research and Instruction*. Her book, *It's not "one more thing": Culturally responsive and affirming strategies in K-12 literacy classrooms*, was published in 2021.

Dr. Howard is recognized for her dedication and commitment to mentoring students to become reading and literacy specialists and leaders. One student wrote that Dr. Howard's "passion, dedication and knowledge radiate in all that she does" and "she has been a profound influence on my life and particularly in my career." Her faculty colleagues noted "her innovative practices, and her commitment to social transformation through education." They recognized that this award would honor and acknowledge "the transformative power of our colleague who has magnified her social justice work by sustaining the hearts and minds of those who will continue her legacy." Dr. Howard fosters a "community of belonging and learning" that recognizes and affirms "the brilliance, cultural wealth and funds of knowledge students bring into our programs." Dr. Howard's commitment to educating and inspiring future leaders in reading and literacy education ensures her students' success but also their own students and communities.

# 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 one category for the 2024 Master's Theses Award: (1) Mathematics, Physical Sciences, and Engineering and (2) are presented in two categories for the 2024 Doctoral Dissertation Award: (1) Social Sciences, Business, and Education 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: MATHEMATICS, PHYSICAL SCIENCES, & ENGINEERING

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## **Dr. Todd Mendenhall**

Dissertation Title: “Semianalytical and Numerical Studies of Relativistic Heavy Ion Collisions”

Department of Physics

Thomas Harriot College of Arts and Sciences

Dissertation Director: Dr. Zi-Wei Lin

<https://thescholarship.ecu.edu/handle/10342/13148>

## **Abstract**

The quark-gluon plasma (QGP) has been produced by relativistic heavy ion collisions, and understanding its properties is a primary goal in the field of nuclear physics. This research first elucidates recent semianalytical developments that improve the estimates of the initial energy and net conserved-charge densities and enable the calculation of trajectories in the quantum chromodynamics (QCD) phase diagram for the matter produced by nuclear collisions. A semianalytical model of the initial densities is developed by including the finite nuclear thickness for parton production. The new maximum energy density is found to have an analytical upper bound and satisfy an approximate scaling relation. QCD phase diagram trajectories are extracted from the semianalytical densities using several nuclear equations of state, and the calculated QGP lifetimes are found to depend significantly on the values of the model’s parameters. The study next presents a comparison between two solutions of the relativistic Boltzmann equation (RBE): one, a numerical solution using parton transport; the other, a theoretical solution for a homogeneous gas of massless particles. Parton transport in Zhang’s parton cascade (ZPC) is found to reproduce the results of a recent exact analytical solution of the RBE with an unexpected effectiveness at high densities when using new generalized collision schemes. Finally, the work discusses some open questions related to parton transport in ZPC and suggests some possible directions to uncover their answers. These future research goals include discovering the cause of an unexpected problem arising in simulations with three-dimensional (3D) expansion, understanding the theoretical distribution of the total center-of-mass (CM) energy squared for two-parton collisions, and studying curved parton motion in the presence of strong electromagnetic fields. Overall, the results presented in this dissertation improve the theoretical and numerical descriptions of the QGP and should be useful for future studies.

# DOCTORAL DISSERTATION AWARD: SOCIAL SCIENCES, BUSINESS, & EDUCATION

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## **Dr. Corin E. Davis**

Dissertation Title: “Recruitment, Retention, and Intersectionality: Recognizing the Voice of Historically Marginalized and Systemically Oppressed Medical Residents”

Department of Human Development and Family Science

College of Health and Human Performance

Dissertation Director: Dr. Angela Lamson

<https://thescholarship.ecu.edu/handle/10342/10673>

## **Abstract**

The health and wellbeing of healthcare professionals has become a significant concern for the function of the healthcare system in the United States (U.S.). With a catastrophic physician shortage in healthcare and cumulative social injustices across the nation, medical schools and residency programs must prioritize the recruitment, wellbeing, diversification, and retention of physicians. The purpose of this dissertation is to increase the body of literature related to burnout and compassion fatigue related to historically marginalized and systemically oppressed residents. The six chapters in this dissertation, include a/an: (a) conceptual model of how MedFTs can influence the recruitment and retention of diverse physicians, (b) scoping review of LGBTQ+ patient and provider experiences in primary care, (c) systematic review of intersectional data related to burnout and compassion fatigue in residency, (d) methodology chapter describing the original study, (e) original research study that reports the results from a quantitative survey and phenomenological interview guide with historically marginalized/systemically oppressed residents related to burnout, compassion fatigue, discrimination, and harassment throughout their residency experience, and (f) conclusion chapter that offers a review of the previous chapters and recommendations for residency programs in the form of a fact sheet.

# MASTER'S THESIS AWARD: MATHEMATICS, PHYSICAL SCIENCES, & ENGINEERING

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## **Amanda Ohler**

Thesis title: "Defining Protein Motions that Comprise the Reaction Barrier in Human Epithelial 15-Lipoxygenase-2"

Department of Chemistry

Thomas Harriot College of Arts and Sciences

Thesis Director, Dr. Adam R. Offenbacher

<https://thescholarship.ecu.edu/handle/10342/10682>

## **Abstract**

Proteins are dynamic in nature, with these motions playing a role in substrate binding and product release. Protein thermal motions have emerged as participating in the bond making/breaking steps of catalysis and by extension the rate enhancement observed in enzymes. A family of enzymes, known as lipoxygenases (LOXs), play a large role in growth and pathogenic defense in plants and homeostasis, cell signaling, and inflammation in humans. The regulation of LOX pro- and anti-inflammatory properties is thought to be controlled through allosteric interactions with small molecules, proteins, and membranes. For all organisms, LOXs oxidize polyunsaturated fatty acids through an often rate-limiting C-H activation step that proceeds through a tunneling mechanism. The activation energy barrier for this LOX reaction is expected to be related to the thermal fluctuations of the protein-substrate complex. How protein motions transfer heat from the surface to buried active sites remains an open question. Furthermore, the connection between thermal motions mediating allostery and the chemical step(s) are not well resolved. Recent studies on the model plant LOX, soybean lipoxygenase (SLO), have identified a solvent-exposed loop that is linked to the origins of a defined network for thermal activation that is distinct from the defined allosteric network. The human counterpart, human epithelial 15-lipoxygenase-2 (15-LOX-2), exhibits similar function but lacks some of these structural features found in SLO, thereby raising the question as to the evolution of structure and protein motions in these enzymes. In this thesis, biophysical methods, including temperature-dependent hydrogen deuterium exchange-mass spectrometry, X-ray crystallography, and differential scanning calorimetry, as well as enzyme kinetics are used to regionally define catalytically linked dynamics related to both allostery and chemical bond breaking step(s) of 15-LOX-2 to further understand how thermal motions regulate lipoxygenase function.

# 2024 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 innovative 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  
Education  
Engineering, Technology, & Computer Science  
Fine Arts, Visual Art, and Design  
Human Health  
Humanities  
Interdisciplinary Innovation  
Natural Sciences  
Social Sciences

# GRADUATE STUDENT AWARDS

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## **Podium Presentation Awards**

### **Biomedical Sciences & Human Health**

Lauren Jung

Mentor: Dr. Elizabeth Ables

“Ecdysone signaling in the *Drosophila* germline regulates a stem cell transcriptional program”

### **Education & Social Sciences**

Daniel Stickel

Mentor: Dr. Jeannie Golden

“Adverse Childhood Experiences, Risk Taking, and Protective Factors”

### **Engineering, Technology, and Computer Sciences**

Colby Sawyer

Mentor: Dr. David Hart

“Evolving PITON: AI-Driven Simplification of IoT Data Access”

### **Fine Arts, Visual Arts, and Design**

Katelyn Brewer

Mentor: Dr. Angela Wells

“Exploring Tourette Syndrome with Analog Photography”

### **Natural Sciences**

Elnaz Pezeshki

Mentor: Dr. Stephen Moysey

“Using electrical resistivity tomography (ERT) to investigate the role of artificial channels on saltwater transport, Hyde County, NC”

# GRADUATE STUDENT AWARDS

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## Poster Awards

### Biomedical Sciences

Connor B. Cribb

Mentor: Dr. Roy Roop

“Investigating the role the polar autotransporter adhesin genes encoded by *Brucella* have on crossing mucosal barriers and virulence”

### Education

Stephanie Wood

Mentor: Dr. Kristen Gregory

“Parents’ and Teachers’ Perceptions of the Effectiveness of Preschool in Terms of Mathematical Kindergarten Readiness”

### Engineering, Technology, and Computer Science

Gabrielle Stein

Mentor: Dr. Nic Herndon

“The Perils of Generative Model Inbreeding: Evaluating the Consequences of Cross-Model Training in Large Language Models”

### Human Health

Ben Brisard

Mentor: Dr. Cameron Schmidt

“Unveiling Sperm Capacitation Dynamics:  
A Novel Spectral Flow Cytometry and Stochastic Modeling Approach”



**Social Sciences**

Emilia N. Rose

Mentor: Dr. James E. Loudon

“Using stable carbon and nitrogen isotope values to estimate exposure to agricultural chemicals among green monkeys (*Chlorocebus sabaeus*) in St. Kitts”

**Natural Sciences**

Jahiem Hill

Mentor: Dr. Robert Hughes

“OptoProfilin: A Single Component Biosensor of Cellular Stress”

## UNDERGRADUATE STUDENT AWARDS

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### Podium Presentation Awards

**Biomedical Sciences**

Nandini Vishwakarma

Mentors: Dr. Laxmansa Katwa and Dr. Srinivas Sriramula

“Discovering the Mysterious Effects of Intracardiac Dopamine Receptor Signaling”

**Engineering, Technology, and Computer Sciences**

Heath Faircloth

Mentor: Dr. Teresa Ryan

“Material Property Investigation of Common 3D Printer Filaments”

### **Multidisciplines**

Jade McNeill

Mentor: Dr. Roshaunda Breeden

“Amplifying Our Voices: Exploring Black Women Student Leaders Experiences at East Carolina University”

### **Natural Sciences**

Victoria Gonzalez Mundarain

Mentor: Dr. Nathan Hudson

“Examining Human Fibrinogen's Molecular Structure Using Electron Microscopy”

### **Social Sciences**

Cassidy Fitz-Randolph

Mentor: Dr. Scott Walfield

“Rape Myth Adherence Among University Students”

## **UNDERGRADUATE STUDENT AWARDS**

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### **Poster Awards**

#### **Biomedical Sciences**

Lucas Boldt

Mentor: Dr. Li Yang

“MADCAM-1 and TNF- $\alpha$  Expression Reduced in GPR4 Knockout Mice Given Immune Checkpoint Inhibitor Immunotherapy”

### **Education**

Dhwani Hada

Co-Presenters: Kailee Ann Grubbs, Jameson Johnson Gerdts,  
Aliah Mikelle Spencer, Stephanie Marie Stewart

Mentor: Dr. Yilei Huang

“Enhancing Electrical Systems Technology Education:  
A Study on Virtual and Augmented Reality Integration in Community Colleges”

### **Engineering**

Josey Wilson

Mentor: Dr. Daniel Perrucci

“Using the Critical Path Method (CPM) for Evaluating  
Allocation Potential of Temporary Housing Unit Design”

### **Human Health**

Daniel Walker

Co-Presenter: Amelia Tart

Mentor: Dr. Sinan Sousan

“The Effects of Commercial Grade E-Cigarette Chemical Ratios and Nicotine  
Strength on the Gravimetric Filter Correction Factors and Real-Time Measurements”

### **Interdisciplinary Innovation**

Joanna Mathew

Co-Presenter: Yanni Pavlikianidis

Mentor: Dr. William Godwin

“Innovation in Medical Education: Crafting a 3D Printed Female Pelvic Model”

### **Multidisciplines**

Jack Meltsner

Mentor: Dr. Glenn Hubbard

“Eternal Light: Two Holocaust Survivors' Stories Of Perseverance”

**Natural Sciences**

Soham Patel

Mentor: Dr. Adam Offenbacher

“Kinetic Investigations of Solvent Effects on  
Human Epithelial 15-Lipoxygenase-2 (15-LOX-2)”

**Social Sciences**

Katelynn Teli

Mentor: Dr. Aimee W. Smith

“Predictors of Cognitive Functioning in Infants Visiting  
the NICU Follow-Up Clinic”

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## CAPTURE 180 RESEARCH CHALLENGE

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**Grand Finalist**

**Rachana Charla**

Mentor: Dr. Kristen Myers

“Emotional Laboring Through Birth: Insights From Doula Volunteers”

**People’s Choice Awards**

**Sophie Arruza**

Mentor: Dr. Teresa Ryan

“Tracking Cloud Coverage in Matlab”

**Madison Nay**

Mentor: Dr. Jon Kirchoff

“Sustainable Transformation of Fast Fashion Supply Chains:  
Challenges, Innovations, and Ethical Imperatives”

# Capturing the Art of Science

## ECU LaserTAG

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**Laren Jung** (First Place)

**Victoria Gonzalez Mundarain** (Second Place)

**Hannah Croy** (Third Place)

# SPECIAL THANKS

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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 2025!

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