

EXPAND EXPAND

**15th Annual
Research & Creative
Achievement Week**
April 5th–9th Student Center

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RCAW 2021 Awards Program

Opening Remarks

Interim Vice Chancellor Michael Van Scott

Chancellor's Remarks

Chancellor Philip Rogers

Distinguished Graduate Faculty Mentor Awards

Graduate Dean Paul Gemperline

Thesis and Dissertation Awards

Graduate Dean Paul Gemperline

RCAW Undergraduate Awards

Lynnsay Marsan

RCAW Graduate Awards

Tom McConnell

Innovation and Entrepreneurship Recognition

Marti Van Scott

Provost's Challenge Award

Elizabeth Hodge

Laser TAG Awards

Dr. Karen Litwa

Closing Remarks

Dr. Paul Gemperline

Planning Committee Members

Executive Committee

Mary Farwell

Assistant Vice Chancellor, Division of Research, Economic Development, and
Engagement

Donna Kain

English, Thomas Harriot College of Arts and Sciences

Lynnsay Marsan

VC Fellow for Undergraduate Research, REDE

Tom McConnell

Associate Dean, The Graduate School

Virginia Stage

Nutrition Science, College of Allied Health Sciences

Jocelyn Bayles

Nutrition Science, Undergraduate Student

Marquerite Bond

The Graduate School

Kathleen Cox

Associate Dean, The Graduate School

Amy Curtis

Science Librarian

Planning Committee Members (cont.)

Taylor Dement

Biomedical Physics Student, Thomas Harriot College of Arts and Sciences

Christyn Dolbier

Psychology, Thomas Harriot College of Arts and Sciences

Nehad Elsawaf

Economics, Thomas Harriot College of Arts and Sciences

Rich Franklin

Microbiology & Immunology, Brody School of Medicine

Emma Goldberg

Department of Physiology, Brody School of Medicine

Pam Hopkins

School of Communication

Margaret Macready

Division of Research, Economic Development, and Engagement

Travis Moffitt

MA Music Student, College of Fine Arts & Communications

Plummer Nye

The Graduate School

Matt Smith

Communication Specialist, University Communications

*Artwork by Will Chance

*Program by Travis Moffitt

Mentor List

A special thank you to all the mentors that encouraged and worked with students for RCAW 2021

Abdel-Salam, Tarek M	DeWitt, Regina	Haddock, Rosemary Kidd
Ables, Elizabeth Tweedie	Dias, Nancy	Hegde, Archana
Alipour, Kent	Dolbier, Christyn	Hodge, Elizabeth Baker
Akhnoukh, Amin K	Donica, Denise	Hodgson, Jennifer
Annetta, Leonard	Driscoll, Virginia Darnell	Horn, Patrick Jacob
Asagbra, Oghale Elijah	Dubis, Gabriel	Horsman, Eric
Asch, Rebecca G	DuBose, Katrina D	Huang, Hu
Atherton, William Leigh	Eagan, Sheena Marie	Hudson, Nathan E
Atkinson, Terry Stafford	Edwards, Robert	Hur, Mi-Sook
Aziz, Shahnaz	Egan, Kathleen Louise	Hur, Misun
Babatunde, Oyinlola Toyin	Eppler, Marion A	Hvastkovs, Eli Gerald
Baker, Michael Drew	Erickson, Timothy Paul	Issa, Fadi Aziz
Banerjee, Sambuddha	Etheridge, James Randall	Jensen, Jakob F
Bell, Natasha Lynn	Ewen, Charles R	Johnson, Erika Katherine
Beltran-Huarac, Juan	Farr, Deonna Emm	Jubran, Hanna
Black, Kristin Zenee	Fazzone, Patricia Anne	Kang, Jin-Ae
Blakeslee, April Monica Houghton	Ferreira, Rosana Nieto	Kariko, Daniel Josip
Blanchflower, Tiffany Machado	Field, Erin Kirby	Kennerly, Susan
Bolin, Linda Prior	Fish, Matthew Taft	Kindl, Heather
Bowler, Mark C	Forbes, Thompson Hollingsworth	Knox, David H
Broskey, Nicholas Thomas	George, Stephanie	Kovar, Cheryl L
Chen, Yan-Hua	Geraldeli, Saulo	Kowalczyk, Christine Marie
Christensen, Timothy W	Geyer, Christopher	Kulas, Anthony
Christian, John C	Gittman, Rachel Kelley	Lagomasino, David
Clemens, Stefan	Gonzalez, Monica Lyn	Lamb, Alfred C
Cofie, Leslie E	Goodwillie, Carol	Larson, Kim L
Collins, John	Graber, Theodore G	Lee, Jinkun
Corbett, Robin	Gregory, Jenny Crowder	Lee, Joseph G
Daniel, Isaac Randolph	Guidry, Allen O	Lee, Tammy D
Das, Bhibha Mayee	Habeeb, Christine	Lewis, Travis Earl

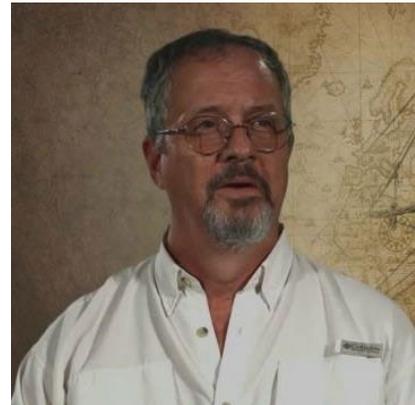
Limberis, Loren	Ngo, Thanh	Shinpaugh, Jefferson
Lin, Ziwei	Olson Lounsbury, Marie	Sitzman, Kathleen Laura
Littleton, Heather	Owens, Tosha Lynn	Skibins, Jeffrey C
Loudon, James Ernest	Oyen, Michelle Lynn	Soderstrom, Kennth M
Mansfield, Kyle David	Pardi, Vanessa	Sousan, Sinan
Martin, Ryan John	Pawlak, Roman M	Speicher, James Edward
Massarra, Carol	Peery, Annette Ivey	Spuches, Anne M
Matthews, Jennifer Cremeens	Peralta, Ariane Legaspi	Stage, Virginia Carraway
McCarlie, Van Wallace	Perry, Jamie L	Surkar, Swati Manoharrao
McClung, Joseph Matthew	Perry, Megan A	Szatmari, Erzsebet Maria
McCoy, Michael W	Pokhrel, Lok R	Thompson, Beth
McKinnon, Jennifer Faith	Polakowski, Nicholas	Thornton, Kendell C
McRae, Susan B	Reardon, Robert Martin	Tisnado, James R
Meardon, Stacey Augusta	Rickenbach, Thomas M	Tran, Tuan D
Mitra, Siddhartha	Rider, Patrick Michael	Tyndall, Deborah Eastwood
Mizelle, Elizabeth	Roberson, Donna W	Vahdati, Ali
Moss, Mark Eric	Robidoux, Jacques	Vail-Smith, Karen
Muise, Heather Lynn	Rocha, Edson R	Vance Chalcraft, Heather D
Murashov, Alexander K	Roop, Roy M	Wei, Holly Lee
Murenina, Elena Konstantinovna	Roper, Rachel L	Wells, Angela Franks
Murphy, Lynne	Rothermich, Kathrin	Wilmes, Justin A
Murray, Nicholas P	Ryan, Teresa Jean	Yeh, Chia Jung
Nassehzadeh-Tabrizi, Moha	Sastre, Lauren Rogers	Zhu, Yong
Neil, Janice A	Shearman, Sachiyo M	
Neufer, Peter D	Sherman, Susan G	
	Shewchuk, Brian M	

ECU Distinguished Graduate Faculty Mentor Award, Master's Category

Charles R. Ewen, PhD

Department of Anthropology

Thomas Harriot College of Arts and Sciences



Dr. Charlie Ewen is a Professor of Anthropology in the Thomas Harriot College of Arts and Sciences, Department of Anthropology, East Carolina University. He obtained his PhD in Anthropology from the University of Florida and he is director of the Phelps Archeology Laboratory at East Carolina University. Dr. Ewen has conducted research on many historical sites and cemeteries of North Carolina. He has written books on such diverse topics as the archeology of piracy and the Lost Colony. Dr. Ewen's research has focused mostly on historical archeology, specifically the contact period and colonial period. However, like most archeologists, circumstances have led him to work on nearly every kind of archeological site, from prehistoric villages to civil war fortifications and twentieth century homesteads. Dr. Ewen's colleagues note that he exemplifies the role of a faculty mentor, having chaired over sixty MA thesis committees. Dr. Ewen mentors students in local field projects where he provides hands on training on research design, budgeting, personnel and logistics. His students get theoretical and practical skills from putting shovels into the ground to analyze recovered data and writing final reports. His colleagues note Dr. Ewen's commitment to diversity and inclusivity. As president for the Society for Historical Archeology he has implemented policies to address these issues nationally and he consistently makes accommodations at his field schools for students for a range of disabilities so that they too can.

Students remarked: "During our excavations Dr. Ewen made a point to engage visitors at our historic site." "His eagerness to include public stakeholders and local community members to ensure their interests were addressed is a value I incorporate in my own research today".

"I am most grateful for the trust and value Dr. Ewen placed on my input during excavations." "His willingness to listen and act on my input gave me confidence to be an active voice and a leader when conducting research."

ECU Distinguished Graduate Faculty Mentor Award, Doctoral Category

Mark C. Bowler, PhD

Department of Psychology

Thomas Harriot College of Arts and Sciences



Dr. Mark Bowler is Associate Professor in the Thomas Harriot College of Arts and Sciences, Department of Psychology, East Carolina University. He obtained his PhD in Industrial and Organizational Psychology from the University of Tennessee. Dr. Bowler is director of the Occupational Health Psychology concentration in Health Psychology PhD program. Dr. Bowler's students and faculty colleagues praise his mentoring of students. His advisees are noted for producing top notch work not only through their formal projects but also work life balance. Faculty colleagues write that he gives feedback on student work in a remarkable manner; relevant and important, but phrased in a manner to empower students. Dr. Bowler achieves this through detailed feedback, outlining reasons for feedback and methods needed to address problems. The most remarkable aspect of Dr. Bowler's mentoring is when these two strengths, rapport with students and skilled feedback combined. Outside of the classroom Dr. Bowler is well known for publicizing opportunities for students whether he encourages people to find their own passions rather than pushing students into a specific area. He doesn't pressure students to change their research ideas, but rather come up with ways to study it and provide additional variables that might work well. Dr. Bowler's students remark that he is one of the most approachable and sincere professors they have ever worked with, an exceptional scholar and mentor.

Thesis and Dissertation Awards

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 2019 Master's Theses Award: (1) Life Sciences, and (2) Social Sciences.

Awards are presented in two categories for the 2019 Doctoral Dissertation Award: (1) Humanities and Fine Arts, 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 representing each college at ECU 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.

ECU Master's Thesis Award - Social Science, Business, and Educational category.

Jordan W. Barbee, MS, Kinesiology, May 2020.

Thesis Title: "Associations of Coach, Peer, and Parent-Initiated Motivational Climate with Burnout and Engagement"

Thesis Director: Dr. Thomas D. Raedeke

Using survey data, Jordan investigated athlete engagement and burnout in a population of 150 high school athletes. Her study examined athlete perceptions of motivational climates created by social agents (coaches, parents, and peers). A survey was used to assess the mastery climate as well as the performance climate created by social agents. Her study found that a mastery climate created by coaches and peers had a significant relationship with a sense of accomplishment, engagement and reduced burnout. A mastery climate is one in which success is focused on improvement, effort and learning through mistakes. A performance climate was defined in terms of social comparison and outperforming others that can result in intra-team rivalries and conflict. Her study also found that a coach created performance climate was linked to a higher engagement, but the effect was small in magnitude. Practical implications of this study suggest creating a mastery climate can help prevent burnout, promote engagement, and that coaches can create a mastery climate by emphasizing effort, learning, and that mistakes are part of the learning process. Strategies were described by which coaches can create challenging practice activities that emphasize self-improvement and learning. The study found that mastery climates did not have a relationship burn out. It did have a significant relationship with athlete engagement and suggested parents play a role in helping promote their adolescent athletes' feeling of engagement.

ECU Doctoral Dissertation - Life Sciences category

Edward Sanderlin, PhD, IDPBBC-Biomedical Science, November 2018

Dissertation title: "The Functional Roles of pH-Sensing G Protein-Coupled Receptors in Intestinal Inflammation"

Dissertation Director: Li Yang, PhD

Dr. Sanderlin's dissertation research sought to understand the microenvironmental mechanisms of inflammatory bowel disease. In his dissertation he studied how immune cells and intestinal tissue responds to acid pH in an inflamed microenvironment. Currently little is known how cells sense extra cellular acidity and subsequently alter inflammatory response. Dr. Sanderlin's dissertation sought to understand the mechanism by which three different members of a class of proton sensing receptors serve as functional pH sensors and alter immune cell inflammatory response in acidic environments. In the course of this study Sanderlin uncovered novel roles for three proteins, GPR4, GPR65 and GPR132 in pH sensing and the regulation of intestinal inflammation. This work was performed by studying mouse models in the presences and absence of each of these proteins. His results showed that GPR4 contributes to intestinal inflammation and could be a valuable therapeutic target in colitis. On the other hand, GPR65 was found to reduce intestinal inflammation. Results indicated GPR132 also functions to reduce intestinal inflammation, however further studies are needed to evaluate its mechanisms of action. Overall, the dissertation work highlights the roles of pH sensing, G protein-coupled receptors in regulation of intestinal inflammation and it highlights the potential of these receptors as valuable therapeutic targets in the treatment of intestinal inflammation.

ECU Doctoral Dissertation - Humanities and Fine Arts category

Temptaous T. Mckoy, PhD, Rhetoric, Writing, and Professional Communication, July 2019

Dissertation title: "Y'all Call it Technical Professional Communication, We Call it #ForTheCulture: The Use of Amplification Rhetorics in Black Communities and their Implications for Technical and Professional Communication Studies"

Dissertation Director: Michelle F. Eble, PhD

Dr. Mckoy's multimodal dissertation project illustrates in innovative and original ways why cultural approaches to technical communication are important to the field of technical communication. The dissertation develops a theoretical framework, Amplification Rhetorics (AR), that allows for a dynamic and intersectional analysis of communicative actions within two communities/spaces made up of historically marginalized people. This framework uses scholarship from critical race theory, Womanist theory, African American/Black rhetorics, and cultural approaches to technical communication to articulate its commitments to reclaiming agency, lived experiences, and intersectional knowledge-making practices. Dr. Mckoy investigated these knowledge-making practices and communicative practices using interviews, observation, social media, and archival materials from HBCUs.

Dr. Mckoy demonstrates the framework's application by providing two case studies. One case analyzes the histories and curriculum of Historically Black Colleges and Universities (HBCUs) and the other case reports on observations and interviews with participants of TrapKaroake as well as other TrapKaroake musicians in digital format. Her project illustrates both how knowledge is created and circulated in these African American/Black spaces as well as the implications for technical and professional communication theory, practice, and pedagogy.

The compelling case studies in this dissertation will influence the ways we discuss knowledge-making and rhetorical practices within technical communication, especially in relationship to historically marginalized communities and the spaces they occupy. Dr. Mckoy's dissertation also has implications for increasing inclusivity for minority bodies in academic as well as professional places and spaces.

Research and Creative Achievement Weeks Awards

Oral and Poster Presentation Awards

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. Only categories with five or more presenters are eligible for an award.

Biomedical Sciences
Business
Community Engagement
Education
Engineering
Engineering/Technology
Fine & Performing Arts
Human Health
Humanities
Natural Sciences
Social Sciences
Sustainability
Technology & Computer Science

Undergraduate Student Oral Presentation Awards

Biomedical Sciences

Spencer Lynch

Mentor: Nathan Hudson

A New Model for Fibrinolysis

Business

Rachel Watkins, Oswaldo Rangel-Corona

Mentor: Timothy Christensen

Tellus: A Business Driving the World's Transition to Sustainable Products

Engineering

Nia Wilson

Mentor: Teresa Ryan

Exploring the dynamic relationship between temperature and elevation in the lower atmospheric boundary layer

Human Health

Dana Shefet

Mentor: Virginia Stage

YOUR CHILD IS OVERWEIGHT, NOW WHAT? UNDERSTANDING HOW HEAD START STAFF COMMUNICATE WITH LOW-INCOME FAMILIES ABOUT CHILDHOOD OBESITY

Humanities

Arvind Rajan

Mentor: Sheena Eagan

Medspectives - the Podcast about Health Professionals, the Stories of Their Practice, and Their Diverse Perspectives into the World Around Us

Natural Sciences

Sarah Akers

Mentor: Sarah McRae

Why so Blue? An Investigation into the Genetic Underpinning of Blue Eggshells in the Eastern Bluebird

Social Sciences

William Guiler

Mentor: Christyn Dolbier

A Neuropsychological Profile of College Students with ADHD

Undergraduate Student Poster Presentation Awards

Biomedical Sciences

Mikayla Luke

Mentor: Nicholas Polakowski

Predicting HBZ Interaction With BATF3 Enhancer Regions Through ChIP-seq

Biomedical Sciences

Ananya Pentakota

Mentor: Joseph McClung

Validation of a Novel Mouse Model of Cox6a2 Knockdown

Business

Kunal Chakraborty, Shaima Alamari, Ryan Cotroneo

Mentor: John Christian

Activity Based Costing for Management Decision Making in Quality Assurance Laboratories

Community Engagement

Alex Urban

Mentor: Timothy Christensen

Campus Voter Initiative

Education

Adam Butler

Mentor: Terry Atkinson

The Child-Parent Reading Experience in Pediatric Medical Office Waiting Areas

Engineering

Grace Krell

Mentor: Stephanie George

Repeatability of AERO for Improved Lymphedema Assessment

Human Health

Katrina Free

Mentor: Hu Huang

Acute High and Moderate Intensity Treadmill Exercise Increases Appetite and NPY/AgRP Neuron Activity in Untrained Female Mice

Natural Sciences

Raazia Zia

Mentor: Anne Spuches

Structural and Thermodynamic Investigation of Pb²⁺ Binding to Human Cardiac Troponin C

Social Sciences

Marianne Congema and Sarah Hoffman

Mentor: Kim Larson

Culturally Responsive Community Palliative Care

Graduate Student Awards

Masters Student Oral Presentation Awards

Education

Vanina Wekam

Mentor: Heather Vance-Chalcraft

Investigating Mentoring Experiences for Populations Interested in Pursuing a Career in Medicine

Natural Sciences

Kelley Depolt

Mentor: Rosanna Ferreira

Compound Coastal Water Event Risk within Eastern North Carolina

Visual and Fine Arts

John Rhodes-Pruitt

Mentor: Heather Miuse

The Monster in Me: Navigating Towards the Mainstream

Graduate Student Oral Presentation Awards

Biomedical Sciences

Bhaven Patel

Mentor: Brian Shewchuck

Emergent Coordination of the Chkb and Cpt1b Genes in Eutherian Mammals: Implications for the Origin of Brown Adipose Tissue

Biomedical Sciences

Taylor Landry

Mentor: Hu Huang

Energy Status and Sex Differentially Modify Feeding Behavior in Response to Acute Treadmill Exercise in Untrained Mice

Engineering and Technology

Matthew Carroll

Mentor: Jinkun Lee

Simulation of Transient Traffic Flow Resulting from Mixed Conventional and Autonomous Vehicles

Human Health

Rachel Grantham

Mentor: Christine Habeeb

Investigating the influence of framing techniques on self-efficacy, other-efficacy, and anticipated affect in an online fitness setting

Social Sciences

Gwyneth Schuler

Mentor: Jeffery Skibins

Wildlife Tourists' Perceptions of Pro-Conservation Behavior Efficacy

Doctoral Student Oral Presentation Awards

Education

Paul Briney

Mentor: Travis Lewis

THE EFFECTS OF IMPLEMENTING RESEARCH-BASED INTERVENTIONS TO FIDELITY WITHIN THE MTSS FRAMEWORK ON K-2 LITERACY

Natural Sciences

Brian Bartlett

Mentor: Rebecca Asch

Projected Changes of the Distribution of Nassau Grouper Spawning Habitat and Its Management Implications

Masters Student Poster Presentation Awards

Engineering

Patricia Butler

Mentor: Stephanie George

Cost-Benefit Analysis of 3D FE Modeling of the Tibia Throughout the Stance Phase

Human Health

Kathryn Moore

Mentor: Lynne Murphy

Maintaining Social Participation and Quality of Life Through Community Mobility After Driving Cessation with Transportation Planning

Graduate Student Poster Presentation Awards

Biomedical Sciences

Mark Tripson

Mentor: Kenneth Sonderstom

Cannabidiol (CBD) improved vocal recovery is associated with anti-inflammatory and antioxidant efficacy

Natural Sciences

Aied Garcia

Mentor: Ariane Peralta

Chronic nutrient enrichment alters the functional role of the soil microbiome in a coastal plain wetland

Social Sciences

Dakota Pavell

Mentor: James Loudon

The Genus Cantius and the Phylogenetic Importance of North American Primates

Doctoral Poster Presentation Award

Human Health

Polina Krassovskaia

Mentor: Nicholas Broskey

Inheritability of the "Athlete's Paradox": the impact of maternal exercise on offspring skeletal muscle health

Innovation & Entrepreneurship Recognition

Marti Van Scott

Provost's Challenge Awards

Elizabeth Hodge

Laser TAG Awards

Karen Litwa

Closing Remarks

Dean Gemperline

Thank you all!