Sixteenth Annual
Graduate Research Symposium
Sharing Ideas - Expanding Horizons

ART BY:
Joel Queen
Award Winning Cherokee Potter
WCU Graduate Student
Master of Fine Arts Program
Dear Participants,

Welcome to the Sixteenth Annual Graduate Research Symposium. Since 1992, the Graduate Research Symposium, sponsored by The Graduate School and Research, has provided graduate students the opportunity to showcase their scholarly research and projects. I want to express my sincere appreciation to you for sharing your scholarly and creative work. In addition, I congratulate all the participating faculty and staff mentors for supporting and encouraging our presenters to participate in this meaningful experience.

For many of you, this will be your first opportunity to share empirical findings and creative works with the academic community. Today, you take that next step in becoming recognized as a scholar in your chosen discipline. The skills that you learn as part of the research process and your ability to convey that research in writing and in person will enable you to establish your authority within your discipline and to improve the world in which we live.

I congratulate you on this significant milestone in your academic development. It is my hope that your experience today inspires you to continue to think about how you might contribute to our understanding of the important issues facing our region, our state, and our world and propels you to take action.

I look forward to meeting each of you and having the opportunity to talk with you about your important work and your plans for the future. A celebration has been planned in your honor in the University Center Grandroom starting at 5:00 pm. Come join your colleagues.

Scott E. Higgins
Dean, Graduate School & Research

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Activities Overview

11:00AM
Business ........................................ Dogwood Room
Education ..................................... Multipurpose Room A
Humanities .................................... Catamount Room
Humanities .................................... Catamount Room
Social Sciences ......................... Grandroom
Social Sciences ......................... Rogers Room
Technology ................................. Multipurpose Room B

1:230PM
Education ................................. Multipurpose Room A
Health ...................................... Grandroom
Health ...................................... Theater
Humanities ................................... Catamount Room
Sciences .................................... Dogwood Room
Social Sciences ......................... Rogers Room
Social Sciences ......................... Rogers Room
Technology ................................. Multipurpose Room B

2:00PM
Education ................................. Multipurpose Room A
Health ...................................... Theater
Humanities ................................... Catamount Room
Sciences .................................... Dogwood Room
Social Sciences ......................... Grandroom
Social Sciences ......................... Rogers Room
Technology ................................. Multipurpose Room B

3:30PM
Education ................................. Multipurpose Room A
Health ...................................... Theater
Humanities ................................... Catamount Room
Sciences .................................... Dogwood Room
Social Sciences ......................... Rogers Room
Technology ................................. Multipurpose Room B

6:00PM
Education ................................. Catamount Room
Education .................................... Multipurpose Room A
Health ...................................... Multipurpose Room A
Humanities ................................... Dogwood Room
Sciences .................................... Dogwood Room

Photo Session
Presenters who would like to be recognized in their local newspaper may go by the Office of Public Relations, 435 HFR on Thursday, March 27 between the hours of 2:00 – 5:00 pm to have their photos taken. Please pick up a biographical form at the registration desk and turn it in when you have your photo taken.

Western Carolina University
Western is a campus of the University of North Carolina system and enrolls more than 9,000 students. Western is located in a beautiful valley between the Blue Ridge and Great Smoky Mountains, an hour west of Asheville, N.C., and 2.5 hours northeast of Atlanta. Here you will find convenient access to a region that offers tremendous opportunities for outdoor research and recreation. Engagement of students and faculty in service learning and other community activities is a critical part of Western’s tradition of academic excellence.

On the Cover
The pottery pictured on the program cover is by Joel Queen, a graduate student in the Master of Fine Arts program at Western Carolina University. The piece pictured in the inset (titled “In his own hands”) is on display in the North Carolina History Museum.

Joel Queen is an enrolled member of the Eastern Band of Cherokee Indians, and he is the 9th generation of potters from the Bigmeat family in Cherokee, North Carolina. Joel has won numerous awards across the nation from competition art shows in pottery, sculpting, and woodcarving. Joel was one of a few Cherokee potters responsible for reviving the lost art of traditional Cherokee stamped pottery through the use of traditional and modern pottery methods. His work combines the past, present, and future of Native American Art. His art is displayed at places such as the Smithsonian Institution (Washington, D.C.), the British Museum (London); and Monticello, the Virginia home of President Thomas Jefferson. Joel Queen Gallery, Inc. is located at 1036 US Hwy. 441 N., Whittier, NC and you can view more of his work online, joelqueengallery.com.
11:00am | UC 213 - Dogwood
ROGER LIRELY, MODERATOR

Editorial Favoritism in Academic Journals – A Case Study of MiSQ
Presenters: Sentil Prakash Chinnachamy, Shree dhevi Rajagopalan
Sponsors: Debasish Banerjee, Paul Jacques

ESX Server
Presenters: Venkatesh Pattabiraman
Sponsor: William Perry

12:30pm | UC 213 - Dogwood
SEAN O’CONNELL, MODERATOR

Effects of a Hemlock Woolly Adelgid Insecticide Treatment on Arthropod Community Diversity and Food Availability for Insectivorous Birds in the Great Smoky Mountains National Park
Presenter: Josephine Falcone
Sponsor: Laura DeWald

Effects of Mycorrhizal Fungi on the Growth of Celastrus Orbiculatus
Presenter: Carly Lett
Sponsor: Laura DeWald

Comparison of Potential Habitat Among Golf Courses in Western North Carolina
Presenter: Jennifer Extine
Sponsor: Laura DeWald

2:00pm | UC 213 - Dogwood
GREG ADKISON, MODERATOR

The Chemical and Physical Soil Properties of Arundinaria Gigantea in Western North Carolina
Presenter: Adam Griffith
Sponsor: Kathy Matthews, Rob Young

Mate Choice and Speciation in the Cryptic Katydid Amblycorypha Alexanderi, Amblycorypha Rotundifolia, and a Song Morph Known as “Craggy” (Orthoptera: Tettigoniidea)
Presenter: Dawn Cusick
Sponsor: Jim Costa

The Effects of the Decline of the Castanea Dentata and Different Management Techniques on the Genetic Diversity of Quercus Rubra in Western North Carolina.
Presenter: Stephanie Grant
Sponsor: Laura DeWald

3:30pm | UC 213 - Dogwood
JACK SUMMERS, MODERATOR

A Portable Tungsten-coil Atomic Emission Detector for Nuclear Forensics and Development of Scientific Methods for Field Analysis
Presenter: Kelly Lawrence
Sponsor: Arthur Salido

Integrated Pest Management Using Insect Pheromones in Apple Orchards in Western North Carolina
Presenter: Paul Davis
Sponsor: Cynthia Arterholt

6:00pm | UC 213 - Dogwood
WILLIAM KWOKHRA, MODERATOR

Crystal Engineering: Solid State Reactivity of Butadiene Monomers in Crystals
Presenter: Kyle D. Beard
Sponsor: Brian Dinkelmeyer

Investigations of the Non-covalent Bond in Various Macrocyle/Protonated Primary Amine Complexes in the Gas Phase and in Solution
Presenter: Diane Benoist
Sponsor: Carmen Huffman
11:00AM | UC 232A - MULTIPURPOSE A
MITCH WILLIAMS, MODERATOR

Why are Women in Poverty? Facts and Counseling Implications
Presenter: Lisa Shows
Sponsor: Lisen Roberts

Enhancing Students’ Basic Math Skills: Preparing Community College Graduates to Meet Employer Needs
Presenter: Paul Knott
Sponsor: Mitch Williams

Single Subject Study of the Effects of Pre-assigned Question Intervention on Class Participation of Three Ninth Grade Math Students
Presenter: Eva Chazo
Sponsor: Sharon Dole

12:30PM | UC 232A - MULTIPURPOSE A
MITCH WILLIAMS, MODERATOR

A Study of Community College Academic Administrator and Faculty Perceptions of the Wingspread Principles of Teaching Effectiveness
Presenter: Paul Knott
Sponsor: Mitch Williams

Examining the Role of Interpersonal Relationships on the Psychological Well-being of Survivors of Intimate Partner Abuse
Presenter: Katherine Hogan
Sponsor: Valerie Schwiebert

Southwestern Community College GEAR UP Program Services: Stakeholder Perceptions of SCC GEAR UP Services
Presenter: April Avery
Sponsor: Eleanor Hilty

2:00PM | UC 232A - MULTIPURPOSE A
PHYLLIS ROBERTSON, MODERATOR

Cyberbullying: What School Counselors Should Know
Presenter: Meghan Horne
Sponsor: Valerie Schwiebert

Postpartum Mood Disorders: How Counselors Can Help
Presenter: Shelley Tom
Sponsor: Valerie Schwiebert

Exploring Community College Culture for Development of Future Leaders
Presenter: Paul Knott
Sponsor: Mitch Williams

3:30PM | UC 232A - MULTIPURPOSE A
PHYLLIS ROBERTSON, MODERATOR

One Teacher’s Experience Interpreting and Enacting a New Science Curriculum Framework: An Ethnographic Case Study
Presenter: Betsy Burrows
Sponsor: Gayle Moller

Counseling Affluent Families and Individuals
Presenter: Robarn Danzman
Sponsor: Valerie Schwiebert

Expressive Art Interventions for Couples in Counseling
Presenter: Tania Arcos
Sponsor: Valerie Schwiebert

6:00PM | UC 232A - MULTIPURPOSE A
PHYLLIS ROBERTSON, MODERATOR

School Based Group Counseling for Children and Pre-adolescents with ADHD
Presenter: Kathryn Vaughn
Sponsor: Valerie Schwiebert

Teen Pregnancy in a Latina Population: Current Research and a Group Intervention
Presenter: Leanne Mullen
Sponsor: Valerie Schwiebert

A Case Study of Buncombe County’s Child Abuse Prevention Program
Presenter: Katie Wohlford
Sponsor: Valerie Schwiebert

Veterans’ PTSD and its Effect on Families
Presenter: Emma Pluta
Sponsor: Valerie Schwiebert

6:00PM | UC 215 - CATAMOUNT
MODERATOR TBA

Acquiring Language in the Home of the 100 Languages: Second Language Acquisition in Reggio Emilia Environments
Presenter: Emily R. Hunter
Sponsor: Eliza Dean

Integrated Therapy: A Comparison of Therapists’ and Teachers’ Understandings of Roles in the Provision of Early Intervention Services
Presenters: Amanda Belue, Joy Griffith, Emily Hunter
Sponsor: Cathy Grist

The Clyde A. Erwin High School Mascot Controversy
Presenter: James (Jim) A. Brown, Jr
Sponsor: Sandra Tonnsen
11:00am | UC 232B - Multipurpose B
JAMES ZHANG, MODERATOR

Machine Vision Systems: Automated Inspection and Metrology
Presenter: Benjamin Guardiola
Sponsor: James Zhang

Design and Analysis of Closed Loop Control System: Coordinated Industrial Drives
Presenter: Jason Naves
Sponsor: James Zhang

Wireless Sensor Networks: Environmental Remote Sensing Station Design
Presenter: Jeffrey Marston
Sponsor: James Zhang

12:30pm | UC 232B - Multipurpose B
JAMES ZHANG, MODERATOR

Factors Affecting Tensile Strength in 3D Prints
Presenter: Amber C. Thompson
Sponsor: James Zhang

Variables Affecting the Surface Finish for Aluminum
Presenter: C. Lee Roach
Sponsor: James Zhang

Statistical Data Analysis of Compression Strengths for Common Sizes of Pipe and Tube
Presenter: Johnson Busick
Sponsor: James Zhang

2:00pm | UC 232B - Multipurpose B
ROBERT ADAMS, MODERATOR

Coil Winding Experimental Design
Presenter: Brad Garland
Sponsor: James Zhang

Oxford Laser Material Removal Rates
Presenter: Dustin L. George
Sponsor: James Zhang

Analysis of Thermoforming Mold Materials
Presenter: Rebecca Warner
Sponsor: Bill McDaniel

3:30pm | UC 232B - Multipurpose B
ROBERT ADAMS, MODERATOR

Optimizing Rapid Prototyping Quality Through Controllable Variables
Presenter: Brett Banther
Sponsor: James Zhang

Best Kept Tolerances Combination for TL 1 Lathe
Presenter: Derrick Norris
Sponsor: James Zhang

Hand Tremor Detection and Differentiation Using Advanced Computing
Presenter: TJ Knaga
Sponsor: James Zhang

Design of a DSSS Transceiver with Carrier and Bit-time Recovery
Presenter: Lingtao Zhang
Sponsors: Robert Adams, James Zhang, Peter Tay

“It is not the fruits of scientific research that elevate man and enrich his nature, but the urge to understand, the intellectual work, creative or receptive... If we knew what it was we were doing, it would not be called research, would it?”
—ALBERT EINSTEIN
11:00am | UC 215 - Catamount
Laura Wright, Moderator

Exploring Mimicry and Hybridity in Postcolonial South African Literature
Presenter: Jennifer Veilleux
Sponsor: Laura Wright

Coloring the Birds in Jean Rhys’s Wide Sargasso Sea
Presenter: Julia McLeod
Sponsor: Laura Wright

Brian Friel’s Translation of the Irish Female
Presenter: Susan W. Noblitt
Sponsor: Laura Wright

11:00am | UC Theater
Deidre Elliott, Moderator

Adventures in Not Reading Heart of Darkness
Presenter: Joseph Telegen
Sponsor: Beth Huber

“Reading for My Life”
Presenter: Karen Dodson
Sponsor: Beth Huber

The Dust Bowl: The Earth’s Resiliency Reflected in Steinbeck’s Women
Presenter: Caitlin Tierney
Sponsor: Deidre Elliot

Digging in The Secret Garden: Applying Burke’s Dramatistic Pentad
Presenter: Bessie Goggins
Sponsor: Deidre Elliot

12:30pm | UC 215 - Catamount
Elizabeth Addison, Moderator

Portrayals of Naturalism Using Darwinism:
Crane’s Maggie: A Girl of the Streets and Steinbeck’s Of Mice and Men
Presenter: Bessie Goggins
Sponsor: Elizabeth Addison

The House of Marx
Presenter: Jennifer Veilleux
Sponsor: Elizabeth Addison

Endearing Villains: Miles and Flora as the Antagonists of Henry James’s The Turn of the Screw
Presenter: Matthew Hundley
Sponsor: Elizabeth Addison

Serving Up Change: Dinner Parties in the Fiction of Edith Wharton and Kate Chopin
Presenter: Julia McLeod
Sponsor: Elizabeth Addison

2:00pm | UC 215 - Catamount
Leah Hampton, Moderator

Advocacy for the Congolese Women: Initiating Nonviolence Through Journalistic Rhetoric
Presenter: Bessie Goggins
Sponsor: Marsha Lee Baker

Riding Shotgun:
How Teaching My Imaginary Child How to Drive Yielded New Insights On Composition Processes
Presenter: Joseph Telegen
Sponsor: Beth Huber

Comparing Blue Collar and White Collar Dialects in Alabama
Presenter: Vida Hilleke
Sponsor: Chandrika Rogers

3:30pm | UC 215 - Catamount
Laura Wright, Moderator

Moments of Decision: Milton’s Doctrine of Free Will
Presenter: Karen Dodson
Sponsor: Mimi Fenton

“With Inward Eyes Illuminated:” Samson’s Divine Enlightenment
Presenter: Tad Daggerhart
Sponsor: Mimi Fenton
12:30pm | UC 302 - Grand Room
MICHELLE HARGIS, MODERATOR

Model-based Treatment for Lexical-semantic Reading Deficits in Aphasia: A Case Study
Presenter: Erin Markley
Sponsor: Ruby Drew

The Correlation Between BMI and Hypertension in Children Five Years of Age in a Rural Southeastern Region
Presenters: Karen McLaughlin, Kathy Jenkins
Sponsor: Sharon Metcalfe

Rhythm Tap Dance: The Tradition and the Dancers
Presenter: Heidi Turlington
Sponsor: Justin Menickelli

12:30pm | UC Theater
KAREN LUNNEN, MODERATOR

A Novel Use of Pedobarograph to Measure Arch Stiffness
Presenters: Matthew Helton, John Lesh, Kimberly Schifino
Sponsor: David Hudson

Establishing Reliability of a New Functional Knee Scale for the Athletic Population
Presenters: Debbie Bachman, Michele Carpenter, Heather Davis, Josh Fruchtman, Katie Rhodes
Sponsor: James Scifers

2:00pm | UC Theater
KAREN LUNNEN, MODERATOR

Enhancing PT/PTA Students’ Knowledge of Anatomy: A Clinically Based Service Learning Project
Presenters: Jessa Brown, David Hollowell, Morgen Kawaguchi, Emily Mainwaring, Nathan Riner, Sam Rule
Sponsor: Kathy Starr

Opinions of North Carolina Acute Care Clinical Managers About Clinical Education
Presenters: Mary Beth Haley, Charlotte Walters, Jenny Spiggle
Sponsor: Linda Eargle

3:30pm | UC Theater
KAREN LUNNEN, MODERATOR

Are Older Adults with Low Bone Mineral Density at Risk for Falling?
Presenters: Jan Bernard, Brooke Malanga, Kasey Mock, Courtney Smith
Sponsor: Lori Schrodt

The Association of Nutritional Status, Gender, and Age with Cross-sectional Area of the Multifidus Muscle in Establishing Normative Data
Presenters: Toni Constantino, Nathaniel Jackson, Lacy Luckadoo, Shannon Lloyd
Sponsors: Todd Watson, Sue McPherson

6:00pm | UC 232B - Multipurpose B
MODERATOR TBA

A Retrospective Look at Practical Nurse Education (PNE) Graduates… Where Are They Now and Why?
Presenter: Kimberly Ann S. Amos
Sponsor: Sharon E. Metcalfe

“True scholarship consists in knowing not what things exist, but what they mean; it is not memory but judgment.”
—JAMES RUSSELL LOWELL
11:00AM | UC 209 - Rogers
David McCord, Moderator

The Relationship of Adaptive Coping Styles to The Five-factor Model of Personality: A Correlational Study
Presenter: Erin P. Hambrick
Sponsor: David McCord

The Personality of Hatred
Presenter: Jennifer L. White
Sponsor: David McCord

Personality Differences in an Asch Conformity Paradigm
Presenter: Wesley Knepper
Sponsor: David McCord

11:00AM | UC 302 - Grand Room
Alvin Malesky, Moderator

The Relationship Between Personality Dimensions and Peer Structure Preference
Presenter: Paul Ingram
Sponsor: William Poynter

Muslim Prejudice and the Influence of Mortality Salience
Presenter: Caleb Corwin
Sponsor: Winford Gordon

Life Dissatisfaction Measures in Assessment Tools
Presenter: Andrew H. Presnell
Sponsor: Norm Hoffmann

12:30PM | UC 209 - Rogers
Moderator TBA

Routine Addiction Screening of County Jail Inmates
Presenter: Steven Proctor
Sponsor: Norman G. Hoffmann

Animal Rights and Moral Intuition: The Role of Visceral Disgust in Animal Activism and Animal-related Attitudes
Presenter: Lauren Golden
Sponsor: Hal Herzog

Hemispheric Asymmetries in Attention Processing Vary with Self-reported Attentional Deficits
Presenter: Paul Ingram
Sponsor: William Poynter

2:00PM | UC 209 - Rogers
Millicent Abel, Moderator

Student Ratings of Male and Female Professors
Presenter: Ryan Couillou
Sponsor: Millicent Abel

How Comedians’ Sex and Attractiveness Affect Ratings of Comedy Routines
Presenters: Marissa Sullivan, Angela Myers
Sponsor: Millicent Abel

Romantic Relationships: The Role of Cognitive Interdependence and Self-concept Expansion
Presenter: Ross May
Sponsor: Millicent Abel

2:00PM | UC 302 - Grand Room
Chris Cooper, Moderator

The Descent from the Mountain: Germans’ Struggle for Self Expression in a Gilded Age
Presenter: Kevin Childers
Sponsor: Laura Cruz

Does Local Spending Help Education?
Presenter: Christopher A. Cody
Sponsor: Christopher Cooper

3:30PM | UC 209 - Rogers
Millicent Abel, Moderator

Electrophysiological Correlates of Decision-making and Memory Updating
Presenter: Brandon Waters
Sponsor: Millicent Abel

Event Impact: Do the Factors of Personality, Coping Styles, and Resiliency Predict the Level of Impact of Stressful Events?
Presenter: Erin P. Hambrick
Sponsor: Millicent Abel

First Serious Romantic Relationship’s Influence on Subsequent Romantic Relationships
Presenter: Ross May
Sponsor: Millicent Abel