Western Illinois University

6th Annual
Graduate Research Conference

Friday, March 22, 2019
University Union
Schedule of Events

8:30am – 2:00pm  Check in (Union First Floor Conference Lobby)
9:00am – 10:30am Concurrent Sessions (Board Room, Capitol Room, Cardinal/Oak Room)
10:45am – 11:30am Performance Session (Heritage Ballroom)
10:45am – 12:15pm Poster Session (Brattain Lounge)
12:30pm – 2:00pm  Concurrent Sessions (Board Room, Capitol Room, Cardinal/Oak Room)
2:15pm – 3:15pm  Concurrent Sessions (Board Room, Capitol Room, Cardinal/Oak Room, Fox Room)
3:30pm – 4:30pm  Keynote: “Skills for Success: Time Management and Believing!” by Dr. Penelope Shumate, School of Music (Heritage Ballroom)
4:30pm – 5:30pm  Awards Reception (Heritage Ballroom)

Note: The Lincoln Room will be open 8:30am – 2:00pm with coffee, water, and donuts

9:00am – 10:30am Concurrent Sessions

Understanding Species Interactions and Habitat Use

Board Room

Moderator: Dr. Mei Wen
Maria-Jose Romero-Jimenez (Biology) “Multigene Characterization of Darksidea Isolates and Description of a New Species”
Zachary J. Witzel (Biology) “Population Demographics of Silver Carp, Bighead Carp, Bignmouth Buffalo, and Paddlefish in Pools 16 through 19 of the Mississippi River”
Dominique Turney (Biology) “Paddlefish Movement and Habitat Use Using Acoustic Telemetry in the Upper Mississippi River (Pools 14-19)”

Molecular Biology and Pathogenesis

Capitol Room

Moderator: Dr. Erica McJimpsey
Adedayo Olabode Adelakun (Biology) “Role of Macrophages and AXL Receptors in Dengue Virus Infection of Permissive Cells”
Michael Oni (Biology) “Modification of Peptide J18 for Improved Ovarian Cancer Targeting”
Olanrewaju Oni (Chemistry) “Expression of Streptavidin on Coat Protein III of Fd-tet Phage”
Taylor Gunby (Chemistry) “Determination of Fd-tet Bacteriophage Infectivity of E. coli B91BK Under Conditions that Disrupt the Biotin-Streptavidin Interaction”

Psychology of Behavior and Experience

Cardinal/Oak Room

Moderator: Dr. Jonathan Hammersley
Kyle Reterstoff (Experimental Psychology) “Is Event-Related Alpha Synchronization Associated with the Attenuation of Vigilance Decrement Effects through Task Switching?”
Amy Walen (Clinical/Community Mental Health) “Life History Mediates Effects of Childhood Intervention on Risk-Taking/Mental Health”
An Le (Experimental Psychology) “The Processing of Subliminal Animate-Inanimate Images and Effects on Mood States”

10:45am-11:30am Performance Session

Heritage Ballroom

Moderator: Dr. Hadley Kamminga-Peck
Austin James Roach (Acting) “Dishonorable Tyrant: Honor and Natural Law Justice in Fuenteovejun”

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1. Xiom Janiria Pinchi-Davila (Biology) “Description of Novel Endophytic Taxa within the Pleosporales and Evaluation of Their Role in Plant Growth”
2. Cheyenne R. Beach (Biology) “Evaluating Sub-lethal Infections of Sphaeridiotrema spp. and Cyathocotyle bushiensis Trematodes in Captive Lesser Scap”
3. Opeyemi Odunyi (Biology) “Growth and Gene Expression of Soybean during Germination under High Salinity Stress and Salicylic Acid”
4. Tyler Thomsen and Madeline Tomczak (Biology) “Habitat Use of Larval Fish in Backwater Reaches of the Upper Mississippi River”
5. Rajeev Roy (Biology) “Expression of a Hemagglutinin Targeting Peptide on Modified Coat Protein VIII of Fd-tet Phage”
6. Ajiboye A. Olok (Biology) “The Role of the AXL Receptor in the Infectivity of Yellow Fever Virus in Permissive Cells”
7. Zachary Witzel (Biology) “Size Selectivity of Gill Nets Used to Target Silver and Bighead Carp in the Upper Mississippi”
8. April Franco (Biology) “Identification of Natural Compounds that Induce Immunogenic Cell Death Using a Novel Calreticulin CRT Reporter”
9. Rebecca N Bocian (Biology) “Identification of Chemotherapeutic Drugs that Induce Immunogenic Cell Death Using a Novel Calreticulin CRT Reporter”
11. Bethany Esterlen (Chemistry) “Trilobites in Limestone”
12. Tiwalola Ogunleye (Chemistry) “Quantification of Naproxen in Equine Plasma for Doping Control in Horse Racing Using Strong Anion Exchange Solid Phase Extraction Followed by Liquid Chromatography with UV Detection”
14. Rebecca Haughey (Chemistry) “Determination of Phosphate and Nitrate Concentration in Soil and Water Samples”
17. Joshua Bartels (Chemistry) “Developing an Inquiry-Based Physical Science Curriculum”
18. Alexandra Brisbin (Chemistry) “Quantitative Analysis of the Organic Explosive HMX in Water by High Performance Liquid Chromatography with Ultraviolet Detection”
19. Frank Lin (Chemistry) “Quantification of Phenylbutazone in Equine Plasma for Doping Control in Horse Racing Using Strong Anion Exchange Solid Phase Extraction Followed by Liquid Chromatography with UV Detection”
20. Eistein Ravi (Chemistry) “C-H Functionalization of Indoles”
22. Ravali Mekala (Chemistry) “Exploration of a New Oxidizing Agent on the Oxidation of Indole”
23. Terrence D Petry, Jr. (Chemistry) “Quantitative Analysis of Limonene Content in Citrus Oil by Gas Chromatography Using Acetophenone as the Internal Standard”
24. Mallika Asar (Chemistry) “Phage Display Selection and Identification of Novel Pancreatic Cancer Targeting Peptides”
25. Kimberly Oldenburg (Chemistry) “Induction of Apoptosis by Peptide J18 in Ovarian Cancer Cells”
26. Adeola Adesoro (Chemistry) “Eco-Friendly Oxidations Using Water-Soluble Oxidizing Agents”
27. Mercedes Joyner (Communication) “Barriers in Upward Communication Channels from Superiors to Subordinates”
29. John Agboola (Health Sciences) “Exploration of the Factors Influencing Mammography Screening Participation”
30. Alyssa Detrick and Alicia Guyette (Health Sciences) “Impact of Sleep on the Mental Health of College Students: A Literature Review”
31. Opeoluwa John Ponnie (Health Sciences) “Burden and Coping Styles Among Informal Caregivers of Depressed Patients in Ondo State Southwestern Nigeria”
32. Bolarinwa Akinwumi (Health Sciences) “A Picture Is Worth a Thousand Words—History of Data Visualization”
33. Samuel Almendarez (Kinesiology) “Effects of Ultra-Endurance Racing on Response Time and Memory Recall”
34. Mitchell Wendling (Kinesiology) “The Effects of Fatigue and Sleep Deprivation on Flexibility and Balance over the Course of an Ultra-Endurance Race”
36. Veerpal Kaur (Physics) “Structural, Magnetic and Optical Properties of Cobalt Doped Zinc Oxide”
38. Katie Little (Recreation, Park & Tourism Administration) “Measuring Camp Staff Diabetes Knowledge and Attitudes at a Diabetes Camp”
39. Rebecca Creager (Sociology) “Sexual Scripting through Netflix: LGBT Representation in Film”
40. Terri Dobmann (Special Education) “Pre-transition Exercise as a De-escalation and/or Preventative Intervention”
12:30pm – 2:00pm Concurrent Sessions

Addressing Stereotypes and Social Justice through History, Film, and Literature

**Board Room**

**Moderator:** Dr. David Banash

Katrina Vandeven (Political Science) “Formation of Abortion Legislation in America: Colonial America through the Early 20th Century”
Harrison Schulte (History) “Cinematic Representations of the Bataan Death March”
Bonita Akinbo (English) “Challenging Stereotypes: Nadeem Aslam’s Approach in The Blind Man’s Garden”
Rhobie Underwood (English) “Markova: A Comfort Gay Victim or an Illusioned Drag Queen? His Stories of War, Homosexuality, and Violence in the Philippines during the Japanese Occupation”

Communicating and Engaging in the World: Behaviors, Barriers, and Responses

**Capitol Room**

**Moderator:** Dr. Melissa Stinnett

Zachary Riel (Communication) “Response to a WEA Tornado Warning Text Message”
Roseline Ajifolokun-Agboola (Communication) “The Effect of Imagined Interactions on the Conflict Styles Engaged by Relational Partners in Conflict Interactions”
Nicole Jones (Communication) “Mismomer of How Autistic Children Communicate”

Agricultural Applications of Molecular Biology, Biochemistry, and Analytical Chemistry

**Cardinal/Oak Room**

**Moderator:** Dr. Kishor T. Kapale

Jamie Greathouse (Chemistry) “The Effect of Grafting on the Antioxidant Capacity in Heirloom Varieties of Tomato (Solanum lycopersicum) in Hydroponic Cultivation”
Bayan Aljamal (Biology) “Gene Expression of Corn Earworm (Helicoverpa zea) When Infected with Pseudomonas aeruginosa Bacteria”
Nick Emory (Biology) “Gene Expression of Soybeans (Glycine max) in Response to Inoculation with Trichoderma Fungi”

2:15pm – 3:15pm Concurrent Sessions

Applications in Mathematics and Physics

**Board Room**

**Moderator:** Dr. Dinesh Ekanayake

Manjula Mahesh K. Ranpati Dewage (Mathematics) “Orderly Packing of Rings”
Michael Mayowa Adetunji (Physics) “Optical Properties of Samarium (Sm) and Europium (Eu) Co-Doped Bismuth Telluro-Borate Glasses”

Social and Economic Issues in Education

**Capitol Room**

**Moderator:** Dr. Algerian Hart

Rachel Najdek (Experimental Psychology) “Students’ Achievement Goal Orientation and Interest in Social Comparison”
Tolulope Olupona (Economics) “The Impact of Education on Income Inequality”

Issues in Public Health

**Cardinal/Oak Room**

**Moderator:** Dr. Maureen Bezold

Caitlin Merritt (Public Health) “Food for Thought: The Beef about Plant-Based Diets and Lowering Meat Consumption”
Uyiosa Chukwuka (Public Health) “Sexual Abuse and the Health Implications on Women at Western Illinois University”

Ecology and Population Dynamics

**Fox Room**

**Moderator:** Dr. Christopher Jacques

Edward Davis (Biology) “Evaluating Survival and Cause-Specific Mortality of Bobcats in West-Central Illinois”
Samuel T. Klimas (Biology) “Spring Foraging Ecology of Green-Winged Teal in the Illinois River Valley”
3:30pm Keynote (Heritage Ballroom)
“Skills for Success: Time Management and Believing!”

Dr. Penelope Shumate, School of Music

Welcome Dr. Nancy Parsons, Former Associate Provost and Director of Graduate Studies

Remarks and Introduction Dr. Mark Mossman, Interim Associate Provost and Director of Graduate Studies

Keynote Dr. Penelope Shumate, School of Music

Praised by The New York Times for singing with “bell-like clarity and surpassing sweetness,” and by The New York Concert Review for “her sparkling coloratura perfection,” Penelope Shumate’s upcoming engagements include her soloist debut with the Royal Philharmonic Orchestra in London. Recently, she has also made multiple soloist appearances at both Carnegie Hall and Lincoln Center in New York City. She has sung with opera companies and orchestras across America including Opera Company of Philadelphia, Opera Roanoke, Opera Saratoga, Des Moines Metro Opera, Utah Festival Opera, Charlottesville Opera, Annapolis Opera, Santa Fe Symphony Orchestra, Oklahoma Philharmonic, Hilton Head Symphony Orchestra, Heartland Festival Orchestra, Rapids Symphony Orchestra, Chamber Orchestra of Philadelphia, and the Chicago Bar Association Symphony Orchestra and Chorus, among others. She has been an award winner with the Gerda Lissner Foundation, The American Prize, and the MacAllister Awards, among others.

At WIU, Dr. Shumate was selected as the winner of the 2018 Provost's Award for Excellence in Scholarly/Creative/Performance/Professional Activities. For two years in a row, she was also the winner of the College Of Fine Arts and Communication Dean's Award for Excellence for Scholarly/Creative/Performing Activities (2018 & 2017). Her WIU voice students’ successes include being selected for international and national voice training programs, winning awards and placing in vocal competitions including the Metropolitan Opera National Council Auditions and NATS, and at WIU, being selected as winners of the School of Music Aria/Concerto Competition for both 2018 and 2017, performing as soloists in Opera Theatre, university ensembles, and Student Showcase Convocation concerts, and being awarded vocal scholarships. Visit www.penelopeshumate.com

4:30pm – 5:30pm Awards Reception (Heritage Ballroom)

The Western Illinois University School of Graduate Studies would like to thank the following for their generous support of this year's Graduate Research Conference:

Center for Innovation in Teaching and Research
College of Arts and Sciences
Department of Biological Sciences
Department of Chemistry
Department of Communication
Department of Physics

Graduate Research Conference Planning Committee
Dinesh Ekanayake, Colin Harbke, Anita Hardeman, Kishor T. Kapale, James McQuillan, Amy Patrick Mossman (Chair), Amanda Schulz, and Mei Wen

Conference Day Volunteers
Michael Adetunji, Clay Burkholder, Pramaban Joshi, Veerpal Kaur, Richard Jake Lambert, Michael Starzyk, Khadga Thakuri

Judges

Moderators
David Banash, Maureen Bezold, Dinesh Ekanayake, Jonathan Hammersley, Algerian Hart, Christopher Jacques, Hadley Kamminga-Peck, Kishor T. Kapale, Erica McJimpsey, Melissa Stinnett, Mei Wen

Thank You!