

The University of Oklahoma
Honors College proudly presents:

*Student Research &
Performance Day*



Saturday,
March 29, 2008

The National Weather Center

Session I, 10:00 - 12:00

Room 1120, Film, Literature

Chaired by Dr. Robert Con Davis-Undiano

- Brooke McCorkle, with Dr. Michael Lee, "Amalgamous Aesthetics: Nationalism and Akira Ifukube's *Gojira* Film Score"
- Nicholas Moellman, with Dr. Samuel Huskey, "The Unifying Aspect of the Number Three in Virgil's *Aeneid*"
- Zachary Privott, with Dr. Victoria Sturtevant, "Oscar Goes to War: World War II and the Academy Awards of 1941"
- Slater David Rhea, with Dr. James Yoch, "The Mahabharata, Classical Indian Epic on Film"

Room 1350, Mechanical Engineering (Robots)

Chaired by Dr. Cengiz Altan

- Jared Arney, Scott Herrmann, Uriah Hughes and Paul Schoelen, with Dr. K.H. Chang, "Assistive Transfer Device Development"
- Sam Bleckley, Juan Herrera and Lawrence Kincheloe, with Dr. Dean Hougen, "Asterias: A Study in Human Robotic Interaction"
- Thomas Cates and Petr Sramek, with Dr. Kuang-Hua Chang, "Assistive Device for Wheelchair Soccer Game"
- Thomas Cates, with Dr. K.H. Chang, "Bow and Arrow Support Device"

Room 2107, Chemistry of Life Processes

Chaired by Dr. George Richter-Addo

- Cody Thomas, with Dr. Vadim Soloshonok, "Memory of Chirality"
- Koree Clanton Arrowood, with Dr. Susan Schroeder, "Looking for Stability in an RNA World"
- Stephanie Easter and Andri Lynn Lee, with Dr. Robert Cichewicz, "Effects of Methyl Gallate on Polyglutamine Toxicity in a *C. elegans* Model of Huntington's Disease"
- David Freeman, with Dr. Chaunbin Mao, "Biomimetic Bone Crystal Growth"
- Becky Myers, with Dr. Susan Schroeder, "pRNA: Solving the Structure"
- Christopher Pack, with Dr. Ann West, "The Expression, Purification, and Crystallization of MPR1 in *Schizosaccharomyces Pombe*"

Room 3620, Social Sciences

Chaired by Dr. Carolyn Morgan

- Adam Drennan, with Dr. Aparna Mitra, "Racial Segregation in College Majors"
- Kyle Jones, with Dr. Circe Sturm, "Listening Between the Lines: Investigating the Cycle of Collaboration in Local Music"
- Jason Orr, with Dr. Alisa Hicklin, "Networking Within Public Management: What Matters Most"
- Kelly Sheline, with Dr. Ryan Brown, "Narcissism and Mental Health"

Room 3910 A, Neurobiology 1

Chaired by Dr. Marielle Hoëfnagels

- Dylan Barnes, with Dr. Donald Wilson, "Behavioral Pattern Separation and Completion in Olfaction"
- Rylon Hofacer, with Dr. Donald Wilson, "Pattern Completion and Separation in Mammalian Olfactory Systems"
- Ashiq Zaman, with Dr. Donald Wilson, "Pattern Separation and Completion and in the Developing Olfactory System"
- Jonathan Smith, with Dr. Donald Wilson, "Neurobiology of Odor Habituation and Dishabituation"

Room 3910 B, Neurobiology 2

Chaired by Dr. James N. Thompson, Jr.

- Helen Ajufo, with Dr. Regina Sullivan, "Anterior Cingulate Cortex"
- Melissa Bugg, with Dr. Regina Sullivan, "Ontogeny of the Hippocampus on Contextual Learning"
- Ally Beasley, with Dr. Regina Sullivan, "Role of the Hippocampus on Contextual Learning"
- Katie Willis, with Dr. Ari Berkowitz, "Comparison of Distributions of Active Spinal Cord Neurons for Four Kinds of Rhythmic Limb Movements"
- Nataliya Popokina, with Dr. Douglas Gaffin, "Scorpion Response to UV and Green Light and its Possible Relation to Scorpion Fluorescence."

Room 4140, Meteorology, Physics

Chaired by Dr. Stewart Ryan

- Christopher Allen, with Dr. Lloyd Bumm, "Flat Gold Nanoparticle Spectroscopy and Dying"
- Daniel Freno, with Dr. Lloyd Bumm, "Optical Properties of Silver Nanoprisms"
- David John Gagne II, with Dr. Amy McGovern, "Automated Classification of Convective Areas in Reflectivity Using Decision Trees"
- Kevin Haghi and Joshua Kalfas, with Dr. Phillip Chilson, "Revisiting the Kelvin Rain Drop Generator to Derive Fundamental Properties of Water Polarization"

Room 5600, Environment 1

Chaired by Dr. David Sabatini

- Quinn Floch, with Dr. Andrew Madden, "Mineral-Water Interactions Redistributing Zn²⁺ in Inundated Mine Wastes"
- Rachel Ann Grisso, with Dr. Eleanor Weinel, "Web Space, Dream Space"
- John Guess, with Dr. Megan Elwood-Madden, "Jarosite: How Long Does it Last on Earth & Mars?"
- Nguyet Hoang, with Dr. Wayne Elisens, "SEM Study of Seed Coat Variation in a Lineage of Roses"
- Daniel Sambu, with Dr. Aondover Tarhule, "Watering Down Poverty: Alleviating Water Poverty through Spatial Targeting of Water Resource Development and Supply in Kenya"
- Allison Thurmond, with Dr. Reid Coffman, "How to Save a Bird Species: *Spiza Americana*, Suburban Habitat, and Central Oklahoma"

Room 5720, History, International Issues
Chaired by Dr. Rob Griswold

- Benjamin Daniel, with Dr. James Hart Jr., "The Isle of Erin: Racism and Cultural Integration"
- Jessica Eastland, with Dr. Robert Cox, "Immigration in the European Union"
- Ryan Hall, with Dr. Donald Pisani, "Sallisaw and the Great Depression"
- Brian Hardzinski, with Dr. Ben Keppel, "Good Night for Ed, Bad Luck for Joe: Edward R. Murrow and Television's Role in Bringing Down Joseph McCarthy"
- Joseph Hunt, with Dr. Judith Lewis, "The False Emancipation: British Women in the First World War"
- Edward Smith, with Dr. Ben Keppel, "Shifting Sun: United States Cold War Foreign Policy and Japan, 1950-1952"

Room 5930, Zoology 1
Chaired by Dr. Heather Ketchum

- Shelly Bowles, with Dr. David McCauley, "Duplication of Transcription Factor AP-2 at the Origin of Vertebrates"
- Elizabeth Bradford, with Dr. David McCauley, "Inhibitor of Differentiation Gene in the Sea Lamprey"
- Geoffrey Lau, with Dr. Cindy Gordon, "A Systematic Revision of the Paracimexomys Group of Multituberculates"
- Jennifer Wells, with Dr. Cindy Gordon, "Enamel Microstructure of Multituberculate Mammals from the Early-Mid Cretaceous of North America"

Observation deck, Linguistics 1
Chaired by Dr. Dylan Herrick

- Kallie Cope, with Dr. Teresa Bell, "Processability Theory and Acquisition of Agreement in Arabic Second Language Acquisition"
- Derick Deweber, with Dr. Teresa Bell, "The Effect of First Language Prosody on Learning Second Language Vocabulary in Adults"
- Jay Jamison, with Dr. Teresa Bell, "The Critical Period Hypothesis, Sociocultural Theory, and L2 Acquisition"
- Kelsey Snapp, with Dr. Teresa Bell, "Mirror-Neuron System and the Acquisition of Vocal Speech for Deaf Children"
- Xiang Fei Yin, with Dr. Teresa Bell, "Music Role (Position) in the Language Classroom: What is the Relationship Between Songs and Chinese L2 Vocabulary Learning; and, How Singing Affects Tonal L2 Learning With Regards to Proper Pronunciation?"

Session II, 1:00 - 3:00

Room 1120, Chemistry
Chaired by Dr. Vadim Soloshonok

- Skylar J. Greiner-Hays, with Dr. Robert Cichewicz, "Minor Green Tea Constituents that Offer Protection from Mutant Huntingtin Toxicity"
- Will Gutekunst, with Dr. Robert Cichewicz, "The Search for Huntington's Disease Promoting Agents in Medicinal Herbs"
- Lisa Mannel, with Dr. Ronald Halterman, "Fluorescence Enhancement through Cucurbit[7]uril Encapsulation"
- Erin Rapp, with Dr. Robert Cichewicz, "A Yeast Model for Type II Diabetes: A Screening Tool for Determining the Effects of Natural Compounds Against IAPP Toxicity"

Room 1350, Environment 2
Chaired by Dr. Amy Cerato

- Jonathan Campos, with Dr. Brian Grady, "C12E6 Surfactant Film Analysis"
- Sarah Kassis, with Dr. Carl Sondergeld, "Effect of Fracture Offset and Proppant on Permeability in the Barnett Shale"
- Roy Khalife, with Dr. Naji Khoury, "PlastiSoil™: A New Revolutionary Generation of an Engineering Material from Recycled Plastic Wastes"
- Carlos Mendez, with Dr. R. N. Parthasarathy, "Effects of Biodiesel Peroxidation on Radiation and Pollutant Emissions"
- Konyrbayev Saken, with Dr. Richard Sigal, "Using High Pressure Mercury Injection to Characterize Shale Gas Reservoir Rocks"
- Zi Wang, with Dr. Kianoosh Hatami, "The Load-strain Behavior of Geogrid Junction"

Room 2107, Zoology 2
Chaired by Dr. Donald Wilson

- Andrew Hill, with Dr. James Thompson, Jr., "Testing Desiccation Resistance in Larval *Drosophila* Mutant Methuselah (mth) and HSP90 Deficient Heterozygotes"
- Chad Michael Knight, with Dr. Heather Ketchum, "The Seasonal Phenology of Forensically Important Flies"
- Stacey Steinmetz, with Dr. Heather Ketchum, "LD50 Values for Permethrin-Treated Larvae and Adults of *Cynomyopsis cadaverina*, the Blue Bottle Fly"

Room 3620, Microbiology
Chaired by Dr. David Nagle

- Amanda Cernosek, with Dr. Tyrrell Conway, "The Involvement of the Putative Sucrose Hydrolase gene *sacH* in the Metabolism of Sucrose in *Escherichia coli* O157:H7"
- James Hartline, with Dr. Tyrrell Conway, "Metabolic Flux in *Escherichia coli* O157:H7 and MG1655"
- Jessica Wilkin, with Dr. Kathleen Duncan, "Characterization of Two Microorganisms Found in an Oil Pipeline and Examination of Biocorrosive Effects of an Isolated Strain of *Bacillus licheniformis*"

Room 3910 A, Zoology 3

Chaired by Dr. Penny Hopkins

- Joshua Johnson, with Dr. David Durica, "Transcriptional Activity of crustacean E75"
Benjamin Martin, with Dr. Gary Wellborn, "Chemical Communication in Amphipods"
Michelle Morgan, with Dr. Gary Wellborn, "DNA Sequencing and Morphological Trait Analysis of Oklahoma Spring Hyalella"
Barret Phillips, with Dr. David Durica, "Genomic Organization of *Celaca pugilator EcR*"

Room 3910 B, Zoology 4

Chaired by Dr. Douglas Gaffin

- Keyaria Gray, with Dr. Barbara Safiejko-Mrocza, "ICAM, VCAM, and RAGE Expression in the Gingiva of Diabetic and Periodontitis Patients"
Jessica Marie Jackson, with Dr. Barbara Safiejko-Mrocza, "Effects of Hyperglycemia and Advanced Glycation End Products on the Expression of Adhesion Molecules in Gingival Fibroblasts and Wound Healing in Vitro"
Eks Wye Pollock IV, with Dr. Barbara Safiejko-Mrocza, "The Effects of *P. gingivalis*' LPS on human gingival fibroblasts and Wound Healing in Vitro"
Leslie Williams, with Dr. Barbara Safiejko-Mrocza, "Possible Mechanisms of the Effects of Nicotine on Gingival Fibroblasts"

Room 4140, Linguistics 2

Chaired by Dr. Marcia Haag

- Melissa Caddell, with Dr. Dylan Herrick, "Vowel Distinctions of L2 English Speakers"
Abigail Cousins, with Dr. Dylan Herrick, "Interlanguage Coda Clusters"
Christopher Dearer, with Dr. Dylan Herrick, "Acrylic Modelling of Human Vowels"
Daniel Helm, with Dr. Dylan Herrick, "The Effect of Rate-of-Speech upon Singleton and Geminate Voiceless Stops in Japanese"
Raychel Winstead, with Dr. Dylan Herrick, "A Comparative Study of Native and Non-Native American English Speakers' Perceptions of American English High Vowels"

Room 5600, Engineering

Chaired by Dr. Kyran Mish

- David Chambers, with Dr. M.C. Altan, "Dispersion and Distribution of Nanomaterials in Polymeric Composites"
Shawna Ong, Redmond Kelley, and John Meier, with Dr. Mark Yeary, "OU Digital Receiver Module Design and Demonstration Project"
Dustin Otten, with Dr. Prakash Vedula, "Direct Quadrature Method of Moments for the Fokker-Planck Equations"
Chiranth Srinivasan, with Dr. Dimitrios Papavassiliou, "Prediction of Turbulent Prandtl Number in Wall Flows"

Room 5720, Fine Arts

Chaired by Dr. Paula Conlon

- Jason Busniewski, with Dr. Zoe Sherinian, "Arabic Music from a Western Perspective"
Matt Byrd, with Dr. Kae Koger, "Suffering, Secrets, and Lies in the Angelina Project: A Dramaturgical Analysis"
Travis Dunlap, with Dr. Lance Drege, "Bach Transcriptions for Solo Marimba"
Kolbe Roper, with Dr. Jonathan Hills, "Friends and Family or OHNOGO"
Ming Yuan Sherry Tay, with Dr. Steve Brule, "Ignite"

Room 5930, Molecular Studies in Model Fish Species

Chaired by Dr. Rosemary Knapp

- Flora Ling, with Dr. Han Wang, "Regulation of the Rhythmic Expression of cry1b in Zebrafish"
Evelyn Meyers, with Dr. Rosemary Knapp, "Spermatogenesis in Bluegill Alternative Male Phenotypes"
Ryan Rorie, with Dr. Han Wang, "Identification and Expression of cng3a in Zebrafish (*Danio rerio*)"
Kevin Winters, with Dr. Han Wang, "Effects of CLOCK-BMAL and PER Proteins on the Expression of cry1a in Zebrafish"

Observation Deck: Politics, Policy

Chaired by Dr. Justin Wert

- Bryan Lee Day, with Dr. Lisa Foster, "A Monument Built On Words"
Matthew Felty, with Dr. Glen Krutz, "Failed Nominations: How the New Interpretation of 'Advice and Consent' Is Re-Shaping the Nomination Process"
Caleb Gayle, with Dr. Carol Silva, "The Utilization of Voter Verifiable Paper Audit Trails and Direct Recording Electronic Voting Machines"
Jensen Mecca, with Dr. Shad Satterthwaite, "Revolutionizing the Presidency"
Chris Murray, with Dr. Hank Jenkins-Smith, "Beliefs about Radiation: Scientists, the Public and Public Policy"