The Graduate Student Senate (GSS) represents the concerns of the graduate student community of Kent State University. The Graduate Student Senate also serves as an allocation body by providing funding to graduate students and graduate organizations for speakers, workshops, social events and professional travel.

2010 – 2011 Executive Board
Deb Lamm Executive Chair
Lindsey Ayers Vice Exec. Chair
Megan Williamson Finance Chair
Courtney Werner Info. Services Chair
Lisa Regula Meyer Advocacy Chair
Michael Allen Symposium Chair
Ashlie Louie Socher Admin. Assistant

Graduate Student Senate Presents
26th Annual Graduate Research Symposium
“Building Leaders for Tomorrow”

Featuring:
- Dr. Barry Franklin, Kent Alumnus and ACSM
- Dr. W. Michael Sherman, University of Akron Provost
### Table of Contents

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<td>Poster Presentations</td>
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<td>Special Thanks</td>
<td>28</td>
</tr>
</tbody>
</table>

### A Special Thanks to All Those Involved

- Graduate Student Senate
- Kent State University
- Department of Geography

#### People
- Dr. Barry Franklin
  - FACSM and Kent State Alumnus
- Dr. W. Michael Sherman
  - University of Akron Provost
- Dr. Ellen Glickman
  - Professor Exercise Physiology
- Dr. Kate McAnulty
  - Director Graduate Student Services
- Mrs. Claire Coseno
  - Senior Business Manager
- Jessica Houtz
  - University Conference Bureau
- All Judges and Panel Session Chairperson

#### Local Businesses
- F. J. Kluth Art Gallery
- Heavenly Cupcakes
- Kent Natural Foods
- Main Street Kent
- Stow Target
- WKSU
**Poster Presentations: 2nd Floor KIVA**

36. *Detection of Immune Complexes using Chiral Nematic Chitin Fibrils* by STEVE FIESTER of the Department of Biological Sciences

37. *Modulation of Transient Receptor Potential Cation Channel, Subfamily A, Member 1 (TRPA1) activity by Cdk5* by MICHAEL A. SULAK of the School of Biomedical Sciences

38. *Ordered Arrays of FtsZ, a Bacterial Division Protein* by JAMES C. REDEARN of the Department of Biological Sciences

39. *RNA oxidation in the brain of Alzheimer’s disease* by QUNXING DING of the Department of Biological Sciences

40. *Exercise in normobaric hypoxia exacerbates symptoms of acute mountain sickness but does not impact mood state in middle-aged males* by CHUL-HO KIM of the School of Health Sciences

41. *Differential Presentations between cortical and white matter demyelination pathology in Atypical Multiple Sclerosis Brains* by MEGAN HENDRICKSON of the School of Biomedical Sciences

42. *Infrared Spectroscopic imaging of Multiple Sclerosis Tissue* by STEPHAN WOODS of the Department of Chemistry

43. *Internet Memes IRL* by JESSICA HEFFNER of the Department of English

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**Welcome Letter**

On behalf of the Graduate Student Senate, I would like to welcome you to the 26th Annual Graduate Research Symposium. This year’s event continues another Kent State tradition by celebrating scholarship and academic achievement. For the first time, we’ve also welcomed undergraduate students to participate in our Symposium which focuses on “Building Leaders for Tomorrow”.

Our keynote speaker, Dr. Barry Franklin, not only is a Golden Flash but also highly regarded as an influential researcher and educator throughout his field of cardiac rehabilitation. Publishing over 500 referred articles and 21 books, Dr. Franklin exemplifies the value of Kent State education. His presentation “Good Luck is Something YOU Create: Ten Behavioral Skills of Highly Successful People” examines the wide range of skills needed in order to succeed in an ever-changing world.

Similarly, Dr. W. Michael Sherman, the Provost of the University of Akron, symbolizes academic success. His pivotal role in academic research and focus on scholarship fits well within the mission of the Graduate Student Senate. Dr. Sherman’s Luncheon presentation is entitled, “Now and Beyond: Anticipating the Future”.

We hope you this year’s Symposium is rewarding and inspiring. Our achievements are many and our crucial role as ambassadors of Kent State University will continue to drive us into the future as leaders of tomorrow.

On Behalf of Graduate Student Senate,

Michael J. Allen
GSS Symposium Chair
Schedule of Events

Thursday, March 31, 2011

Keynote Address 4:30PM – 6:00PM
Kent Student Center Governance Chambers
Featuring Good Luck is Something YOU Create: Ten Behavioral Skills of Highly Successful People
Kent State University Alumnus Dr. Barry Franklin, FACSM

Friday, April 1, 2011

Registration 8:30AM – 11:00AM
Kent Student Center Room 204

Oral Presentations 9:00AM – 12:00PM
Kent Student Center Rooms 313-315

Poster Presentations 10:00AM – 12:00PM
Kent Student Center (KIVA) 2nd Floor

Symposium Luncheon 12:00PM - 3:00PM
Kent Student Center Room 306
Featuring Now and Beyond: Anticipating the Future
Dr. W. Michael Sherman, University of Akron Provost

Poster Presentations: 2nd Floor KIVA

29. Pp1cc gene promoter is testis specific and functions to maintain PP1γ1 and high levels of PP1γ2 in Sertoli cells and testicular germ cells, respectively for normal spermatogenesis by NILAM SINHA of the Department of Biological Sciences

30. Arachidonic acid-induced COX-2 expression in neuroblastoma cells involves histone H3 phosphorylation and acetylation by SARA HOUSTON of the Department of Biological Sciences

31. Inheritance of chloroplast DNA (cpDNA) in Lobelia siphilitica by ALICIA DUREWICZ of the Department of Biological Sciences

32. Influence of time of day on the locomotor response to lipopolysaccharide administration in mice by JESSICA MURPHY of the Department of Biological Sciences

33. Hurricane Preparedness and Planning in Coastal Public School Districts by JESSICA VAN METER of the Department of Geography

34. Synthesis and Characterization of Antioxidant Coated Gold Nanoparticles by EILEEN ALEXANDER of the Department of Chemistry

35. Advantages of Automated Method for Mapping Landforms by DR. KAKOLI SAHA, 2010 Department of Geography Graduate
Poster Presentations: 2nd Floor KIVA

22. Avalanche Fatalities in the Western United States: A Comparison of Three Databases, and the Creation of a Pooled Database by JEREMY SPENCER of the Department of Geography

23. Clostridium difficile and Toxin Recovery from Feces Preserved with ETM by MICHAEL SHILLING of the Department of Biological Sciences

24. Modelling Smectic Layers in Confined Domains by MYKHAAILO PEVNYI of the Liquid Crystals Institute

25. Abbeys and Prisons: Shakespearean Shadows in Jane Austen's Northanger Abbey by RANDI PAHLAU of the Department of English

26. Transcriptional Regulation of VEGF by WT1 and AR in prostate cancer by KURTIS EISERMANN of the School of Biomedical Sciences

27. Interaction of CDC25B Phosphatase with 14-3-3 Proteins in Ovaries and Oocytes of Adult Mouse by SANTANU DE of the Department of Biological Sciences

28. The Use of Spark-Based Nonthermal Plasma for Sterilization of In Vitro-Constructed Biofilms by JAMES FERRELL of the Department of Biological Sciences

Undergraduate Program Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
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<tbody>
<tr>
<td>Alicia Durewicz</td>
<td>Department of Biological Sciences</td>
</tr>
<tr>
<td>Eileen Alexander</td>
<td>Department of Chemistry</td>
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<tr>
<td>Jessica Van Meter</td>
<td>Department of Geography</td>
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<tr>
<td>Matthew C. Hudnall</td>
<td>Department of Anthropology</td>
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</tbody>
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Master's Program Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
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<tbody>
<tr>
<td>Adam Ladd</td>
<td>School of Art</td>
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<tr>
<td>Alex Colucci</td>
<td>Department of Geography</td>
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<tr>
<td>Andrew Carnes</td>
<td>School of Health Sciences</td>
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<tr>
<td>Anne Dudley</td>
<td>School of Journalism &amp; Mass Communication</td>
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<tr>
<td>Ashlie Louie Sochor</td>
<td>School of Art</td>
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<tr>
<td>Bryce Hruska</td>
<td>Department of Psychology</td>
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<tr>
<td>Cathleen Pyrek</td>
<td>Department of Anthropology</td>
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<tr>
<td>Curtis Eaton Jr.</td>
<td>Foundations, Leadership &amp; Administration</td>
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<tr>
<td>Hannah Madson</td>
<td>Department of Biological Sciences</td>
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<tr>
<td>Inoka H. Widanagamage</td>
<td>Department of Geology</td>
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<tr>
<td>Jennifer Burrell</td>
<td>Department of Geography</td>
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<tr>
<td>Jessica Heffner</td>
<td>Department of English</td>
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<tr>
<td>Julie Gouin</td>
<td>Department of Geology</td>
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<tr>
<td>Katharine Clair</td>
<td>Foundations, Leadership &amp; Administration</td>
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<tr>
<td>Kathryn E. Smith</td>
<td>Department of Psychology</td>
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<tr>
<td>Kathryn J. Wells</td>
<td>Department of Geology</td>
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<tr>
<td>Kelly Barriball</td>
<td>Department of Biological Sciences</td>
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<tr>
<td>Shilpi Tiwari</td>
<td>Foundations, Leadership &amp; Administration</td>
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<tr>
<td>Stephanie Horvath</td>
<td>School of Health Sciences</td>
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<tr>
<td>Tom Kresch</td>
<td>Foundations, Leadership &amp; Administration</td>
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</tbody>
</table>
15. **Paleoclimatic characteristics of late Pleistocene/Holocene carbonates in the Arctic Ocean based on a PCA and element correlation study of downcore XRF data** by CHANDAWIMAL SIRIWARDANA of the Department of Geology

16. **Paleoclimatic and Minearologic characterization of downcore VNIR, VIS, DSR, and XRF data from the Northwind Ridge area in the central Arctic Ocean** by CHANDAWIMAL SIRIWARDANA of the Department of Geology

17. **Argentina’s Emergence into the Core Rugby Realm** by NICK WISE of the Department of Geography

18. **Immigrant terms and stolen identities: Unpacking new media’s position in rhetoric and composition** by COURTNEY L. WERNER of the Department of English

19. **Improvement in Response Time of VA LCD by Polymer Stabilization** by SARAH HICKS of the Liquid Crystals Institute

20. **Cognitive reserve moderates the association between heart failure and cognitive impairment** by MICHAEL L. ALOSCO of the Department of Psychology

21. **The richest Cretaceous decapod locality in the world? – An update** by ADIËL A. KLOMPMAKER of the Department of Geology
8. LGBT Students and Leadership by SHILPI TIWARI of Foundations, Leadership, and Administration (FLA)

9. Water Table Variability on The Pitted Karst Plain, Yucatán, Mexico by JENNIFER BURRELL of the Department of Geography

10. Identity and Place Construction through Media: How Canadian Sporting Media Creates Popular Notions of North American and European Ice Hockey Styles and Players by ALEX COLUCCI of the Department of Geography

11. Fluctuation Modes of a Bent-Core Nematic Liquid Crystal by MADHABI MAJUMDAR of the Department of Physics

12. The histone deacetylase inhibitor Trichostatin A and L-Methionine induce epigenetic changes in the adult CNS which may be underlying factors in the progression of neurodegenerative disease by JONATHAN VADNAL of the Department of Biological Sciences

13. Articulating Argument in Document Design by LINDSAY STEINER of the Department of English

14. The Reconstruction of Paleoclimate of Soledad Basin from Benthic Foraminiferal Assemblages Influenced by Changes is Productivity and Ventilation Since Early Holocene by NIVEDITA MEHROTRA of the School of Geology

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<table>
<thead>
<tr>
<th>Ph.D. Program Participants</th>
<th>Department</th>
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<tbody>
<tr>
<td>Lisa Regula Meyer</td>
<td>Department of Biological Sciences</td>
</tr>
<tr>
<td>Madhabi Majumdar</td>
<td>Department of Physics</td>
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<tr>
<td>Marie A. Yeh</td>
<td>Department of Marketing</td>
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<td>Mary Schramm</td>
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<tr>
<td>Megan Hendrickson</td>
<td>School of Biomedical Sciences</td>
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<td>Michael A. Sulak</td>
<td>School of Biomedical Sciences</td>
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<td>Michael L. Alosco</td>
<td>Department of Psychology</td>
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<td>Michael Shilling</td>
<td>Department of Biological Sciences</td>
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<td>Molly Taggart</td>
<td>School of Communication Studies</td>
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<tr>
<td>Mykhailo Pevnyi</td>
<td>Liquid Crystals Institute</td>
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<tr>
<td>Nick Wise</td>
<td>Department of Geography</td>
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<tr>
<td>Nilam Sinha</td>
<td>Department of Biological Sciences</td>
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<tr>
<td>Nivedita Mehrotra</td>
<td>Department of Geology</td>
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<tr>
<td>Qunxing Ding</td>
<td>Department of Biological Sciences</td>
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<tr>
<td>Randi Pahlau</td>
<td>Department of English</td>
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<tr>
<td>Santanu De</td>
<td>Department of Biological Sciences</td>
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<tr>
<td>Sarah Hicks</td>
<td>Liquid Crystals Institute</td>
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<tr>
<td>Sara Houston</td>
<td>Department of Biological Sciences</td>
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<tr>
<td>Sarah Zabic</td>
<td>Department of History</td>
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<tr>
<td>Shu Hui Lin</td>
<td>Teaching, Learning &amp; Curriculum</td>
</tr>
<tr>
<td>Sinu Paul</td>
<td>Department of Biological Sciences</td>
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<td>Stephan Woods</td>
<td>Department of Chemistry</td>
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<tr>
<td>Steve Fiester</td>
<td>Department of Biological Sciences</td>
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<tr>
<td>Suchismita Ghosh</td>
<td>Department of Biological Sciences</td>
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</tbody>
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Oral Presentations: Room 313

Session I
Chairperson: Deb Lamm

9:00AM: Session Set up

9:15AM
Hox Gene Functions and Diversity within the Primate Order by MATTHEW C. HUDNALL, Anthropology
Keywords: Hox, Primate, Evolution, Development

9:30AM
Mating System Comparison of Lonicera Maackii (Amur Honeysuckle) Plants in the Understory and along the Edges of a Columbus, Ohio Woodlot by KELLY BARRIBALL, Biological Sciences.
Keywords: Mating System, Local Habitat Variation, Outcrossing Rate, Invasive Plant

9:45AM
The Effectiveness of 90KSU by TOM KRESCH, CURTIS EATON JR., ANNE DUDLEY, Foundations, Leadership, & Administration; Journalism and Mass Communication
Keywords: 90KSU, Intercollegiate Athletics, Higher Education

Graduate Research Symposium

Poster Presentations: 2nd Floor KIVA

1. Preliminary Characterization of the Highland-Vijayan Thrust Boundary Zone, Sri Lanka by INOKA HASANTHI WIDANAGAMAGE of the Department of Geology

2. Biogeography of Non-Marine Ostracodes from a Late-Glacial Beringian Lacustrine Record by KATHRYN J. WELLS of the Department of Geology

3. American Style Higher Education in Bulgaria by KATHARINE CLAIR of Foundations, Leadership, & Administration (FLA)


5. Geophysical Characterization of the Porosity Distribution in the Clinton Formation, Ashtabula County, Ohio by JULE GOUIN of the Department of Geology

6. Psychometric Properties of the PTSD Alcohol Expectancy Questionnaire (P-AEQ) and a Test of the Self-Medication Hypothesis in an Undergraduate Population by BRYCE HRUSKA of the Department of Psychology

7. Elucidating the Pathway of Apatone® Induced DNase II Reactivation During Autoschizic Cell Death by KAREN MCGUIRE of the School of Biomedical Science
Session III
Chairperson: David Widner

11:00AM: Session Set-Up

11:15AM  
*HIV-1 Evolution and Epitope Associations* by SINU PAUL, Biological Sciences  
Keywords: HIV-1, Evolution, Epitopes

11:30AM  
*Circadian Gene Modulation and Brain Sites of Action in Acamprosate Suppression of Alcohol Intake during Relapse* by ALLISON J. BRAGER, Biological Sciences  
Keywords: mPER2, Circadian, Mouse, Alcohol, Acamprosate

11:45AM  
*Squat lobsters from the Late Jurassic: 150 million years away from your dinner plate* by CRISTINA ROBINS, Geology  
Keywords: Paleontology, Fossils, Decapods, Galatheoids, Squat Lobsters

Session II
Chairperson: Deb Lamm

10:00AM: Session Set-Up

10:15AM  
The Effect of Peer Influence on Running Speed, Enjoyment, and Perceived Exertion in Intercollegiate Distance Runners by ANDREW CARNES, School of Health Sciences  
Keywords: Distance Running, Peer Influence, Exercise Motivation, Enjoyment, Perceived Exertion, Physical Activity Behavior

10:30AM  
*Tropical Cuisine: Costa Rica* by STEPHANIE HORVATH, School of Health Sciences  
Keywords: Culinary Tours, Costa Rica, Nutrition

10:45AM  
*Effects of Non-Selective Mechanisms on Sex Ratio Variation in Lobelia Siphilitica* by HANNAH MADSON, Biological Sciences  
Keywords: Sex Ratio, Lobelia Siphilitica, Gynodioecy, Gene Flow, Genetic Drift
Session III  
Chairperson: Deb Lamm

11:00AM: Session Set-Up

11:15AM  
*Behind the Music: Titian’s Venus and Musician Paintings with an Iconographic Study on Instruments in Allegorical Art* by ASHLIE LOUI SOCHOR, School of Art.  
Keywords: Gender Studies, Art, Renaissance

11:30AM  
*Bernini’s Cornaro Chapel: Visualizing Mysticism in the Age of Reformation* by ADAM LADD, School of Art  
Keywords: Bernini, Rome, Counter-Reformation

11:45AM  
*Purging Disorder: An Exploratory Investigation of Phenomenology, Psychological Correlates, and Distinctiveness as a Diagnostic Category* by KATHRYN E. SMITH, Psychology  
Keywords: Eating Disorders, Purging Disorder, Body Image, Dieting, Women

Session II  
Chairperson: David Widner

10:00AM: Session Set-Up

10:15AM  
*Utilization of Organic vs. Inorganic Forms of Nitrogen by Bacteria Isolated from Streams with varying Nitrate Concentration* by SUCHISMITA GHOSH, Biological Sciences  
Keywords: Heterotrophic Bacteria, Organic and Inorganic Nitrogen, Streams, Nitrogen Utilization

10:30AM  
*The Impact of Typha Angustifolia and Phragmites Australis Invasions in Wetlands on Behavior of Larval and Adult Rana Clamitans* by LISA REGULA MEYER, Biological Sciences  
Keywords: Invasive Plants, Amphibians, Behavior, Wetlands

10:45AM  
*Indirect Cattail Eradication Effects on Decomposition in a Seasonally Dry Tropical Wetland* by JUSTIN J. MONTEMARANO, Biological Sciences  
Keywords: Ecology, Freshwater, Carbon, Macrophytes, Wetland
Session I
Chairperson: David Widner

9:00AM Session Set-Up

9:15AM
Elastic Constants and Orientational Viscosities of a Bent-Core Nematic Liquid Crystal by MADHABI MAJUMDAR, Physics.
Keywords: Elastic Constant, Viscosity, Dynamic Light Scattering, Freedericksz Transition, Bent-core Nematic, Clusters.

9:30AM
Nature of Fermi Systems near l=0 Pomeranchuk Instability: A Tractable Crossing Symmetric Equation Approach by KELLY REIDY, Physics
Keywords: Condensed Matter Physics, Correlated Electrons

9:45AM
Caffeine Timing and Cycling Performance by EDWARD RYAN, School of Health Sciences.
Keywords: Caffeine, Cycling

Session I
Chairperson: Amanda Mullet

9:00AM
Case Study Research Techniques: Obtaining Access to Japan’s National Personnel Authority (NPA) and the Mike Mansfield Fellowship Program by FRANKLIN B. LEBO, Political Science. Keywords: Case Study, Elite, Japan, National Personnel Authority (NPA); Mike Mansfield Fellowship Program (MFP)

9:15AM
Value Relevance of Innovation in the Pharmaceutical Industry by MARY SCHRAMM, Marketing
Keywords: Value Relevance, Innovation, Research & development, New Products, Pharmaceuticals

9:30AM
Stereotype Processing’s Effect on the Impact of the Myth/Fact Message Format: The Role of Personal Relevance by MARIE A. YEH, Marketing
Keywords: Attitudes, Stereotypes, Automaticity, Perceived Learning, Mental Illness

9:45AM
Forging Connections between Civil Rights at home and the Cuban Revolution: Robert F. Williams in Castro’s Cuba by DWIGHT MEYER, History
Keywords: Robert F. Williams, Cuban Revolution, Civil Rights
Session II
Chairperson: Amanda Mullet

10:00AM: Session Set-Up

10:15AM
Young Children's Social Symbolic Play with Language Development by SHU HUI LIN, Teaching, Learning, & Curriculum Studies (TLC)
Keywords: Symbolic Play, Second Language Acquisition

10:30AM
Notgeld and National Identity: The Role of Emergency Money in Post-WWI Germany by ERIKA BRIESACHER, History
Keywords: Weimar Germany, Material Culture, Emergency Money, Collecting, Culture

10:45AM
Which Way is Left?: The “Red Choir” in Action and the Symbology of the Belgrade Student Protest, June 1968 by SARAH ZABIC, History
Keywords: History, Student Protest, 1968, Yugoslavia, Communism

Session III
Chairperson: Amanda Mullet

11:00AM: Session Set-Up

11:15AM
Associating Asthma Admissions to Synoptic Weather Types in New York State by CAMERON LEE, Geography
Keywords: Applied Climatology, Synoptic Methods, SSC, Weather Types, Asthma, Hospital Admissions, Morbidity

11:30AM
"In Accordance with the Best Traditions of American Democracy": The Institute of Arab Americans Affairs and Palestine Question by DENISE JENISON, History
Keywords: Arab-Americans, Palestine

11:45AM
Friendship, Love, and Sexual Partners: Motives for Creating Cyber Relationships by MOLLY TAGGART, School of Communication Studies
Keywords: Friendship, Love, Sexual Partners, Interpersonal Communication, Motives, Cyber Relationships, Online/Internet Dating, Online Dating Websites