



# URSA SCHOLARS WEEK

APRIL 8-11, 2013

PRESENTED BY BAYLOR UNDERGRADUATE RESEARCH & SCHOLARLY ACHIEVEMENT (URSA)



BAYLOR  
UNIVERSITY

OFFICE OF THE VICE PROVOST  
FOR RESEARCH

Students: Show us your favorite moments from Scholars Week! Tweet pics with the hashtag #URSAScholarsWeek. URSA will award a prize for the best picture!



**#URSAScholarsWeek**

**Dear Colleagues:**

**Welcome to URSA Scholars Week 2013.** The research enterprise at Baylor never stops, but I'm grateful you are taking the time to join us as we pause to acknowledge and appreciate the achievements of the 180 students and 70 faculty represented in this sixth annual Scholars Week celebration. The poster and platform presentations you'll see this week demonstrate once again the depth of commitment Baylor faculty have to individual mentoring that engages students in meaningful research and scholarship beyond the classroom and prepares them for lifelong learning.

These undergraduates, in partnership with their faculty mentors, are exploring the range of human experience and human challenges, from the intersection of geology and aviation, to the role of multilingualism in children's cognitive development, to the impact of conflicting artistic styles on the career of a 16th century artist. Full abstracts of all presentations are available at [www.baylor.edu/ursa](http://www.baylor.edu/ursa).

Please don't restrict your participation this week to students you already know. Take this opportunity to discover just how diverse and talented our undergraduates are. Enjoy with us the growth of URSA, and look forward with us to a bright future as faculty continue to make the undergraduate experience at Baylor uniquely rewarding.

A handwritten signature in black ink that reads "Truell W. Hyde". The signature is written in a cursive, flowing style.

Truell W. Hyde, Ph.D.  
Vice Provost for Research

**Monday, April 8, 2013**  
**Bill Daniel Student Center**  
**Fentress Room**

**2:00**

**Nour Ammari**

**Faculty Mentor: Dr. Nathan Elkins**

The Pythian Games and Delphi

[Art]

**Laura McMillan**

**Faculty Mentor: Dr. Heidi Hornik**

Francesco Salviati: Roman Mannerist in a Florentine World

[Art]

**Ian Lemmon**

**Faculty Mentor: Mrs. Carol Macaulay-Jameson**

Archeological Investigations at Salado College Archeological  
Ruins (41BL241), Salado, Texas

[Anthropology]

**Astrid Loomans**

**Faculty Mentor: Mrs. Carol Macaulay-Jameson**

The Tremulous and Tenacious History of Salado College,  
Salado, Texas

[Anthropology]

**Monday, April 8, 2013**  
**Bill Daniel Student Center**  
**Baines Room**

**2:00**

**Emily Tichenor**

**Faculty Mentor: Dr. Lydia Grebenyova**

Children's Discourse in a Problem-Solving Setting:  
A Cross-Gender Comparison

[English]

**Grace Goble**

**Faculty Mentor: Dr. Lydia Grebenyova**

Acquisition of /-s/ Morpheme in English

[English]

**Ryan Smith**

**Faculty Mentor: Dr. Lydia Grebenyova**

The Structure of the Conjunction Phrase

[English]

**Ada Zhang**

**Faculty Mentor: Dr. Jay Losey**

Intelligence Versus Passion

[English]

**Monday, April 8, 2013**  
**Bill Daniel Student Center**  
**Beckham Room**

**2:00**

**Josh Rose**

**Faculty Mentor: Dr. Adrienne Harris**

Enlightenment in Russia: Mikhail Vasilievich Lomonosov  
[Modern Foreign Languages]

**Kayla Grumbles**

**Faculty Mentor: Dr. Adrienne Harris**

Eternally Young, Forever Remembered: A Glance at the Use of  
Zoia Kosmodemyanskaya's Image in Post-Stalin Soviet Russia  
[Modern Foreign Languages]

**Paul Schlaudraff**

**Faculty Mentor: Dr. Adrienne Harris**

Русская душа: Dostoevsky's Portrayal of the Russian Soul  
in "The Brothers Karamazov"  
[Modern Foreign Languages]

**Dillon Camp**

**Faculty Mentor: Dr. Scott Spinks**

The Distrust of the Poor in El Conde Lucanor  
[Modern Foreign Languages]

**Monday, April 8, 2013**  
**Bill Daniel Student Center**  
**White Room**

**2:00**

**Karla Coleman**

**Faculty Mentor: Dr. Frieda Blackwell**

Historical Revisionism and Feminist Criticism in “El reportaje”  
by Carmen Riera

[Modern Foreign Languages]

**Megan Hermann**

**Faculty Mentor: Dr. Frieda Blackwell**

Benito Feijoo y La Sistema de Educación en España

[Modern Foreign Languages]

**Brittini Hancock**

**Faculty Mentor: Dr. Frieda Blackwell**

The Exploration of a Dreamlike State to Express Emotions in  
the Poetry of Gustavo Adolfo Bécquer

[Modern Foreign Languages]

**Ellen Scott**

**Faculty Mentor: Dr. Frieda Blackwell**

Leandro Fernández de Moratín: A Cure for Decadence in  
Spanish Baroque Theater

[Modern Foreign Languages]

**Monday, April 8, 2013**  
**Bill Daniel Student Center**  
**Fentress Room**

**3:30**

**True Price and Frank Peña**

**Faculty Mentor: Dr. Young-Rae Cho**

Survey: Enhancing Protein Complex Prediction in PPI Networks  
with GO Similarity Weighting

[Computer Science]

**Scott Uhrich**

**Faculty Mentor: Dr. William Anderson**

Large-eddy Simulation of Turbulent Flow Over a Field of  
Crescentic Sand Dunes: Insights for Aeolian Processes

[Mechanical Engineering]

**Ryan Warnick**

**Faculty Mentor: Dr. David Kahle**

Interactive Modules as Tools for Illustrating Statistical Concepts

[Statistical Science]

**Gregg Fox**

**Faculty Mentor: Dr. Tamarah Adair**

Investigating Synergy Between Blue Light Irradiation and  
Antibiotic Treatment in *S. aureus*

[Biology]



**Monday, April 8, 2013**  
**Bill Daniel Student Center**  
**Baines Room**

**3:30**

**Brett Hager**

**Faculty Mentor: Ms. Carrolle Kamperman**

Apocalyptic Vision in American Postmodern Film and Literature  
[English]

**David Welch**

**Faculty Mentor: Dr. Ralph Wood**

The Christian Re-interpretation of Anglo-Saxon Heroic Virtue in  
the Lord of the Rings  
[Great Texts]

**Maxcey Kite**

**Faculty Mentor: Dr. D. Thomas Hanks**

Once Upon a Lack of Time  
[English]

**Margaret Patterson**

**Faculty Mentor: Dr. D. Thomas Hanks**

Animal Instincts: C.S. Lewis's Depiction of the Noble Creature in  
The Chronicles of Narnia  
[English]

**Monday, April 8, 2013**  
**Bill Daniel Student Center**  
**Beckham Room**

**3:30**

**Kaitlin Burt**

**Faculty Mentor: Dr. Jan Evans**

The Absence of Faith

[Modern Foreign Languages]

**Kristin Smart**

**Faculty Mentor: Dr. Jan Evans**

The Defiance of Gender Roles for Women in Spanish and Latin American Literature

[Modern Foreign Languages]

**Ria Halder**

**Faculty Mentor: Dr. Linda McManness**

What Role Does Multilingualism Play in a Child's Cognitive Development?

[Modern Foreign Languages]

**Jake Abell**

**Faculty Mentor: Dr. Holly Collins**

From Trauma to Drama: Finding a Local Space in Rwandan Representations of Genocide through Theater

[Modern Foreign Languages]

**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**Fentress Room**

**2:00**

**Emily Edmondson**

**Faculty Mentor: Dr. Rosalie Beck**

Enculturation and Christian Missions: A Case-Study of the Apparition of the Virgin of Guadalupe to St. Juan Diego at Tepeyac

[Religion]

**Andrew Phillips**

**Faculty Mentor: Dr. Rosalie Beck**

Missionary Kids: The Impact of the "Third Culture" When Assimilating into Post-Missionary Life

[Religion]

**Sarah Caldwell, Rachel Calhoun, Josh Flores,  
Chris Gerac, and Gabrielle Leonard**

**Faculty Mentor: Dr. Dennis Horton**

The Effects of Short-Term Mission Trips on Host Partners and Their Communities

[Religion]

**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**Baines Room**

**2:00**

**Ariane Flores**

**Faculty Mentor: Dr. Michael-John DePalma**

Reasserting Affirmative Action in Admissions at the Collegiate Level

[English]

**Alekza Latte and Melissa Peguero**

**Faculty Mentor: Dr. Mia Moody-Ramirez**

Chris Brown & Rihanna Image Repair Case Study

[Journalism, Public Relations & New Media]

**Madeline Lloyd**

**Faculty Mentor: Dr. Mia Moody-Ramirez**

2013 Presidential Primary Study on Negativity in Twitter and Blogs

[Journalism, Public Relations & New Media]

**Jenny Philen**

**Faculty Mentor: Ms. Carol Perry**

Tell Your Story with an Online Magazine

[Journalism, Public Relations & New Media]

**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**Beckham Room**

**2:00**

**Taylor Dodson**

**Faculty Mentor: Ms. Janet Norden**

Exploring the Relationship Between Death and Macario  
[Modern Foreign Languages]

**Sophie Farah**

**Faculty Mentor: Ms. Janet Norden**

The Fringe Relationships of Medicine and Religion  
in the Film Macario  
[Modern Foreign Languages]

**Molly Francis**

**Faculty Mentor: Ms. Janet Norden**

Pervasive Injustices in Socio-Economic Exchanges  
in the Mexican Film Macario  
[Modern Foreign Languages]

**Carlos Silva**

**Faculty Mentor: Dr. Karol Hardin**

Healthcare for Spanish-speaking Patients: A Modest Proposal  
for a Local Solution  
[Modern Foreign Languages]

**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**White Room**

**2:00**

**Daniel Lynch**

**Faculty Mentor: Dr. Larry Lehr**

Turning Baylor University Dining Hall Food Waste into Topsoil  
[Environmental Science]

**Jacob Reed**

**Faculty Mentor: Dr. Larry Lehr**

Application of Best Management Practices for the Repair of  
Water Retaining Structures  
[Environmental Science]

**Richa Manglorkar and Jing Wu**

**Faculty Mentor: Dr. Myeongwoo Lee**

The Role of Integrin in Neuronal Migration  
[Biology]

**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**Fentress Room**

**3:30**

**Kirsten Semmes**

**Faculty Mentor: Dr. Hope Johnston**

The Two Arthurs

[English]

**Amy Freeman**

**Faculty Mentor: Dr. David Jeffrey**

The Life of the Servus Dei

[Honors]

**Laura McMillion**

**Faculty Mentor: Dr. David Jeffrey**

The Philological and Theological Principles of Jerome  
as a Translator

[Honors]

**Lyndsay McReynolds**

**Faculty Mentor: Dr. David Jeffrey**

The Tree of Life in Modern Literature and Art

[Honors]

**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**Baines Room**

**3:30**

**Haley Breaux, Amber Jones, Emily Maddock  
and Laura Catherine Trent**

**Faculty Mentors: Dr. Shelby Garner  
and Dr. Maryann Faucher**

The Use of Photovoice to Identify Challenges and Supports  
Experienced by Family Caregivers of the Older Adult  
[Nursing]

**Austin Tiffany**

**Faculty Mentor: Dr. John White**

Christian Outreach and the 2012 Olympics in London  
[Religion/Truett Seminary]

**Emily Johnson**

**Faculty Mentor: Dr. Andrew Meyer**

The Great Brazos Relay: Unleashing an Athlete's Spiritual  
and Emotional Energies  
[Health, Human Performance and Recreation]



**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**Beckham Room**

**3:30**

**Jordan Rux**

**Faculty Mentor: Dr. Robert Kruschwitz**

Nietzsche and Anarchism: Preventing the Nihilistic Results  
of a Contradictory State

[Philosophy]

**Will Burnson**

**Faculty Mentor: Dr. Ivy Hamerly**

Palestinian Statehood

[Political Science]

**Brian Kim**

**Faculty Mentor: Dr. Ivy Hamerly**

Nuclear Non-Proliferation Treaty: Iran and North Korea

[Political Science]

**Lyzette Garza**

**Faculty Mentors: Dr. Joseph Brown**

**and Dr. Mia Moody-Ramirez**

New Media, Old Messages: Negativity in the  
Presidential Primaries

[Political Science]

**Aundrea Payne**

**Faculty Mentors: Dr. Joseph Brown**

**and Dr. Mia Moody-Ramirez**

New Media, Old Messages: Negativity in the  
Presidential Primaries

[Political Science]

**Tuesday, April 9, 2013**  
**Bill Daniel Student Center**  
**White Room**

**3:30**

**Kate Lee**

**Faculty Mentor: Dr. Paul Larson**

Pardo Bazán and Restructuring Feminism  
in Spain's 19th Century

[Modern Foreign Languages]

**Sarah Rabke**

**Faculty Mentor: Dr. Paul Larson**

The Question of Female Agency in Lope de Vega's  
"Castigo sin venganza"

[Modern Foreign Languages]

**Alex Rice**

**Faculty Mentor: Dr. Paul Larson**

Racial Discrimination in José Martí's "La muñeca negra"

[Modern Foreign Languages]

**Nicholette Wilkerson**

**Faculty Mentor: Dr. Paul Larson**

Petrarch and Quevedo: Reinventing Lovesickness

[Modern Foreign Languages]

**Vanessa Wyns**

**Faculty Mentor: Dr. Paul Larson**

Dysfunctionality and Trauma in Rosa Montero's Novel  
Instrucciones para salvar el mundo

[Modern Foreign Languages]

---

## Poster Presentations

---

**April 10 and 11, 2013**

**12:30 pm – 1:30 pm**

**Baylor Sciences Building**

- Board 1 Jennifer Husak, Sabrina Lacruz and Chloe Rose**  
**Faculty Mentor: Dr. Lori Baker**  
Speaking for the Dead: A Skeletal Analysis  
[Anthropology]
- Board 2 Eleanor Lastrapes**  
**Faculty Mentor: Dr. Katie Binetti**  
Perceptions of Vaccine Safety and Efficacy Amongst  
Baylor University Undergraduates  
[Anthropology]
- Board 3 Katie Horton**  
**Faculty Mentor: Dr. Lori Baker**  
Human Biological Variation and the Application of  
Personalized Medicine  
[Anthropology]
- Board 4 Nowrin Ahmed**  
**Faculty Mentor: Dr. Joaquin Lugo**  
Early-life Seizures Result in Long-term Elevation in Anxiety  
in Mice and spatial Learning Deficits  
[Psychology & Neuroscience]
- Board 5 Tessa Espinoza**  
**Faculty Mentor: Dr. Wade Rowatt**  
Initial Intellectual Humility Scale Development  
and Validation  
[Psychology & Neuroscience]
- Board 6 Crina Floruta**  
**Faculty Mentor: Dr. Joaquin Lugo**  
Social Behavior Deficits in PTEN Knockout Mice  
[Psychology & Neuroscience]

**Board 7 Linda Nguyen**  
**Faculty Mentor: Dr. Wade Rowatt**  
Psychophysiological Correlates of Implicit and  
Explicit Attitudes  
[Psychology & Neuroscience]

**Board 8 Jessika White**  
**Faculty Mentor: Dr. Joaquin Lugo**  
Deletion of PTEN in neurons Results in Alterations in  
Repetitive Behavior in Mice  
[Psychology & Neuroscience]

**Board 9 Jonathan Fordyce**  
**Faculty Mentor: Dr. Becky Spencer**  
Exercise Interventions for the Alzheimer's  
& Dementia Patient  
[Nursing]

**Board 10 Jessica Perkins**  
**Faculty Mentor: Dr. Becky Spencer**  
Concussion Assessment  
[Nursing]

**Board 11 Cody Lee Zepeda**  
**Faculty Mentor: Dr. Becky Spencer**  
Weight Loss Treatment for Knee Osteoarthritis  
in Obese Older Adults  
[Nursing]

**Board 12 Alison McCants and Ali Lutz**

**Faculty Mentor: Ms. Michelle Brown**

Designing for Assisted Living Communities  
[Family & Consumer Sciences]

**Board 13 Haley Moore**

**Faculty Mentor: Dr. Rinn Cloud**

Comparative Performance of a Plant-Based Detergent  
and a Standard Synthetic Detergent on Flame  
Resistance and Performance Properties of a Children's  
Sleepwear Fabric  
[Family & Consumer Sciences]

**Board 14 Emily Johnson**

**Faculty Mentor: Dr. Andrew Meyer**

The Great Brazos Relay: Enriching Minds, Bodies,  
and Relationships  
[Human Health, Performance & Recreation]

**Board 15 Sarah Rosenbaum**

**Faculty Mentor: Dr. Jake Owens  
(Drexel University)**

Community Structure of Birds around Moka, Bioko Island,  
Equatorial Guinea  
[Environmental Science]

**Board 16 Aaron Rodriguez**

**Faculty Mentor: Dr. Susan Bratton**

Comparisons of Chlorophyll and Defoliation Levels of  
Two Native Oak Species and Two Invasive Woody Plants  
between the 2011 Drought and 2012 in Cameron Park,  
Waco, TX  
[Environmental Science]

**Board 17 David Dreier, Thomas Moore, Adrian Parr,  
Matthew Reid, Daniel Stokes  
and Preston Watkins**

**Faculty Mentor: Dr. Sascha Usenko**

Copper Concentrations in Drinking Water Fountains  
in the Baylor Sciences Building  
[Environmental Science]

**Board 18 Sam Fix and Josh Depuydt**

**Faculty Mentor: Dr. Susan Bratton**

Day Hiking in Urban, Natural, or Wilderness Settings: Type of Hike and Environment as Determinants of Hiker Experience  
[Environmental Science]

**Board 19 Adrian Parr**

**Faculty Mentor: Dr. Bryan Brooks**

Probabilistic Hazard Assessment of CYP Activity for Organophosphates  
[Environmental Science]

**Board 20 Roshan Patel**

**Faculty Mentor: Dr. Joseph White**

Texas Red Oak and Ashe's Juniper Differ in Partitioning of Non-structural Carbohydrates among Plant Parts  
[Biology]

**Board 21 Katherine Hooker**

**Faculty Mentor: Dr. Ryan King**

Nuclear Magnetic Resonance (NMR) Analysis Reveals Effects of Nutrient Enrichment on Leaf Litter Breakdown in an Alaskan Headwater Stream  
[Biology]

**Board 22 Ngoc-Anh Huynh**

**Faculty Mentor: Dr. Robert Doyle**

Seasonal THM Potential Formation Trends of Water Flowing into Lake Waco  
[Biology]

**Board 23 Alyssa Gorlick**

**Faculty Mentor: Dr. Marty Harvill**

Sustainability of Mosquito Larvae in Various Temperatures  
[Biology]

**Board 24 Audrey Murchland**

**Faculty Mentor: Dr. Marty Harvill**

Sodium Chloride Effects on *Simocephalus serrulatus* Reproduction  
[Biology]

**Board 25 Ben Reed**

**Faculty Mentor: Dr. Marty Harvill**

Salt Water Pollution Effects on Daphnia Reproduction  
[Biology]

**Board 26 Elizabeth Yuan, Andrew Kliphon**

**Faculty Mentor: Dr. Marty Harvill**

Effects of Chlorine Concentrations on Cladophora sp.  
[Biology]

**Board 27 Kenzie Davis, Emily Jenkins, Blanca Macareno**

**Faculty Mentor: Dr. Marty Harvill**

Optimal Temperature for Simocephalus  
serrulatus Reproduction  
[Biology]

**Board 28 Tyler Freeman and Brad Kroyer**

**Faculty Mentor: Dr. Marty Harvill**

Effect of Copper (II) Sulfate Pentahydrate on  
Simocephalus serrulatus Reproduction  
[Biology]

**Board 29 Efstratios Papadelis and Gilbert Ruiz**

**Faculty Mentor: Dr. Marty Harvill**

Effects of Heightened Nitrate Levels: Cattail v. Bulrush  
[Biology]

**Board 30 Lauren Howard and Panna Patel**

**Faculty Mentor: Dr. Marty Harvill**

The Effect of Escherichia coli on the Reproductivity of  
Simocephalus serrulatus  
[Biology]

**Board 31 Salima Hirjee and Megan Steele**

**Faculty Mentor: Dr. Marty Harvill**

Infection Rate and Effect on Reproduction of  
Metschnikwia bicuspidata on Two Age Groups of  
Simocephalus serrulatus Population  
[Biology]

**Board 32 Alyssa Pantle, Grant Oviatt and Abel Alemeshet**

**Faculty Mentor: Dr. Mary Harvill**

Additive Nutrients' Effect on Phytoplankton Measured by the Reproductive Success of *Simocephalus Serrulatus*  
[Biology]

**Board 33 Melody Padilla**

**Faculty Mentor: Dr. Marty Harvill**

Population Growth of *Simocephalus serrulatus* vs. Water from Varying Locations of Lake Waco Wetlands  
[Biology]

**Board 34 Raquel Ledesma**

**Faculty Mentor: Dr. Marty Harvill**

Determining the Effects of *Selenastrum capricornatum*, *Escherichia coli* B, and *Saccharomyces*  $\alpha$ 1 on the Population Growth of *Simocephalus serrulatus*.  
[Biology]

**Board 35 John Nathan and Michael Cotton**

**Faculty Mentor: Dr. Marcie Moehnke**

Evaluation of the Protective Effects of Acai Berry Against UVB Radiation in *Drosophila Melanogaster*  
[Biology]

**Board 36 Tina Tran**

**Faculty Mentor: Dr. Diane Hartman**

Determining MRSA Carriage Rates in Cat  
[Biology]

**Board 37 Meredith Rosenthal**

**Faculty Mentor: Dr. Tamarah Adair**

The Effects of Blue Light on Varying Strains of *Staphylococcus aureus*.  
[Biology]

**Board 38 Lucy Xu**

**Faculty Mentor: Dr. Diane Hartman**

MRSA Prevalence and Predominant Bacterial Species in Canine.  
[Biology]



**Board 39 Nitheesha Alapati, Sarvi Amjadi, Caitlyn Brashears, Valerie Briell, Benjamin Cody, Ryan Durham, Alishia Griffin, Melissa Henderson, Emily Interrante, Brad Killingsworth, Chris Kolar, Taewoo Lee, Stefanie Mundhenk, Mallory Myers, Oreoluwa Olaniyan, Chelsea Orlando, Chelsea Peterson, Benjamin Riley, Lauren Sawyer, Nicholas Simitzi, Meghan St. Cyr, Rebekah White**  
**Faculty Mentors: Dr. Tamarah Adair and Dr. Bryan Gibbon**

Analysis of the Genome Organization of the K1 Subcluster Mycobacterium Phage Validus

[Biology]

**Board 40 Jeanne Samake**

**Faculty Mentor: Dr. Tamarah Adair**

Dimethyl Sulfoxide Reduces the Inhibitory Effect of Blue Light on Staphylococcus in Water, Glucose and BHI

[Biology]

**Board 41 Alexander Agent**

**Faculty Mentor: Dr. Diane Hartman**

Staphylococcus and the Domesticated Horse:

A Beginning

[Biology]

**Board 42 Bayless Drum**

**Faculty Mentor: Dr. Tamarah Adair**

Genome-Wide Analysis of Blue Light Regulation of

Staphylococcus aureus

[Biology]

**Board 43 Kelsey Deal**

**Faculty Mentor: Dr. Diane Hartman**

The Relationship between Crayfish Abundance and

Hydrologic Factors in Ozark Highland Streams

[Biology]

**Board 44 Kelli Hicks, Fiyin Abraham, Eric Beal, Yejin Kang, Evan Pixley, and Morgan Thompson**

**Faculty Mentor: Dr. Myeongwoo Lee**

Characterization of E3 Ubiquitin Ligases in *C. elegans*

[Biology]

**Board 45 Nitheesha Alapati, Sarvi Amjadi, Caitlyn Brashears, Valerie Briell, Benjamin Cody, Ryan Durham, Alishia Griffin, Melissa Henderson, Emily Interrante, Brad Killingsworth, Chris Kolar, Taewoo Lee, Stefanie Mundhenk, Mallory Myers, Oreoluwa Olaniyan, Chelsea Orlando, Chelsea Peterson, Benjamin Riley, Lauren Sawyer, Nicholas Simitzi, Meghan St. Cyr, Rebekah White**  
**Faculty Mentors: Dr. Tamarah Adair and Dr. Bryan Gibbon**  
Isolation, Purification, and Analysis of Mycobacteriophage Genomic DNA  
[Biology]

**Board 46 Solon Burleson**  
**Faculty Mentor: Dr. Steven Driese**  
Permian Basin Formation and Oil-Producing Zones  
[Geology]

**Board 47 Dillon DeGarmo**  
**Faculty Mentor: Dr. Daniel Peppe**  
Magnetostratigraphy of the Paleocene Tongue River Member of the Fort Union Formation  
(Williston Basin, North Dakota)  
[Geology]

**Board 48 Mark McCollum**  
**Faculty Mentor: Dr. Daniel Peppe**  
Magnetostratigraphy of the Lower Miocene Hiwegi Formation (Rusinga Island, Lake Victoria, Kenya)  
[Geology]

**Board 49 Creighton Meyers**  
**Faculty Mentor: Dr. Steven Driese**  
Suspended Sediment Collection and Analysis in Fluvial Environments  
[Geology]

**Board 50 Clinton Ramey**

**Faculty Mentor: Dr. Steven Driese**

Gulf of Mexico Sedimentary Basin

[Geology]

**Board 51 Blake Taylor**

**Faculty Mentor: Dr. Daniel Peppe**

Paleoenvironmental Reconstruction of Late Pleistocene

Deposits in the Lake Victoria Region Using Clay

Mineralogy and Geochemistry

[Geology]

**Board 52 Alex Boggess**

**Faculty Mentor: Dr. Steven Driese**

The Role of Small Aircraft and Pilots in

Geological Mapping

[Geology]

**Board 53 Nick Cestari**

**Faculty Mentor: Dr. Bill Hockaday**

Developing a Paleovegetation Proxy along a Forest

to Grassland Transition in Central Texas

[Geology]

**Board 54 Matthew McCarter**

**Faculty Mentor: Dr. Steven Driese**

Cavern Development in the Guadalupe Mountains,

New Mexico

[Geology]

**Board 55 Jack Stanley**

**Faculty Mentor: Dr. Trey Cade**

Space Weather Effects on Aircraft Navigation:

A Pilot's Perspective

[Aviation Sciences]

**Board 56 Azaan Ramani**

**Faculty Mentor: Dr. Patrick Farmer**

Protein Film Voltammetry of Heme Oxygenase

[Chemistry & Biochemistry]

**Board 57 Alexander Ambrocik**

**Faculty Mentor: Dr. Kevin Pinney**

Synthesis and Isolation of Novel Vascular Disrupting Agents with Potential Chemotherapeutic Properties  
[Chemistry & Biochemistry]

**Board 58 Drew Cody**

**Faculty Mentor: Dr. Kevin Pinney**

Design and Synthesis of Functionalized Thiosemicarbazone Analogues as Potential Anti-metastatic Agents  
[Chemistry & Biochemistry]

**Board 59 Joseph Guillory**

**Faculty Mentor: Dr. Mary Lynn Trawick**

Biochemical Evaluation and Molecular Modeling of Thiosemicarbazone Inhibitors of Cruzain  
[Chemistry & Biochemistry]

**Board 60 Regina Martinez**

**Faculty Mentor: Dr. Patrick Farmer**

Synthetic Hydroxyheme: Synthesis of Iron (III) 5-oxyoctaethylporphyrin Dimer  
[Chemistry & Biochemistry]

**Board 61 Stephanie Fontenot**

**Faculty Mentor: Dr. Touradj Solouki**

Probing the Structural Variations of Metal-Complexed Model Peptides Using Post-Ion Mobility/Collision-Induced Dissociation Mass Spectrometry  
[Chemistry & Biochemistry]

**Board 62 Chamath Chandrasekera**

**Faculty Mentor: Dr. Sung-Kun Kim**

Characterization and Purification of TEM-1  $\beta$ -lactamase  
[Chemistry & Biochemistry]

**Board 63 Brett Harper**

**Faculty Mentor: Dr. Touradj Solouki**

Human  $\alpha$ -Defensin Peptides as Potential Stress Biomarkers  
[Chemistry & Biochemistry]

**Board 64 Morgan Goodwin**

**Faculty Mentor: Dr. David Jack**

Mathematical Modeling and Prediction of Polymers  
[Mechanical Engineering]

**Board 65 Ashley Johnson**

**Faculty Mentors: Dr. Lesley Wright  
and Dr. Carlos Manzanares**

Cavity ring-down absorption studies for obtaining  
temperature measurements in gas turbine  
cooling applications  
[Mechanical Engineering]

**Board 66 Will Barnes**

**Faculty Mentor: Dr. Lorin Matthews**

Dust Grain Growth in a Protoplanetary Disk: Effects of  
Location on Charge and Size  
[Physics]

**Board 67 Evan Bauer**

**Faculty Mentor: Dr. Kenichi Hatakeyama**

Simulation Studies of the Time Digitizer for the CMS  
Hadron Calorimeter Upgrade  
[Physics]

**Board 68 Nathan Beasley**

**Faculty Mentor: Dr. Jeffrey Olafsen**

Characterization of Granular Shear Flow using Magnetic  
Resonance Imaging  
[Physics]

**Board 69 Blake Birmingham**

**Faculty Mentors: Dr. Kenneth Park  
and Dr. Zhenrong Zhang**

Tip Etching Dynamics & Effects on STM Atomic Resolution  
[Physics]

**Board 70 Brandon Mattingly**

**Faculty Mentor: Dr. Gerald Cleaver**

Building Models in Free Fermionic String Theory  
[Physics]

**Board 71 Forrest Phillips**

**Faculty Mentor: Dr. Kenichi Hatakeyama**

CMS Forward Hadron Calorimeter Anomalous Signal  
Studies at CERN

[Physics]

**Board 72 J. Grzechowiak, S. Simpson, and Richard Beach**

**Faculty Mentor: Dr. Dwight Russell**

Comparing the 2MASS and WISE Infrared Databases for  
Classification of Background Stars and Embedded Young  
Stellar Objects

[Physics]

# FUTURE UNDERGRADUATE RESEARCH EVENTS

## School of Education

The School of Education will be showcasing Undergraduate Research on April 16, 2013 from 4:30 - 6:30pm at the Lee Lockwood Library on Waco Drive

## School of Engineering

The School of Engineering will have a poster session on Friday, April 19, showcasing the research/projects of engineering students. There is an undergraduate category and a graduate category. The poster session will take place at the Mayborn Museum, from 11:30 - 1:30pm. The top three candidates of each category will be awarded a prize. Posters will be judged by the Engineering and Computer Science Board of Advocates.

## Honors Week

All presentations will be in Alexander, classroom, 115

**Monday, April 15** (10:15 - 12:00pm) & (5:15 - 8:00pm)

**Tuesday, April 16** (8:15 - 10:45pm) & (2:00 - 8:00pm)

**Wednesday, April 17** (8:15 - 9:45am) & (1:45-4:00pm)

**Thursday, April 18 (Diadeloso)** (8:30 - 12:00pm) & (2:00 - 7:00pm)

**Friday, April 19** (8:30 - 12:00pm) & (3:30 - 8:00pm)

# **14th Annual Black Glasses Student Film Festival**

Hooper-Schaefer: Jones Theater

**Friday, May 3rd at 7 pm**

Originally started by film students in 1999, the Black Glasses Film Festival has grown into an annual event sponsored by Baylor Film & Digital Media to give students an opportunity to showcase their films and reach a wider audience. Black Glasses takes place at the end of each spring semester and is dedicated to exhibiting the best student work in filmmaking and screenwriting.

<http://www.baylor.edu/communication/index.php?id=68545>



# **Art Student Exhibition**

**March 28 – April 17**

Gallery 1 & 2 of the Martin Museum of Art  
Hooper Schaefer Fine Arts Center

The Martin Museum of Art will feature the Baylor Art Student Exhibition March 28th- April 17th. All Museum events are free and open to the Public. Internationally renowned sculptor Jesús Morales will select approximately 85 works from an average pool of 200 entries. The Martin Museum of Art is located in the Hooper-Schaefer Fine Arts Center on the Baylor University campus.

Hours are 10:00 - 6:00pm Tuesday, Wednesday and Friday, 10:00 - 7:30pm on Thursday, 10:00 - 4:00pm on Saturday, and 1:00 - 4:00pm on Sunday. The museum is closed during university holidays. Admission is FREE and all events are open to the public, unless specified.

For more information call 254-710-1867 or visit the museum website at [www.baylor.edu/martinmuseum](http://www.baylor.edu/martinmuseum).



# BAYLOR

U N I V E R S I T Y

---

## OFFICE OF THE VICE PROVOST FOR RESEARCH

Undergraduate Research and Scholarly Achievement  
Office of the Vice Provost for Research  
One Bear Place #97534  
Waco, Texas 76798-7534  
Office: (254) 710-7594