

BRIGHT IDEAS CONFERENCE



**A showcase spotlighting faculty  
research, scholarship and artistry**

**Wednesday, April 11, 2012  
Pattillo Student Center, 2nd Floor  
Stephen F. Austin State University**

**Research Posters & Scholarly Exhibits**

11:00 a.m. - 4:00 p.m.

Grand & Twilight Ballrooms

*Featuring more than 80 posters & exhibits  
including selections from the  
Undergraduate Research Conference*

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**Awards Ceremony & Spotlight Exhibits**

4:00 p.m. - 6:00 p.m. Twilight Ballroom

Reception at 4:00 p.m.

**Spotlight Exhibits**

Marie Kelly

*Nelson Rusche College of Business*

Nagalapura Viswanath

*James I. Perkins College of Education*

Lauren B. Selden

*College of Fine Arts*

Warren C. Conway

*College of Forestry & Agriculture*

Dianne Dentice

*College of Liberal & Applied Arts*

Marthea Turnage, Ann Ellis, & Kayce Halstead

*Ralph W. Steen Library*

Robert K. Henderson

*College of Sciences and Mathematics*

# SPOTLIGHT EXHIBITS

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**Marie Kelly**

Lecturer, Gerald W. Schlieff School of Accountancy  
*Nelson Rusche College of Business*

## ***Financial Statement Racing***

Students often become confused regarding the normal balance of an account (debit and credit) and which financial statement the account would appear on. I have designed a game to be played in my Financial Accounting 231 classes called Financial Statement Racing. The structure of the game splits the class into two teams, each with a racetrack mounted on the board in front of the class. The lanes of the racetrack consist of Balance Sheet-debit, Balance Sheet-credit, Income Statement-credit, and Income Statement-debit, representing the two main financial statements. These track names also make up the last four columns of the worksheet. Each student has a worksheet handout with these four columns indicated on their paper. When I call time, a student from each team runs to the racetrack and picks a race car from the cup. Each car will have the name of an account on it. The student will have 10 seconds to place the car on the proper financial statement track. If the student puts the car (account) on the wrong track, the other team can take that car and place it on their own racetrack. When a team puts the account on the correct track, the students on that team can place the account in the proper column on their handout. The first team to place enough accounts on the proper financial statement track to get to the “finish line” wins Financial Statement Racing and wins homework bonus points.



**Nagalapura Viswanath**

Professor, Department of Human Services  
*James I. Perkins College of Education*

## ***Part-word Repetitions Are Not Created Equal - Clinical & Theoretical Significance***

Part-word Repetition (PWR) is a hallmark of developmental stuttering. During a PWR, a stutterer initiates a word only to abruptly terminate it, one or more times, before producing the word and re-establishing the communication flow. Among the many dysfluencies that define stuttering (PWR, prolongation of initial sound of words and blocks), developmentally PWR appears earliest. It is also a feature that is universal. Frequency of PWR figures prominently as one of the metrics that characterize severity of stuttering. In this study, we conducted fine-grained spectrographic analysis of PWR produced by four adult stutterers to gain an insight into its mechanism. We discovered that PWRs are not mechanistically homogeneous thus calling into question the use of frequency of PWR in an undifferentiated manner. We discovered four different types of PWR (A, B, C and D). Broadly speaking, the findings have multiple clinical and theoretical implications. One immediate diagnostic implication is that the disorder itself may not be a single entity. This implication dovetails with recent genetic and neuroimaging studies that suggest similar possibility. Finally, the PWR typology may have prognostic significance, in part explaining the uneven success rate with therapies in adult stutterers.

# SPOTLIGHT EXHIBITS

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**Lauren B. Selden**  
Assistant Professor, School of Art  
*College of Fine Arts*

## ***The Gault Project: Incorporating New & Old Artifacts***

The SFA Advanced Art Metals students have created silver and bronze replicas of prehistoric projectile points that date from 13,500 years ago. These replicas will help to reshape our understanding of the initial populations in the Americas. The students visited and took part in an actual excavation at the Gault Site. “The Gault Site has yielded some 600,000 Clovis-era artifacts, including etched rock plates that represent the only Paleolithic artwork yet discovered in the New World” (<http://www.stonepages.com/news/archives/003557.html>). The chance to experience Gault, a site bearing artifacts that illustrate the prehistoric sculpture of the first Americans - in an active role - is a truly inspiring link to our contemporary working practice. The students will learn how to perform lost wax casting, a technique that requires them to carve a form from wax, clean and polish it to perfection, attach the product of that process to the base of a flask that is then filled with a refractory material (investment), burned out (in a kiln), and centrifugally injected with molten metal. These techniques will assist the students in the creation of wearable and sellable works using a subject matter that represents the essence of who we are as human beings.



**Warren C. Conway**  
Associate Professor, School of Forestry  
*Arthur Temple College of Forestry & Agriculture*

## ***Floristic Composition of a Bottomland Hardwood Forest in East Texas***

Southeastern bottomland hardwood forests are diverse and productive ecosystems, providing critical habitat to a wide diversity of species including Neotropical migrant songbirds. Currently, most bottomland hardwood forests are relatively young, even-aged forests characterized by a lack of compositional or structural complexity. Silvicultural practices have been hypothesized as a method for developing old-growth-like complexity in a young forest. As part of a larger research project examining the efficacy of non-traditional silvicultural techniques to restore old-growth structure for wildlife habitat, we began intensive floristic surveys at Old Sabine Bottom Wildlife Management Area (OSBWMA), a hardwood system reflective of the aforementioned even-aged and structurally simple forests. Using a systematic 200m x 100m point-grid, our objectives were to characterize pre-treatment (harvest) conditions in all forest strata across OSBWMA. During the 2011 growing season, 188 plots were established, in which 31 tree, 14 shrub, 20 vine, and 36 herbaceous species were recorded.



**Dianne Dentice**

Assistant Professor, Department of Social and Cultural Analysis  
*College of Liberal & Applied Arts*

***White Revolutionaries: “Keepin’ it White, Right, and Tight”***

There are three distinct social categories that describe white supremacist racialist ideology: race, ethnicity, and nationality. These categories define who the individual is within the context of self, group, and society. Membership in these categories dictates what the individual thinks and feels. There are also specific behavioral attributes associated with membership such as practicing endogamy and exhibiting racial pride. There is consensus among group members as to what it means to be part of their socially constructed group. There are strong motivational factors associated with maintaining in-group solidarity and dominant status based on these three categories. By adhering to the rules dictated by group membership, the self is uplifted along with the group based on white racial identity. There are also sociocognitive processes that account for social identity phenomena within the context of white supremacist beliefs. The first is self-categorization which accentuates perceived similarities between people (including the self) who belong to the same category. Self-categorization accentuates perceived negative differences among Blacks, Hispanics, Asians, Jews, and homosexuals. The process of categorization further reinforces in-group norms and creates stereotypes that favor the in-group over the out-group. This project is based on ongoing field research that began in 2005 and survey data collected in May 2010. Findings are important because they contribute to literature about extremist groups and racialist ideology in contemporary American society.



**Marthea Turnage**

Librarian IV

**Ann Ellis**

Librarian III

**Kayce Halstead**

Librarian III

*Ralph W. Steen Library*

***Texas State Department of Education Bulletins 1918-1946  
Digitization Project***

Stephen F. Austin State University supports a large education department that offers degrees in teaching, human sciences, human services, and educational leadership through the doctoral level. The Ralph W. Steen Library documents collection includes monthly bulletins published by the Texas State Department of Education from 1918-1946. These documents present an intriguing glimpse at the development of education between the two World Wars. Since they are old and in fragile condition, it was decided that the documents would become an interesting and useful research collection if preserved digitally and made available electronically.

# SPOTLIGHT EXHIBITS

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## **Robert K. Henderson**

Assistant Professor, Department of Mathematics & Statistics  
*College of Sciences & Mathematics*

### ***Bounded Monte Carlo Simulation of Critical Information Related to Retirement Planning***

In the process of effective retirement planning, it is necessary to make assumptions about the future behavior of several key metrics. The most notable among these are annual return rates on equity, fixed income, and cash investments, as well as the annual inflation rate. The simplest form of projection is to assume a constant rate for each of these factors into the future time frame under consideration; however, it is a virtual certainty that such projections will be in error. As a result, other approaches that attempt to account for the uncertainty surrounding future projections of these values have been developed, of which Monte Carlo simulations is a popular technique. However, even this approach, as it is commonly practiced can produce results that are difficult to believe will ever actually occur. This presentation describes one approach to more effective use of available historical information on these key retirement planning metrics to produce more realistic and believable Monte Carlo simulation results.

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## **Undergraduate Research Conference Top Scholars**

### **Andrew Falcon & Michael Fleck**

Nelson Rusche College of Business  
*How Does SFA's Student Investment  
Roundtable Fund Stack up Against National  
Competitors?*  
Advisor: Ryan Phelps  
(Economics and Finance)

### **Amanda Johnson**

James I. Perkins College of Education  
*Beta-Glucan Reduces Heart Disease by  
Lowering LDL-Cholesterol*  
Advisor: Darla O'Dwyer  
(Human Sciences)

### **Garrett Nichols**

College of Fine Arts  
*A Performer's Analysis of Brahms Sonata  
in F Minor for Clarinet & Piano*  
Directed by Chris Ayer & John Cotner  
(School of Music)

### **Sierra Gibbons**

Arthur Temple College of Forestry & Agriculture  
*Phytoremediation of Cadmium & Chromium  
Contaminated Soils*  
Advisor: Kenneth Farrish  
(Environmental Science)

### **Lindsey Antonini**

College of Liberal & Applied Arts  
*ARKTOSK: Language of the Bears*  
Advisor: Jessie Sams  
(English)

### **Rebecca Collins & Molly Blanchette**

College of Sciences and Mathematics  
*The Heavy Metal Analysis of Lichens & Soils*  
Advisor: Michael A. Janusa  
(Chemistry)

# EXHIBITS

## **Representing the Teaching Excellence Center**

*Pharmacology Brochures: Design for Learning*  
Haidinyak G, Athey C

*Two Semester Project Incorporating Research into the Undergraduate Curriculum*  
Harris M

*SFA One-Oh-Wonderful: Collaboratively Learning about Collaborative Learning*  
Newman T, Supan K

*Experiential Learning Impacts SFA Nutrition Students & the East Texas Community*  
O'Dwyer D, Hensarling N

*Teaching Students Community Building through a Multidisciplinary Approach to Service Learning*  
Oliphant E, Price-Mayo B, Cooper S, McDonald D, Ashton C, Bordelon N, Wareing S, Anthony D

*BAFA' BAFA': Experiencing Interaction with Another Culture in the Classroom*  
Roy S

*Human Dimensions & Civic Engagement in the Natural Resources Classroom*  
Stephens-Williams P

*Changing Roles to Change the Nature of Future Natural Resource Professionals: Providing Tools to Students to Teach the Public about Fire*  
Stephens-Williams P, Kulhavy D, Oswald B, Stafford K

## **Representing the Ralph W. Steen Library**

*East Texas Digital Archives & Collections*  
Brancato J

*If You Think Your Phone is Smart Now, Wait Till You Take it to the Library*  
Reynolds R

*Library Internship/Advanced Independent Studies*  
Turnage M, Williams R

*Texas State Department of Education Bulletins Digitization Project (Spotlight Exhibit)*  
Turnage M, Ellis A, Halstead K

# EXHIBITS

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## **Representing the James I. Perkins College of Education**

*An Examination of Early Childhood Educators' Knowledge Skills & Confidence Regarding Spatial Skills & Abilities Development*

Akerson A

*Academia & Industry Collaboration to Enhance Student Learning*

Barrios T, Grand M

*Motor Learning Principles & Vocal Pedagogy*

Bergan C

*What are Couples Saying About Relationship Education? Ideas for Service Providers*

Burr B

*Discrepancy Awareness Versus Saliency: Novel Implications on the Self-regulation of Health-related Behavior*

Faries M, Dooling S

*Energy Expenditure & Affective Responses to Resistance Training*

Faries M, Espinoza J

*Validation of the SensaWear Pro Armband for Energy Expenditure During Stability Ball Sitting*

Faries M, Claborn L

*Teacher Attrition: A Qualitative Study of Why Some Teachers Leave Hard-to-Staff Urban, Rural, & Suburban Schools in Texas*

Jenlink K, Session N, Black F, Vargas O, Bevers W

*The Impact of Principal Instructional Leadership on Teacher Attrition in Hard-to-Staff Schools: Survey Research*

Jenlink K, Bush S, Lindley C, Porter D

*What Makes a Low Performing School District Hard to Staff?*

Jenlink K, Amonett C, Nix T

*The Zebra Brain and Sociology: A New Approach to Understanding the Connections Linking Individual & Social Psychology*

Lauter J

*Student Directed Service-Learning*

O'Dwyer D, Bradley C

*Using iPad Technology for Visitor Surveys*  
Pfaffenberg C, Runnels C, Darville R

*The Bully Project: A Service-Learning Collaboration*  
Solmonson L

*Part-word Repetitions Are Not Created Equal - Clinical & Theoretical Significance*  
(Spotlight Exhibit)  
Viswanath N

### **Representing the College of Fine Arts**

*New York Art & Design, Maymester Travel Class*  
Andrew P

*The Gift of the Magi Radio Drama*  
Conn C, Rosenfeld J

*Concept - Space - Object*  
Hajikano M

*How to Use the Internet in Your Classroom*  
Midgley H

*Sound in Silent Horror Films*  
Midgley H

*Recording the Unpublished Piano Compositions of Alec Wilder*  
Roberts J

*The Gault Project: Incorporating New & Old Artifacts (Spotlight Exhibit)*  
Selden L, Jimerson S

*El Camino Real de los Tejas: A Photographic Survey*  
Talbot C



# EXHIBITS

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## **Representing the Arthur Temple College of Forestry & Agriculture**

*Floristic Composition of a Bottomland Hardwood Forest in East Texas  
(Spotlight Exhibit)*

Bennett A, Conway W, Comer C

*Wetland Function & Vegetation Analysis Utilizing Geographic Information System  
(GIS) and Remote Sensing During the Creation of the Naconiche Reservoir,  
Nacogdoches County, Texas*

Carr S, Williams H, Oswald B, Unger D

*Detection Probability & Effective Listening Radii For Eastern Wild Turkey Surveys  
in East Texas*

Chavez S, Conway W, Comer C, Calkins G

*Assessment of Suitable Habitats for the Louisiana Black Bear (*Ursus americanus  
luteolus*) in East Texas*

Comer C, Hung I, Scognamillo D, Unger D, Kaminski D

*Identifying Well Pads in the Haynesville Shale Region, Louisiana and Texas, with  
Digital Imagery*

Dans D, Unger D, Farrish K, Hung I

*Home Range Composition of White-tailed Deer Fawns Compared to Does in  
Northeastern Louisiana*

Hasapes K, Comer C

*A Forest Insect Alphabet: Combining Science, Art, & Music*

Kulhavy D, Jones C

*Edge of Life: Forest Pathology Art*

Kulhavy D, Rozic M

*Baseline Blood Lead Levels in Mottled Ducks (*Anas fulvigula*) & Its Potential  
Exposure to Lead Laden Soils on the Texas Chenier Plain National Wildlife Refuge  
Complex*

McDowell S, Conway W, Comer C, Haukos D, Moon J

*Nest Success & Nest Site Selection of Black-necked Stilts on the Texas Chenier Plain  
National Wildlife Refuge Complex*

Riecke T, Conway W, Comer C, Haukos D, Moon J

*Land Cover & Water Quality Response Due to Oil and Natural Gas Exploration in East Texas*

Schwab S, Unger D, Zhang Y, McBroom M, Hung I

*Louisiana Stakeholders' Attitudes & Knowledge Concerning Black Bears in Seven Selected Parishes*

Stephens-Williams P, Darville R, Comer C, Peterson C

*American Woodcock (Scolopax minor) Habitat Suitability & Occupancy in Eastern Texas*

Sullins D, Conway W, Comer C, Haukos D

*Evaluation of WholeTree Substrate Amended with Spent Mushroom Compost or Peat Moss in the Pot-in-Pot Production of Rosa hybrida*

Summerville A, Maurer M

*Accuracy Assessment of Area Calculation Using Consumer Grade GPS Units in Southern Pine Forests*

Unger D, Hung I, Zhang Y, Parker J

*Accuracy of Land Cover Maps Derived From Remotely Sensed Data*

Unger D, Hung I, Zhang Y, Darville R, Brown B

*Sub-Pixel Classification of Forest Cover Types*

Westbrook J, Hung I, Unger D, Zhang Y

*Prediction of in vitro True Digestibility of Coastal Hay Using Near Infrared Reflectance Spectroscopy*

Young L, Hill J

### **Representing the College of Liberal & Applied Arts**

*Ground-truthing Geophysical Survey Results at Los Adaes*

Avery G, Hargrave M, Ernenwein E, Gregory P

*Utilizing Research Opportunities to Increase Future Social Work Practitioners' Abilities to Link Research, Knowledge Base, & Practice*

Bice-Wigington T, Moravec-Gallagher M, Raynes J, Perry B

*Maya Blue: A New Source Outside of Yucatan, Mexico*

Cecil L

# EXHIBITS

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*White Revolutionaries: "Keepin' it White, Right, and Tight" (Spotlight Exhibit)*  
Dentice D

*Native American Land Trust: Contested Sacred Space in South Texas*  
McDonald D, Roth J

*Two "Faces" of Indian Identity: A Comparative Analysis of Identity Management on Facebook of Asian Indians Living in India & the U.S.*  
Roy S

*Sacred & Spiritual Landscapes: Research in Progress*  
Snowden K, Segady T

*Metropolitan Quality-of-Life Rankings Based on User Priorities*  
Szafran B

*Composition Pedagogy & Community Outreach: Leading & Serving East Texas Academic Writing Programs*  
Tasker Davis E, Fox N, Thomas K, Porter K

## **Representing the College of Sciences & Mathematics**

*A Habitat Management Model Based on Foraging Red-cockaded Woodpecker Habitat Use and Avoidance*  
Burt B, Saenz D, Conner R, Macey J

*Transgenic Cells Exhibit Suppression of Viral Activity in Feline Adenocarcinoma Cells Persistently Infected with Equine Infectious Anemia Virus*  
Canterberry S, Long C, Payne S, Rahman H, de la Cruz J

*Deciphering the Mechanism of Apoptosis Induction by Doxorubicin in Colon & Prostate Cancers*  
Clack B, Sonavane R, Gonzales C

*Evaluating the Role of Two Bacterial Chaperone Systems in Protein Folding of Recombinant Enzymes*  
Clack B, Reddy V

*Use of Milk Proteins to Shut Down a Major Wheat Pest in Developing Countries*  
Clack B, Yandamuri R, Kumar P, Hargrove J

*Basement Control as Origins of the Mount Enterprise Fault System (MEFS):  
A Possible Degassing Mechanism of the Haynesville Shale, Rusk County, Texas*  
Dornfeld A, Brown W

*Absorption & Efficiency Characteristics of Graphene Quantum Dot Solar Cells*  
Friedfeld R, Belew J, Coleman R, Pusko M

*Bounded Monte Carlo Simulation of Critical Information Related to Retirement  
Planning (Spotlight Exhibit)*  
Henderson R

*Make a Difference Day: Service Learning for Nursing Education*  
Hensarling J, Connor D, Morse K

*Quantitative Interpretation of 2D and 3D Seismic Data*  
Heyt K, Brown W, Liner C

*New Research Telescopes for the SFASU Observatory*  
Markworth N, Bruton D

*Clinical Simulation: End-of-Shift Report using SBAR Tool*  
Migl K, Powell R

*Ellis van Creveld Protein Binds & Hydrolyzes Nucleotides*  
Odunuga O, Bollinger S, Choi K, Polvadore E

*DFT/TD-DFT Investigation of Optical Absorption Spectra, Electron Affinities,  
and Ionization Potentials of Mono-nitrated Benzantrones*  
Onchoke K

*Salt, Sediment, & Tar Interactions and the Origin of Tar Beds in the Green  
Canyon Area of the Gulf of Mexico*  
Okoronkwo K, Brown W

*Semi-strong Continuity*  
Roberson P, Scheers J

*Solids of Revolution Formed by Rotating Functions*  
Robinson C, Becnel J, Moyer B

# EXHIBITS

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## **Representing the Nelson Rusche College of Business**

*Oil Spills as they Relate to the Field of Accountancy*  
Barker B, Rogers V, Madsen L

*A is for Accounting, B is for Balance, C is for Cash*  
Bunn E

*Financial Statement Racing (Spotlight Exhibit)*  
Kelly M, Blalock J

*Hydraulic Fracturing & the Environment: Accounting Perspective*  
Lewis E, Rogers V

*Accounting for the Pipeline Industry: an Oil & Gas Accounting Topic*  
Sanders L, Rogers V, Jones A, Pyle S

## **SFA Center Exhibits**

*The STEM Research & Learning Center*  
Executive Director: Kimberly Childs  
Co-Directors: Lesa Beverly, John Moore, & Josephine Taylor

*The Science Research Center*  
Director: Beatrice Clack

*The Teaching Excellence Center*  
Co-Directors: John Moore, Patricia Foster, & Norman Markworth

*The Center for Regional Heritage Research*  
Director: Mark Barringer

*The Office of High-impact Practices*  
Director: Tara Newman



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# 2012 BRIGHT IDEAS CONFERENCE

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