

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

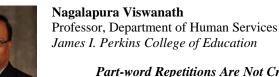


Marie Kelly
Lecturer, Gerald W. Schlief School of Accountancy
Nelson Rusche College of Business

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.



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



Lauren B. SeldenAssistant 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 popu-

lations 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 in-

cluding 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 DenticeAssistant 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 Word 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



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.

Undergraduate Research Conference Top Scholars

Andrew Falcon & Michael Fleck

Neslon 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)

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

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



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

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

 $\label{lem:continuous} \textit{Evaluating the Role of Two Bacterial Chaperone Systems in Protein Folding of Recombinant Enzymes}$

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 Benzanthrones

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

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

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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
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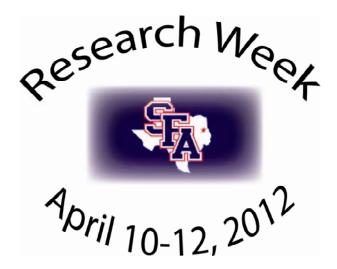
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