Dr. Sandra K. Woodley
President

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Gary Solomon
2014 UL System Academic Summit

April 11-12, 2014
University of Louisiana at Lafayette

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SCHEDULE AT A GLANCE

Friday, April 11, 2014

10:30 a.m. - 1:00 p.m. Registration Check-In
Hamilton Hall Lobby

11:30 a.m. - 12:30 p.m. Welcome And Lunch
Catholic Student Center

1:00 p.m. - 2:00 p.m. Concurrent Session A
Hamilton Hall Classrooms

2:15 p.m. - 3:15 p.m. Concurrent Session B
Hamilton Hall Classrooms

3:30 p.m. - 4:15 p.m. Service-Learning Keynote Panel
Hamilton Hall Auditorium

4:30 p.m. - 5:30 p.m. Performance Art Showcase
Ducrest-Gilfry Auditorium in Angelle Hall

5:30 p.m. - 7:00 p.m. Art Exhibition And Reception
A. Hays Town Building

Saturday, April 12, 2014

8:30 a.m. - 9:30 a.m. Registration Check-In
Hamilton Hall Lobby

9:00 a.m. - 9:15 a.m. Welcome
Hamilton Hall Auditorium

9:30 a.m. - 10:30 a.m. Concurrent Session C
Hamilton Hall Classrooms

10:45 a.m. - 11:45 a.m. Poster Session
Angelle Hall Orchestra Room

12:00 p.m. - 12:45 p.m. Lunch
Catholic Student Center

12:45 a.m. - 1:30 p.m. Undergraduate Research Keynote
Catholic Student Center

1:45 p.m. - 2:45 p.m. Concurrent Session D
Hamilton Hall Classrooms

1:45 p.m. - 2:45 p.m. CUR Faculty Panel Discussion
Hamilton Hall 131

3:00 p.m. - 3:30 p.m. Wrap Up And Recognition
Hamilton Hall 108
Welcome to the University of Louisiana at Lafayette, home of the Ragin’ Cajuns. We’re glad you’re here to participate in the University of Louisiana System’s third annual Academic Summit.

As you’ve seen, substantial construction is under way on campus. We apologize for any inconvenience it may cause. Progress is sometimes messy but the outcome of these projects will be worth the occasional noise and detours we experience.

When the dust settles, an expanded and completely renovated Student Union will become the hub of campus activities, especially for students who live in our residence halls. After the Student Union is complete at the end of this year, two buildings on Hebrard Boulevard will be torn down to provide a scenic view of it and the adjacent Cypress Lake.

A parking garage is being built between Fletcher and Rougeou halls.

And, our Quadrangle will have a new look that features a fountain with a fleur-de-lis sculpture. The redesign was initiated, designed and financed by our students.

Most of the improvements are part of a Master Plan for campus growth that was developed over the past couple of years with participation by students, faculty, staff, alumni and members of the community.

It’s a pleasure to host the Academic Summit this year. This two-day event is a chance for the UL System’s nine universities to share what we’re learning, to network with colleagues and fellow students, and to challenge each other intellectually.

Like previous summits, it will include a system-wide service learning conference. Helping others through service is an obligation of an educated society. As institutions of higher learning, we have a responsibility to convey this principle to the 90,000 students we teach. The summit will also include performance art, a student art exhibition, and undergraduate research.

Thank you for participating in this Academic Summit. We hope you enjoy your visit and invite you to return to our campus in a few months to see our progress.

Sincerely,

E. Joseph Savoie
President
On behalf of the Board of Supervisors for the University of Louisiana System, I welcome you to the third annual UL System Academic Summit!

This is the premier event for our nine-university system that showcases the best of academic learning across multiple disciplines. Whether you are here to learn more about infusing service-learning, undergraduate research, or artistic expression, these co-curricular activities exemplify the core of our mission: excellence in teaching and student knowledge.

We are especially appreciative of the University of Louisiana at Lafayette for hosting this year’s conference on its beautiful campus. I have no doubt you will experience great food and hospitality amid the towering historic oaks that are so prolific here, and don’t forget to stop by Cypress Lake to see the alligators.

To the faculty and staff presenting or supporting your student mentees, thank you for your hard work and dedication. Your students’ successes are a direct reflection upon you, and the state of Louisiana is the ultimate beneficiary.

To the students presenting, you are to be commended for going beyond the classroom in your pursuit of knowledge. It is our hope that the Academic Summit medals awarded to you are worn with pride on the day of your graduation. We also hope you will document this experience in your MyEdu.com profile so that you can showcase your work and presentation skills to potential employers.

To all attendees, make the extra effort over these two days to get to know students, faculty, and staff members outside of your own university. These are valuable connections that can reap many benefits in the future. Together, we are nine universities and 90,000 students strong!

Sincerely,

Dr. Sandra K. Woodley
President
University of Louisiana System
Campus Service from Stem to Stern: Making the Most of our Campus-Community Partnerships

Moderator: David Yarbrough, Ph.D.

This presentation will spotlight key campus–community service over the past academic year. From focused experiential learning platforms to broad-stroke community engagement events, the marriage between university service and the communities where they reside help create a unique quality of life specific to college towns.

Undergraduate Research Keynote Presentation

Discovering Engineering

Chris Carroll, Ph.D.

Dr. Chris Carroll is an assistant professor at the University of Louisiana at Lafayette. His area of expertise has been primarily focused on prestressed and reinforced concrete and he has recently incorporated infrastructure maintenance and sustainability into his research interests. As an assistant professor at the University of Louisiana at Lafayette, Dr. Carroll has been involved in a variety of projects including ancient engineering, transportation materials, and the use of recycled materials in concrete. He first worked on a project evaluating the techniques believed to be used by the ancient Egyptians and Romans for two television series, *Engineering the Impossible* and *Unearthing Ancient Secrets*. His most recent project, *Preliminary Analysis of Polymer Concrete Used for Bridge Deck Joint Repairs*, was funded by the Louisiana Department of Transportation and Development and was focused on a bridge maintenance issue continually plaguing state DOT’s across the country. Lastly, Dr. Carroll’s current project involves using recycled materials for potential applications to structural engineering. The purpose of the study is to evaluate the behavior of fiber reinforced rubber concrete for potential use as an energy absorbent material for seismic applications.

Council On Undergraduate Research (CUR) Panel Discussion

How to Stimulate Undergraduate Research

Panel Members:

Dr. Allyse Ferrara, Associate Professor of Biological Sciences, Nicholls State University
Dr. Juliana Hinton, Biology/Health Science Department, McNeese State University
Dr. Danny Hubbard, Associate Director of the College of Arts and Sciences, Grambling State University
Dr. Julia Frederick, Director of University Honors Program, University of Louisiana at Lafayette
Ms. Leslie Gruesbeck, Gallery Coordinator, Northwestern State University
Academic Summit Schedule

FRIDAY, APRIL 11, 2014

10:30 a.m. – 1:00 p.m.  Hamilton Hall Lobby  Registration

11:30 a.m. – 12:30 p.m.  Catholic Student Center  Welcome and Lunch

1:00 – 2:00 p.m.  Hamilton Hall  Concurrent Sessions

**HH 113**

Neurological Effects of Caffeine on Individuals With Bipolar Disorder  
Destiny LaRue  Northwestern State University

From Dolly to Lolita?: Female Empowerment and the Lolita Fashion Subculture  
Randi Ditta  Northwestern State University

A Theory of Inter-Generational Reparations in Nozick’s Historical Conception of Property Rights  
Jules Guidry  Northwestern State University

**HH 223**

Synthesis of Azide Ligands and Conjugation to G5 PAMAM Dendrimers  
Lauren Luce  Nicholls State University

Fingertip Tracking Using the Microsoft Kinect  
Grace Chenevert  Southeastern Louisiana University

Fixed Point Theory of Matrix Families  
Amal deAlwis  Southeastern Louisiana University

**HH 116**

A Traffic Light Control System Design  
Monroe Willis, Deshon Swafford, Iree Jackson  Grambling State University

Spark Plasma Heat Treated ZrB$_2$-SiC and HfB$_2$-SiC Composites for Ultra High Temperature Aerospace Applications  
Marquavious T. Webb  Grambling State University

Variations in Raindrop Size Distributions Associated with Diverse Storm Types and Structures  
Anthony Viramontez  University of Louisiana at Monroe

**HH 108**

Embedded Service Learning: The Benefits of Staying Put  
Hector LaSala  University of Louisiana at Lafayette

Students Producing Documentaries for Non-Profit Organizations  
Laszlo Fulop  University of New Orleans

**HH 115**

Integrating Service Learning Into the Beginning Band Class  
Jan Scott, Huber ‘Mickey’ Smith  McNeese State University, Maplewood Middle School

Vermilionville Education Enrichment Partnership: Academic Service Learning in Action  
Toby Daspit, Elaine Riley Taylor, Jolie Johnson  University of Louisiana at Lafayette, Vermilionville
<table>
<thead>
<tr>
<th>Session</th>
<th>Time</th>
<th>Location</th>
<th>Title</th>
<th>Presenter(s)</th>
<th>Institution(s)</th>
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<tr>
<td>HH 112</td>
<td>2:15 – 3:15 p.m.</td>
<td>Hamilton Hall</td>
<td>Concurrent Sessions</td>
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<td>HH 115</td>
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<td>HH 115</td>
<td>Musical Analysis and Performance of <em>Tango</em> for Low Brass Sextet</td>
<td>Joshua Mattison</td>
<td>Louisiana Tech University</td>
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<td>Huckleberry Trails Entry Pavilion</td>
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<td><em>The Friend and Helper and Advocate of Every Good Cause: Victorian Print Culture and the Dissemination of the New Woman Movement</em></td>
<td>Brandi Vincent</td>
<td>Northwestern State University</td>
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<td>HH 113</td>
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<td>HH 113</td>
<td><em>Stinking Lizaveta: the Humble Saint of The Brothers Karamazov</em></td>
<td>Jillian Allbritton</td>
<td>University of Louisiana at Monroe</td>
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<td><em>Three Austrian Muses</em></td>
<td>Taylor LeBlanc</td>
<td>Nicholls State University</td>
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<td>Allons! A Universal Call to Freedom in Walt Whitman's <em>Song of the Open Road</em></td>
<td>Brandon Naquin</td>
<td>Nicholls State University</td>
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<tr>
<td>HH 223</td>
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<td>HH 223</td>
<td>The Common Core Curriculum and Proposed Adaptations for Students with Mild to Moderate Disabilities</td>
<td>Avarelle C. Williams</td>
<td>University of New Orleans</td>
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<td>HH 116</td>
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<td>HH 116</td>
<td>Service Audit</td>
<td>Hyunju Shin</td>
<td>McNeese State University</td>
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<td><em>Self Efficacy and Service Learning: Students and the Disposition for Taking Action</em></td>
<td>Patricia Lanier</td>
<td>University of Louisiana at Lafayette</td>
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<tr>
<td>HH 108</td>
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<td>HH 108</td>
<td>Take-Home Bags for Early Literacy Success</td>
<td>Ramona Wynder, Melissa Caprio-White, Lauren Dearmond</td>
<td>Northwestern State University</td>
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<td><em>Teaching Theory, Research, and Service in the Cemetery: A Service-Learning Project</em></td>
<td>Franics Staten</td>
<td>Grambling State University</td>
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<tr>
<td>HH 112</td>
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<td>HH 112</td>
<td>Oliver Gets An X-Ray: A Multi-Facet Service-Learning Tool</td>
<td>Kendall DeLacerda, Kari Cook, Holly Lane</td>
<td>Northwestern State University</td>
</tr>
</tbody>
</table>
Library Needs of Undergraduate Students Living on Campus
Estoban David Sotomayer  University of New Orleans

3:30 – 4:15 p.m.  HH 108  Service-Learning Keynote Panel: Campus Service from Stem to Stern: Making the Most of Our Campus-Community Partnerships
Dr. David Yarbrough, Moderator

4:30 – 5:30 p.m.  Angelle Hall  Performance Art Showcase
Ducrest-Gilfry Auditorium

5:30 – 7:30 p.m.  A. Hays Town Building  Art Exhibition and Reception

SATURDAY, APRIL 12, 2014

8:30 – 9:30 a.m.  Hamilton Hall Lobby  Registration

9:00 – 9:15 a.m.  Hamilton Hall 108  Welcome

9:30 – 10:30 a.m.  Hamilton Hall  Concurrent Sessions

HH 223  Monitoring Coastal Erosion and Near-Shore Structures in Southwest Louisiana
Amit Sharma  McNeese State University

Influence of Forest Edge on the Occurrence and Abundance of Small Mammals
Lindsey Arabie  McNeese State University

Initiation of a Soil Survey of Southwest Louisiana and its Potential Forensic Applications
Justin Higginbotham, Drew Hood  McNeese State University

HH 116  Biofunctional Clay Nanotube Composites
Joshua Tully  Louisiana Tech University

Nitrate and Type 1 Diabetes in Alligators
Stephen Green  Louisiana Tech University

Ortho-Alkoxylation of Diaryl Ketoxime Ethers
Elizabeth Kimball  Southeastern Louisiana University

HH 113  Surface Modification of TiO2 Nanoparticles to Enhance Biocompatibility and Selectivity for Use in Photodynamic Therapy
Alexander Lyons Jr., Richard Prevost, Scott Gordon, Matthew Tarr  University of New Orleans

Incidence of Clostridium difficile Infections Related to the Administration of Broad-Spectrum Antibiotics and Proton Pump Inhibitors
Jacob Foret  Nicholls State University

Beliefs in the Mickey Shunick Case: The Impact of Familiarity, Involvement and Individual Differences
Emily Broussard, Ariel Guillary, Samantha Marks, Richard Nelson  University of Louisiana at Lafayette
### Academic Summit Schedule

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<tr>
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<td>Catholic Student Center</td>
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<td>12:45 – 1:30 p.m.</td>
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<td>Undergraduate Research Keynote Speaker: Discovering Engineering</td>
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#### HH 108
- **Non-Law Enforcement 1st Responder Asset Protection During Active Shooter Situations**
  - Yvonne Gray
  - Northwestern State University
- **Electrical Co-Op FEMA/State Reimbursement Procedures**
  - Derrick James
  - Northwestern State University
- **Reading on the River—A Community Collaboration to Promote Early Literacy**
  - Debra Jo Hailey, Michelle Fazio-Brunson, Leslie Gruesbeck
  - Southeastern Louisiana University, Northwestern State University

#### HH 115
- **Students Without Borders: A Service-Learning Program**
  - Reller Jones
  - Grambling State University
- **Bio-Diversity: Calculating Energy Savings for Greenlight New Orleans**
  - Larry Dew
  - University of New Orleans

#### HH 112
- **Straight Talk: A Service-Learning Program**
  - Cassandra Peoples
  - Grambling State University
- **TEACH Project Students Broaden Horizons Through STEM Investigations**
  - Tiffany Jackson, Montrell Marshall, Mark Parrish
  - University of Louisiana at Monroe, Carroll High School, First Baptist Church of West Monroe
- **Girl Scouts Power Up with TEACH Project Partnership**
  - Tiffany Jackson, Katherine Stagg, Linda Trimble
  - University of Louisiana at Monroe, Ouachita Parish Schools, Girl Scouts & Louisiana STEM

### 10:45 – 11:45 a.m.
**Angelle Hall**
- Orchestra Room
- Undergraduate Research Poster Session

### 12:00 – 12:45 p.m.
**Catholic Student Center**
- Lunch

### 12:45 – 1:30 p.m.
**Catholic Student Center**
- Undergraduate Research Keynote Speaker: Discovering Engineering
  - Dr. Chris Carroll
  - University of Louisiana at Lafayette

### 1:45 – 2:45 p.m.
**Hamilton Hall**
- Concurrent Sessions

#### HH 223
- **The Politics of Translation: A Literary Experiment in Two Languages**
  - Maria-Josee Mendez
  - McNeese State University
- **Prometheus Radio Project vs FCC: A Legal Analysis of Conglomerate Ownership of Radio Broadcasting**
  - Hannah Matherne
  - Southeastern Louisiana University
- **International Monetary Fund: The Developing Country’s Perspective**
  - Katherine Auil
  - Grambling State University

#### HH 113
- **Social Media and Racism: A State-by-State Analysis of Post 2012 Presidential Election Tweets**
  - Cory Williams
  - University of Louisiana at Monroe
Academic Summit Schedule

The Impact of Victim Alcohol Consumption and Perpetrator Use of Force on Perceptions of an Acquaintance Rape Vignette
Jada Horton, Ariel Guillory, Tracy Protti, Lauren Held  University of Louisiana at Lafayette

No Glove, No Love: Predicting Condom Use Behaviors from Implicit and Explicit Attitudes and Psychological Flexibility
Jessica Auzenne  University of Louisiana at Lafayette

HH 116
Examining Statistical and Practical Differences Among Life Expectancy Tables: Implications for Vocational Rehabilitation
Morgan Soileau  University of Louisiana at Lafayette

Is It Time For A Female President?
Kometa Mufor  Grambling State University

HH 115
Online Course Delivery and Service Learning: Best Practices
Terry Silver  University of Tennessee-Martin

When Counting is Inadequate: The Failure of Quantitative Measures to Demonstrate True Impacts of Service-Learning Projects
Jack Atherton  Northwestern State University

HH 108
A Great Experience
Heather Houston  Northwestern State University

Volunteering for the Lighthouse Program as a Tutor
Kelsi Copeland  Northwestern State University

Altering the Course: Mental Illness and First Responders
Amy Douthwaite  Northwestern State University

HH 112
Life Events, Transitions, and Turning Points
Pamela Saulsberry, Eric Hendrix, Tara Williamson  University of Louisiana at Monroe

The Horse/Human Relationship: How Horses Can Help Youth With a History of Abuse or Neglect
Laura Gentry, Daniel Mayer  Louisiana Tech University

1:45 – 2:45 p.m.  Hamilton Hall 131
Council on Undergraduate Research Faculty Panel Discussion: How To Stimulate Undergraduate Research
Dr. Allyse Ferrara  Nicholls State University
Dr. Juliana Hinton  McNeese State University
Dr. Danny Hubbard  Grambling State University
Dr. Julia Frederick  University of Louisiana at Lafayette
Ms. Leslie Gruesbeck  Northwestern State Louisiana

3:00 – 3:30 p.m.  Hamilton Hall 108
Wrap-Up and Recognition
Performance Art Showcase

Ducrest Gilfry Auditorium, Angelle Hall
4:30 p.m. - 5:30 p.m.

Grambling State University
“Vivaldi Concerto”
Composer: Antonio Vivaldi
Performers: Ethan Pipion, Ophelia James
Faculty Mentor: Ye Tao

Louisiana Tech University
“Optional Duets” I. Harmony, II. Melody
Composer: Joshua Mattison
Performer: Joshua Mattison, Joe L. Anderson
Faculty Mentor: Joe L. Anderson

McNeese State University
“Land”
Composer: Takatsugu Muramatsu
Performer: Tab Olson
Faculty Mentor: Lonny Benoit

Nicholls State University
“Sonata for Horn, Trumpet, and Trombone,” Opus 33, Movement 1
Composer: Francis Poulenc
Performers: Paula Santos, French horn; Marayna Falgout, trumpet; Jeremy Landry, trombone
Faculty mentor: Matthew Jefferson

Northwestern State University
“Hommage a Manuel de la Falla”
Composer: Bela Kovacs
Performer: Jaime Cisneros
Faculty mentors: Malena McLaren and David Steele

Southeastern Louisiana University
“Pantomima & Danza de Molinera”
Composer: Manuel de Falla (arr. P. Kerber)
Performers: Southeastern Guitar Quartet: Dustin Dawson, Blake Guidry, West Lentz, Amon Straughter
Faculty Mentor: Patrick Kerber

University of Louisiana at Lafayette
“Les Flammes d’Enfer (The Flames of Hell)”
Composer: traditional
Performers: UL Lafayette Cajun Ensemble: Marie-Laure Boudreau, Garland Bernard, Carroll Breaux, Jakob Goodwin, Eli Guillot, Kevin Hebert
Faculty mentor: Mitch Reed, Mark DeWitt

University of Louisiana at Monroe
“La Folia” (RV 63)
Composer: Antonio Vivaldi, Arr. Anton Höger
Performers: UL Monroe Guitar Quartet: Keith Adams, John Farmer, Joshua Love, Joe Stokes
Faculty mentor: Daniel Sumner

University of New Orleans
Tracks,” and other poems
Poetry by Riley Patrick Bingham
Performer: Riley Patrick Bingham
Faculty mentor: Carolyn A. Hembree
Art Exhibition

Paul & Lulu Hilliard University Art Museum and A. Hays Town Building
5:30 p.m. - 7:00 p.m

GRAMBLING STATE UNIVERSITY

Rock Hall
Solange Alfred
Faculty Mentor: Rodrecas Davis

Skewed Melody
Quinstitia Gray
Faculty Mentor: Rodrecas Davis

UNdefeated
DeJaneé Mitchell
Faculty Mentor: Rodrecas Davis

My Sweet Melancholy
Brittany Sinegal
Faculty Mentor: Rodrecas Davis

Blooming Bursts
Rachel Wise
Faculty Mentor: Rodrecas Davis

LOUISIANA TECH UNIVERSITY

Untitled Photograph
Deepanjan Mukhopadhyay
Faculty Mentor: Nicholas Bustamante

Guardian
Sienna Haralson
Faculty Mentor: Nicholas Bustamante

Lighthouse
Ashley Sellers
Faculty Mentor: Nicholas Bustamante

Audubon Identity Insectarium
Casey Voinche
Faculty Mentor: Nicholas Bustamante

Drop Caps
Anne Muckleroy
Faculty Mentor: Nicholas Bustamante

McNEESE STATE UNIVERSITY

Beautiful Things
Elizabeth Broussard
Faculty Mentor: Lynn Reynolds

We Are All Connected
Lindsey Johnson
Faculty Mentor: Lynn Reynolds

Theory of Gravity: From Lust to Haze
Joe Racca
Faculty Mentor: Lynn Reynolds

Government Shutdown
Brooke Robinson
Faculty Mentor: Lynn Reynolds

Bluejay
Hannah Wilson
Faculty Mentor: Lynn Reynolds

NICHOLLS STATE UNIVERSITY

Jordan
Sarah Hartman
Faculty Mentor: Jean Donegan

Room 1 (from the series Please Come In)
Jacob Jennings
Faculty Mentor: Deborah Lillie

Reliquary
Grant Rodrigue
Faculty Mentor: Michael Williams

Self Portrait
Amber Selph
Faculty Mentor: Ross Jahnke

Building Pt: 1
Alicia Voisin
Faculty Mentor: Joseph Holsapple

NORTHWESTERN STATE UNIVERSITY

Boom
Trávan Cooper
Faculty Mentor: Matt DeFord

Rabbit Boy
Callie Do
Faculty Mentor: Matt DeFord

Business Card
Jessica Johnson
Faculty Mentor: Matt DeFord

Tea Time
Shandi Russell
Faculty Mentor: Matt DeFord

Forgotten Dreams
James Stringer
Faculty Mentor: Matt DeFord
Art Exhibition

SOUTHEASTERN LOUISIANA UNIVERSITY

Untitled Landscape
Mary Chatelain
Faculty Mentor: Dale NewKirk

Untitled Pot
Rachel Savier
Faculty Mentor: Dale NewKirk

Trapped in the Pumpkin Marsh
John Atkins
Faculty Mentor: Dale NewKirk

Sorry Closed
Evan Thomas
Faculty Mentor: Dale NewKirk

Vega Design
Caleb Holloway
Faculty Mentor: Dale NewKirk

SOUTHEASTERN LOUISIANA UNIVERSITY

UNTITLED LANDSCAPE
MARY CHATELAIN

UNTITLED POT
RACHEL SAVIER

TRAPPED IN THE PUMPKIN MARSH
JOHN ATKINS

SAD CLOSED
EVAN THOMAS

VEGA DESIGN
CALEB HOLLOWAY

UNIVERSITY OF LOUISIANA AT MONROE

Amanda
Ben Bennett
Faculty Mentor: Cliff Tresner

Flora and Fauna of Brazil
Alyssa Guidry Posey
Faculty Mentor: Brian Fassett

Vision Nocturne (Night Vision)
Sara E. Howard
Faculty Mentor: Dr. Joni Noble

Fields of Green
Chelsea McGaha
Faculty Mentor: Cliff Tresner

And So It Ends Within the Mind
Victoria Smith
Faculty Mentor: Cliff Tresner

UNIVERSITY OF LOUISIANA AT LAFAYETTE

Force of Glacial Movement
Evan Koch
Faculty Mentor: Brian Kelly

Untitled Video
Brittney Salsman
Faculty Mentor: Brian Kelly

Untitled Print
William Cummins
Faculty Mentor: Brian Kelly

Spectator
Matthew Keller
Faculty Mentor: Brian Kelly

Front Trigger Hose Nozzle/Pistol Grip Hose Nozzle
Ariel Mazariegos
Faculty Mentor: Aaron McNamee

UNIVERSITY OF LOUISIANA AT MONROE

Amanda
Ben Bennett
Faculty Mentor: Cliff Tresner

Flora and Fauna of Brazil
Alyssa Guidry Posey
Faculty Mentor: Brian Fassett

Vision Nocturne (Night Vision)
Sara E. Howard
Faculty Mentor: Dr. Joni Noble

Fields of Green
Chelsea McGaha
Faculty Mentor: Cliff Tresner

And So It Ends Within the Mind
Victoria Smith
Faculty Mentor: Cliff Tresner

UNIVERSITY OF NEW ORLEANS

Pure
Sarah Mollere
Faculty Mentor: Cheryl Hayes

Reflection
Harriet Townsend Burbeck
Faculty Mentor: Cheryl Hayes

Portal Keeper
Christy Becnel
Faculty Mentor: Aaron McNamee

Orchid II
JoLean Laborde
Faculty Mentor: Aaron McNamee

Front Trigger Hose Nozzle/Pistol Grip Hose Nozzle
Ariel Mazariegos
Faculty Mentor: Aaron McNamee
Summit Reception

SUMMIT RECEPTION

All participants are invited to attend the Summit Reception on Friday from 5:30-7:00 PM at the A. Hays Town building of the University Art Museum. This will provide an opportunity for all attendees of the conference and their guests to meet while viewing the works selected for the 2014 University of Louisiana System Art Exhibition. A. Hays Town is a nationally renowned architect recognized both for his modern designs, as well as, his interpretations of French and Spanish colonial architecture.
Service-Learning Presentations

GRAMBLING STATE UNIVERSITY

Pathways to ACT Mastery: The Implementation Process
Loretta Jaggers
Grambling State University

This presentation is designed to first identify the components of the “Pathways to ACT Mastery Model” based on related research. Second, instructional strategies, activities, and resources that were used during the implementation of the model will be presented. Emphasis will be placed on the activities that demonstrate the relationship between the Pathways to ACT Mastery Model and the College Readiness Standards for English, Math, Reading and Science. Activities will also be presented that focus on the Common Core Standards and ACT’s College and Career Readiness System. These highly interactive activities were outlined in the ACT Prep Instructional Modules that were designed by content-area specialists (English, Math, Reading and Science). These Modules were specifically used during the implementation process and provided opportunities for the students to apply and transfer the content knowledge provided by the content-area specialists. Finally, ACT test prep strategies that were used during the implementation process will also be presented.

Teaching Theory, Research, and Service in the Cemetery: A Service-Learning Project
Francis Staten, Anthropology Class, Social Research Club, Black Empowerment Apprenticeship Program
Grambling State University

This service-learning project is designed to involve students in a cemetery-research preservation project. It commences first in the classroom where students are introduced to anthropological theories and methodological concepts. After the learning process, students take an ethnographic field trip to a historical cemetery where they are instructed to gather data from tombstones of families and individuals that pertains to lessons learned in the classroom, such as social identity and symbols. The research-service component also requires them to record observed environmental problems or preservation needs via notebooks, digital camera, cell phones or other electronic devices. As an outgrowth of this project since 2006, students have adopted a burial site for preservation and beautification; participated in identifying deteriorating monuments, tombstones and markers, and secured temporary markers for the unknown. Finally, they have used the data for research presentations at professional conferences, academic and community service programs.

Students Without Borders: A Service-Learning Program
Reller Jones
Grambling State University

Criminal Justice students at the undergraduate and graduate levels developed a project called “Students Without Borders.” This project was organized by students and faculty as a service-learning activity. On November 12, 2013 Typhoon Haiyan (known in the Philippines as Typhoon Yolanda) went down in history as the deadliest and most destructive weather ever recorded. About 9.8 million people were affected, according to Philippine estimates. Over 10,000 or more were people killed, based on reports from Philippine government officials. Our students and faculty realize that a disaster of that magnitude will ultimately lead to an increase in criminal activity under the Social Disorganization Theory, an approach that posits that crime results when social control among the traditional primary groups, such as the family and the neighborhood, breaks down because of social disarray within the community. The students and faculty felt it necessary that we do our part to help minimize the risk of increasing crime rate. Over 2.5 million people in the Philippines are in need of emergency food and clothing. On November 18, 2013, students and faculty started collecting clothing, donations and non-perishable items to send to the Filipinos. The program was a success because on January 17, 2014 the Philippine Disaster Relief workers came to Grambling and picked up over 1,000 pounds of food, an undetermined amount of clothing, and more than $800.00 in donations.

Straight Talk: A Service-Learning Program
Cassandria H. Peoples
Grambling State University

Students in the Introduction to Social Work Class at the bachelors’ and master’s level in the Lambda Chapter of Phi Alpha Honor Society developed a program called “Straight Talk.” This program was organized as a service-learning activity for students to test their aptitude as well as their attitude toward various subject areas that are of importance to high school age children. The program targets alleviating stress on teens due to bullying, sexting, teen pregnancy, substance abuse, and the hidden dangers of social media. Ruston High School served as a pilot site during the 2012-13 school year. One hundred (100) high school students in the 15-18 age group participated in the program. Social Work students used their training to engage the high school students in group discussions, role play and group counseling activities. The training had an ultimate goal of guiding students to embrace the fact that certain activities can have life-altering and devastating consequences. The Ruston High School students were able to speak openly about challenges they faced.
LOUISIANA TECH UNIVERSITY

The Horse/Human Relationship: How Horses Can Help Youth with a History of Abuse or Neglect
Laura Gentry, Daniel Mayer
Louisiana Tech University

Louisiana Tech University students in ANSC 220 “Introduction to Horsemanship” conducted horse-related activities with abused or neglected youth residing at the Louisiana Methodist Children’s Home, Ruston, Louisiana. These service-learning activities were designed to teach life skills to disadvantaged youth while reinforcing horsemanship concepts learned in class for university students. All activities were conducted at the Outdoor Wilderness Learning Center, Dubach, Louisiana, and were designed to facilitate confidence, communication, and effective team effort. Activities included utilizing horses to help youth understand social hierarchies when working within a communal environment, increasing cooperative and communication skills by guiding university students with a horse through an obstacle course, demonstrating acts of compassion through shared grooming tools used on horses, and participating in games related to the five senses that demonstrate parallels between affinities for horse and human. For university students, working with the youth not only reinforced horsemanship concepts taught in class but also taught them more about themselves. Horses are very honest in their behavior; therefore, they were ideal implements for teaching the youth about their own behavior and social skills via an easy to understand and charismatic methodology.

MCNEESE STATE UNIVERSITY

Integrating Service Learning into the Beginning Band Class
Jan Scott and Huber ‘Mickey’ Smith
McNeese State University, Maplewood Middle School

McNeese State University Department of Performing Arts integrated a service-learning opportunity in partnership with the Maplewood Middle School band program in the fall of 2010. The beginning woodwind class is comprised of sixth-grade students who have no prior instrumental knowledge. The Band Director is responsible for teaching all instruments without the aid of an assistant director. Incorporating service learning into the beginning woodwind class has allowed the McNeese education students an opportunity to provide assistance to the band director with one-on-one lessons, group sessions, and daily classroom setup. This session will discuss the expected and unexpected outcomes of the past three years of service learning.

Service Audit: Learning Going Beyond the Classroom Walls
Hyunju Shin
McNeese State University

The current service-learning project is designed to extend learning in McNeese marketing classes to benefit the local service providers in their pursuit of service excellence. Student teams in the MKTG 383 course, Marketing Innovations, participate in a service audit project in which students evaluate how well a chosen locally-based company is doing on service and use class materials and knowledge to make a presentation on what the firm needs to do to be a strong service provider. The project begins with an initial interview with several of the company’s managers to understand what the company’s goals are and what they think the problems might be. The student teams then create a proposal document in which they enumerate the research objectives, planned approach, time-line, projected benefits to the company, and needed elements for research from the company. After the data collection procedure, each group will create a report on how well the chosen company is doing on service and what the firm needs to do to be a strong service provider using the concepts learned in the course. They will present their findings and suggestions to the managers and the class.

NORTHWESTERN STATE UNIVERSITY

Take-Home Bags for Early Literacy Success
Ramona Wynder, Melissa Caprio-White, Lauren Dearmond
Northwestern State University

Undergraduate Early Childhood and Elementary Education candidates enrolled in Reading Methods at Northwestern State University, Gallaspy College of Education and Human Development, participate each semester in a service-learning project designed to facilitate emergent literacy development among three- and four-year-old children. The project is done in partnership with NSU Child and Family Network and the Natchitoches Area Chamber of Commerce as a part of the Natchitoches School Readiness Project. The goal of the School Readiness Project is to work with childcare centers, children, and families, providing support and resources to increase literacy knowledge and development for school readiness. Reading Methods candidates contribute by designing and creating Family Take-home Literacy Bags to donate to childcare centers involved in the project. The take-home literacy bags contain a children’s literature book, activities for parents to use while reading the book their children and the supplies needed for the activities.
Oliver Gets an X-Ray: A Multi-Facet Service-Learning Tool
Kendall DeLacerda, Kari Cook, Holly Lane
Northwestern State University

Radiologic Imaging is a highly technical vocation with limited hands-on services. At Northwestern State University (NSU), program faculty recognized and promoted a radiologic student’s creative artistic skills as a means to teach local elementary school children about x-rays. Introducing radiology at such an early age will help make future imaging needs less frightening, more successful, and less exposure to the dangers of radiation due to repeated exams. With faculty support in development, production, and corporate sponsorship this small idea grew into a complete coloring book with a full story line titled, “Oliver Gets an X-Ray”. After great success at local schools and community health units, the program explores other areas of opportunity to use the coloring book. Imaging departments and pediatric units have had positive results using NSU’s coloring book as an educational/reward tool for pediatric imaging studies. The program looks forward to sharing this tool’s success with other radiology programs on both state and national levels. Being offered by an academic program, these successful uses of this tool will be recurring at annual events, which will guarantee longevity of “Oliver”. Any profits from the sale of this book will be used to support a scholarship fund for future radiologic students at NSU.

Electrical Co-Op FEMA/State Reimbursement Procedures
Derrick James
Northwestern State University

This proposal aims to teach Electrical Co-Ops how to procure the goods and services they need during a federal declared disaster and how to properly document their expenses for a quick and timely reimbursement. The procedures give a step-by-step guide to submitting invoices, Force Account Labor Summaries, Force Account Equipment Summaries and Rented Equipment Summaries. A step-by-step process for closeout is also included. The proposal also talks about the need for co-ops to document the materials and contracts that they use. Procurement is one of the most important factors in gaining reimbursement under the Robert T. Stafford Act. In the past, co-ops have lost or had the potential to lose millions of dollars because they did not properly procure vendors and materials or properly document their expenses or losses.

A Great Experience
Heather Houston
Northwestern State University

The purpose of this service project was to engage in positive interaction with the community and to select a service project that would enhance the level of communications skills with a specified group of people that could be used in daily interactions within healthcare facilities. During this project I helped kids onto horses, led them through different exercise courses, and learned how to care and groom the horses. Not all people respond the same way to following directions, remaining calm in stressful situations, being in a hospital or clinic or interacting with new people. This is common in people with autism. This service-learning project benefitted me in several ways. It made me more confident when interacting with patients that have special needs and taught me to be more patient with people. Another thing this project did was to make me more appreciative for what I have. Seeing the way the kids responded to the smallest things completely changed my outlook on life. This volunteer experience definitely made an impact on me, and it will be an experience I remember for a lifetime. I hope to inform others of the GREAT benefits of equine therapy and encourage people to volunteer.
When Counting is Inadequate: The Failure of Quantitative Measures to Demonstrate True Impacts of Service-Learning Projects
Jack Atherton
Northwestern State University

Since the degree in Unified Public Service Administration was created, seniors in the capstone course have been encouraged to engage in service-learning projects, bringing together aspects of core curriculum, producing a product available for use, and benefiting the public safety of communities in the state, and serving the population as a whole. Traditional measures of service-learning activities are generally quantitative and do not reflect the merit and benefit of these student endeavors. This project examines through illustrations of current and past student projects, the shortcomings of current measures used to evaluate service-learning participation, and covers qualitative measures of evaluation that can be used to measure service learning.

Volunteering for the Lighthouse Program as a Tutor
Kelsi Copeland
Northwestern State University

For my service-learning project, I volunteered at the Lighthouse Program at the Highland Volunteers of America Center. The Lighthouse is an after-school program for students from kindergarten age to seniors in high school. These children come from different schools to do their homework and participate in fun activities while their parents work. It is a great way for them to actually do their work and study for tests since they may not be able to do these things at home. Because some of these children come from parents that are indifferent, they have a harder time understanding the schoolwork that is asked of them. I volunteered to tutor second-to-fifth grade students who were having a harder time. For the most part, it was just a matter of helping them with their homework and clearing up any confusion they had. It really helped them to have someone who wasn’t a parent help them with their work. After I finished assisting the children request help, we did extracurricular activities such as learning activities, playing kickball, or learning about computers.

Altering the Course: Mental Illness and First Responders
Amy Douthwaite
Northwestern State University

Mental illness is a complex and devastating diagnosis, which requires a fundamental understanding of how people afflicted with a diagnosis respond to the world around them. For those who are tasked with protecting the community, this understanding has a far-reaching effect, beyond the immediate contact. Forming relationships with community partners, such as DCFS and/or behavioral health experts to lay a foundation for dispatchers, law enforcement, and firefighters to learn the basic signs and symptoms of the more common types of mental illness, Alzheimer’s, and Autism will allow first responders to intervene in ways that limit negative outcomes. Dispatchers and first responders are also responsible for initial mobilization after a disaster, whether in their jurisdiction or in support of others. By laying the groundwork for mental illness comprehension on a day-to-day basis, first responders will have the knowledge base to aid those afflicted in a disaster response model. Furthermore, by incorporating this training into the overall emergency-management plan, those charged with protecting the community possess another tool that aids in their mission. While those afflicted with mental illness represent a minority, but continually growing number, it is imperative that their well-being and needs are accounted for at the most basic levels.

SOUTHEASTERN LOUISIANA
Reading on the River-A Community Collaboration to Promote Early Literacy
Debra Jo Hailey, Michelle Fazio-Brunson, Leslie Gruesbeck
Southeastern Louisiana University, Northwestern State University

Presenters will share the success story of the development and growth of Reading on the River, a recurring community event that promotes early literacy and parent education while engaging high school students, college students, and other community members in community service. High school and college students who have participated over the years will share their insights and reflections about the event. Participants will leave with ideas and resources for individualizing, replicating, and extending the ideas presented. Hand-outs will be given that outline steps to be taken, committees needed, marketing strategies, and funding opportunities that will allow participants to replicate the idea in their own communities while taking the individual needs and resources of their community into consideration. A question and answer session will follow.
UNIVERSITY OF LOUISIANA AT LAFAYETTE

Embedded Service Learning: The Benefits of Staying Put
Hector LaSala
University of Louisiana at Lafayette

For several years now, our School of Architecture and Design has adopted as one of its pedagogical missions to not just graduate competent and creative architects but Citizen-Architects. The remarkable tale as to how this has been achieved is the subject of my presentation. Since 2003, our architecture and design students participated in the transformation of the Outreach Center, a non-profit organization that assists the homeless population in our region. The initially-design intent that emerged was twofold: first, to generate an ambitious and comprehensive long-range master plan, and second, and most importantly, to immediately design and fabricate a series of small, modest, inexpensive and strategic elements, which would address urgent needs. Out of such a modest start, over two hundred students participated in designing and building 30+ projects, ranging from outdoor benches and an amphitheater, to the renovation of a metal warehouse into the Recovery Action Center, their chemical dependency clinic, to the renovation of a metal warehouse into the Recovery Action Center, their chemical dependency clinic. From this point forward our efforts yielded results far beyond what we could have imagined. In 2008, due to a visit by US Senator Mary Landrieu to the site, we were able to not only share with her the remarkable works by our students, but also our master plan’s vision of an urban affordable housing development: the first of its kind for our city. Astonishingly, the $16 million, student-designed project is now built: a 98-unit, mixed-use project, two city blocks from our downtown’s main street.

Self Efficacy and Service Learning: Students and the Disposition for Taking Action
Patricia Lanier, Lise Anne Slatten
University of Louisiana at Lafayette

The presentation examines data collected from graduate and undergraduate students using pre- and post-tests to assess the student’s confidence in making a significant contribution to the community through service.

UNIVERSITY OF LOUISIANA AT MONROE

Transferring Teaching Strategies from the Classroom to Service-Learning Projects
Kimberly S. Whorton
University of Louisiana at Monroe

Service learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich learning experiences, teach civic responsibility and strengthen communities. What better course than Community Dental Health to create a case study for this concept? Dental hygiene students were taught how to assess, plan, implement, and evaluate community programs. The students were taught these concepts using a variety of different teaching strategies in class. During the spring semester, the students must complete a practicum in which they assess, plan, implement and evaluate a community site of their choice. Two objectives were to for the students to learn practical application of their studies while becoming active in providing community service. This process helps build character and teaches responsibility to the community. To evaluate which teaching strategies were used, students were asked to complete a questionnaire, a mid-term assessment report, and a final assessment report concerning which teaching strategies chosen. The final assessment report required subjective information and reflective responses concerning what the students felt were effective. The reports were then assessed for particular themes regarding which teaching strategies were used.
Service-Learning Presentations

**TEACH Project Students “Broaden Horizons” Through STEM Investigations**  
Tiffany Jackson, Montrell Marshall, Mark Parrish  
University of Louisiana at Monroe, First Baptist Church of West Monroe, Carroll High School

The purpose of this interactive session will be to discuss the project’s collaborative structure that produced reciprocal learning for the university’s students and its community partners. Providing meaningful service is a key standard for service-learning projects and one of the successes of this collaboration is that it identified and met an authentic need in the community. Additionally, the students’ involvement in real-world applications of the theory, best practices, and strategies presented in course work provided opportunities for purposeful reflective practice and authentic self-assessment. The presenters will present different perspectives on the planning, implementation and outcomes of the project and will discuss the critical role of data collection and analysis to assess the effectiveness of the partnerships for all stakeholders.

**Girl Scouts “Power Up” with University of Louisiana at Monroe’s TEACH Project Partnership**  
Tiffany Jackson, Katherine Stagg, Linda Trimble  
University of Louisiana at Monroe, Ouachita Parish Schools, Girl Scouts & Louisiana STEM

The purpose of this session will be to discuss the outcomes, benefits and lessons learned from a collaborative service-learning project with the local Girl Scout Council and the TEACH Project interns. This community partnership grew from a shared goal to engage 3rd through 6th grade girls in STEM-related activities and conversations. Based on current research findings, women hold less than 25 percent of STEM jobs. Therefore, a secondary goal of the project was to educate the girls on the STEM career choice available to them. The one-week STEM camp utilized a Girl Scout curriculum focused on three areas of science and technology including energy conservation, biology, and physical science. In addition, a fourth session covered technology and math. ULM’s new alternative certification teacher candidates had the opportunity to watch master teachers model pedagogical strategies and behavior management techniques for the first two days, co-taught on the third day and solo taught on the last day of instruction. Candidates were observed and evaluated by university supervisors who provided commendation and recommendations for improvement. This valuable field experience was an invaluable component of the introductory course rotation.

**Life Events, Transitions, and Turning Points**  
Pamela Saulsberry, Eric Hendrix, Tara Williamson  
University of Louisiana at Monroe

Social Work students in the Human Behavior and the Social Environment I course conducted a service-learning project that required them to gather information from seniors/elders in the community on life events, transitions, and turning points in their lives. This service-learning project offered the opportunity for the seniors/elders to reflect on the events of their lives while at the same time, assisting in the education of college students.

**UNIVERSITY OF NEW ORLEANS**  
**Students Producing Documentaries for Non-Profit Organizations**  
Laszlo Fulop  
University of New Orleans

In my Documentary Production class, students work with a cultural non-profit organization, NOLAVie.com, which provides us with contacts from the community. These include Rebuilding Hope in New Orleans, Institute of Women and Ethnic Studies, Stay Local, Historic New Orleans Collection, etc. Students produce five-minute documentaries that are streamed on NOLAVie.com and on the organizations’ websites. By working with outside organizations, the students not only hone their production (shooting and editing) skills, but also gain valuable producing experience. The pressure to deliver quality content has had a tangible positive impact on student work.

**Library Needs of Undergraduate Students Living on Campus**  
Estoban David Sotomayer  
University of New Orleans

During the Fall 2013 semester, four UNO graduate students enrolled in an advanced marketing class, designed and carried out an extensive user survey intended to provide the UNO Library administration with feedback regarding the most important needs for students living in residence halls. The study succeeded in demonstrating which areas of library service met or exceeded the needs of students and which ones did not meet such needs. This presentation will detail the parameters of the study and focus upon what residential students most hope to find when using the library—both when studying onsite and when accessing online databases from their residence hall rooms.
Bio-Diversity: Calculating Energy Savings for Greenlight New Orleans

Larry Dew
University of New Orleans

I teach two large sections of Biodiversity, both primarily aimed at freshmen. One is for Biology majors (BIOS 1073), and one is for non-majors (BIOS 1063). Each includes segments on climate change, sea-level rise, and coastal erosion. In coastal Louisiana, I think of these topics as particularly relevant for service learning, so as part of their class requirements, I give my students the opportunity to volunteer for class credit on local projects related to these issues. (Many of the students who have volunteered for these projects have gone on to join the Biology Club, a service club for which I serve as the faculty adviser. The club has conducted environmental education on campus and elsewhere and does further volunteering as well.) Many of these projects have involved environmental restoration, such as planting marsh grasses. Others have helped with environmental remediation, and improving energy efficiency, such as with Greenlight New Orleans, an organization that installs free energy-efficient light bulbs and backyard vegetable gardens in New Orleans residences. About two dozen students in the fall semester volunteered for this organization. For academic work, I direct students to an online carbon footprint calculator to consider how much of a difference they can make as individuals, working together with their families and communities. The final lecture of these classes includes these topics in a question/answer session and class discussion.

UNIVERSITY OF TENNESSEE-MARTIN

Online Course Delivery and Service Learning: Best Practices

Terry Silver
University of Tennessee-Martin

Service learning is a powerful instructional tool to promote student and civic engagement. It can promote important benefits for students (enhance civic engagement and/or learning), the community partner (useful products), the instructor (hands-on learning of academic content), and the university itself (positive community relations). The problem is service-learning risks being left behind as instructors increasingly transition to online learning platforms. Anecdotal observations of colleagues suggest that some abandon their service-learning efforts when transferring to teaching online because they view the online platform as an obstacle to service learning. In this session, we will explore online course delivery and service-learning issues and successes. We will delve into technological, pedagogical, and content knowledge influences on best practices for those wanting to integrate service learning into online courses. Identification of possible issues with the intersection of these and how those issues can be resolved according to instructors who are successfully integrating service learning in online course formats will be a desired outcome of this session. An additional outcome is clarification of best practices for online course delivery and service learning.
GRAMBLING STATE UNIVERSITY

A Traffic Light Control System Design
Presenters: Monroe Willis, Deshon Swafford, Iree Jackson
Faculty Mentor: Dr. Shueh-Ji Lee

Traffic light control systems need to be reliable, safe and efficient. The objective of this project is to design such a system by using analog and digital electric/electronic components and devices. The developed system has two different control modes that are adapted to an electronic detector. The timing parameters for both modes can be adjusted to fit any specific intersection needs. The National Instruments Circuit Design Suite 12.0 was used to simulate, analyze, and troubleshoot this system. A prototype was constructed on the NI Elvis II platform to demonstrate its performance. This system can be modified and expanded easily.

Spark Plasma Heat Treated ZrB₂-SiC and HfB₂-SiC Composites for Ultra High Temperature Aerospace Applications
Presenter: Marquavious T. Webb
Faculty Mentor: Dr. Naidu Seetala

UHTC ceramics are useful for propulsion and thermal protection systems. ZrB₂ and HfB₂ with SiC were prepared using spark plasma heat treatment. We used PALS to study the nanoporosity, SEM for particle size distribution, and microhardness tester for Vickers hardness. HfB₂ has larger vacancy clusters and nanopores with lesser concentrations compared to ZrB₂ and SiC. The 10wt%SiC composite has higher hardness compared to 20wt%SiC in both ZrB₂-SiC and HfB₂-SiC composites. The coarse-composites showed higher open-porosity compared to nano-composites and segregations of SiC is reduced in nano case. By reducing the SPS treatment temperature, the grain growth is further reduced.

International Monetary Fund: The Developing Country’s Perspective
Presenter: Katherine Auil
Faculty Mentor: Dr. John Nwoha

This treatise provided a brief history/overview of the International Monetary Fund. It highlighted sources of funding and “lender” countries, criteria for assistance as a low-income “borrower” country, and contract terms of loans dispersed to the low-income, developing countries. It further discussed the pros and cons on the receiving end of these contractual loan obligations, and analyzed the overall impact of borrowing from the debtor’s perspective. Lastly, this paper assessed and critiqued the IMF’s assistance to low-income countries in the form of a literary review. The overall effect on borrowing countries and findings were further elaborated in the conclusion.

Is It Time for a Female President
Presenter: Kometa W. Mufor
Faculty Mentor: Dr. Steve A. Favors

Is America ready to elect a woman president? This is a question that is being widely debated across the country. A Newsweek poll conducted in December 2006 found that 86% of American citizens said they will vote for a qualified woman as president. Based on this poll and other media reports, students at Grambling State University were polled to examine the possibility of a woman becoming president of the United State of America within the next fifteen years. This paper will provide information about how Grambling students feel about this subject.

LOUISIANA TECH UNIVERSITY

Musical Analysis and Performance of Tango for Low Brass Sextet
Presenter: Joshua Mattison

This presentation is to analyze the structure and composition of Tango written by Joshua Mattison in the fall of 2013. Analysis will include the harmonic vocabulary and structure, as well as the rhythmic and melodic material of the composition. An electronic performance of the piece will be presented as the end of the presentation.

Huckleberry Trails Entry Pavilion
Presenters: Aaliyah Muhammad, Lindsy Trisler, Bailey Craighead

Last spring, the Louisiana Tech Design/Build studio designed and built a pedestrian entry for a local park. The project drew its formal inspiration from the Voronoi geometry found in leaf venation patterns and the dappled tree canopy found on the project site. To create and manipulate these patterns the designers explored how parametric design tools can improve an architect’s ability to create appropriate design solutions without compromising constructability. With the design and construction processes serving as their experiment, it was found that even modest incorporation of parametric design tools can allow greater control of complex geometry creating more desirable outcomes.
Biofunctional Clay Nanotube Composites
Presenter: Joshua Tully

Halloysite clay nanotubes have been introduced to form functional composites with a variety of biomedical applications. This research enhances the catalytic activity of enzymes by encasing them within the nanoscale tube. The loading efficiency and biocatalytic activity of urease and glucose oxidase were measured by UV-Vis spectrophotometry, thermogravimetric analysis, and bioactivity assays. It was possible to immobilize enzymes on the external surface or in the inner lumen of halloysite. 50% of these proteins remain immobilized in the tubes lumens while another 50% was slowly released. The immobilized enzymes retain their activity for an extended period of time and at elevated temperatures.

Nitrate and Type 1 Diabetes in Alligators
Presenter: Stephen Green
Faculty Mentor: Thea Edwards

Type 1 diabetes is a pancreatic disease leading to insufficient insulin production. Insulin facilitates uptake of glucose from the blood into cells. If inadequate amounts of insulin are produced, blood sugar levels rise, which damages organs.

Type 1 diabetes has been linked epidemiologically to nitrate in drinking water. In our experiment, we tested the effects of different concentrations of nitrate on the development of beta-cells in alligator pancreas. Hatchling alligators were exposed to 0, 10, or 100 ppm nitrate (NO₃-N) added to the water in which they lived. Pancreas samples were fixed, sectioned and stained to mark nKx6.1, a protein marker for early beta-cell differentiation. Prevalence of nKx6.1-stained beta-cells was digitally quantified using Image J, and compared among alligators from different treatments.

Influence of Forest Edge on the Occurrence and Abundance of Small Mammals
Presenter: Lindsey Arabie
Faculty Mentor: Dr. Justin Hoffman

In forested habitats, shrubs and grasses that exist under overhead power lines are not regularly maintained, while those above oil and natural gas pipelines are regularly mowed. This creates differences in the forest edge found at each site. Our objectives are to measure small mammal abundance and occurrence in relation to the forest edge for areas containing an underground pipeline and overhead power line. We found that both abundance and richness was greater in forest habitats that bordered overhead power lines. There was no difference in the distance that small mammals were captured from the forest edge in either habitat.

Initiation of a Soil Survey of Southwest Louisiana and its Potential Forensic Applications
Presenter: Justin Higginbotham, Drew Hood
Faculty Mentor: Richard Donahoe

A survey of different soil types in Calcasieu Parish will be performed and several properties, chemical and physical, will be examined in order to establish the significant differences between each soil type. The properties that vary significantly between samples will then be examined for potential applications in forensic analysis of a soil sample and applications that prove to be most practical and efficient will be determined. We were able to ascertain the difference between the soils by using conventional methods. There were a few soil types that could be distinguished just based off of two methods.

The Politics of Translation: A Literary Experiment in Two Languages
Presenter: Maria-Josee Mendez
Faculty Mentor: Dr. Wendy Whelan-Stewart

The politics of translation is elusive and volatile, both in the process of decoding and reconstructing language and in the reception of translation itself. The writer must contend not only with the sociocultural and personal implications consequent to oscillating between Spanish and English; she must also demand to be listened to and understood—regardless of how either language shapes her expressions—as a woman. In translating the works of Claudia Lars, and analyzing the inadequacy of language in representing the voice of any person, I intend to contemplate my own personal identity as a nonnative Hispanic writer.
Undergraduate Research Oral Presentation Abstracts

NICHOLLS STATE UNIVERSITY

Three Austrian Muses
Presenter: Taylor Leblanc
Faculty Mentor: Dr. Deborah Cibelli

This paper explores how three Austrian Expressionism artists Gustav Klimt, Egon Schiele and Oskar Kokoschka used women as muses. Klimt’s use of women personified his oeuvre, while Egon Schiele’s oeuvre was inspired by both himself in self-portraits and women that were close to him. Oskar Kokoschka’s oeuvre was inspired in similar ways as Schiele’s though each artist varies distinctively in style. Moreover, the way each artist and his work uses women as muses reflects the anxieties and contradictions of late 19th century European society. As such, we can understand why their work resonated with and continues to resonate with audiences.

“Allons!” A Universal Call to Freedom in Walt Whitman’s “Song of the Open Road”
Presenter: Brandon Naquin
Faculty Mentor: Dr. Todd Kennedy

While the majority of Walt Whitman’s prosody celebrates the self, “Song of the Open Road” combines a conceptual appreciation of autonomy with a dedication to functionality. In drafting “Song”, Whitman was no longer interested in merely discussing autonomy; he instead delivers a method of attaining autonomy. Whitman describes “the open road” for eight sections of the poem in a vivid, ambiguous style reminiscent of his other verse, then abandons his philosophical meandering for the simplicity of “Allons!”—a French word meaning “Let’s go!”—creating a strikingly terse parallel for Whitman’s delayed poetics.

Synthesis of Azide Ligands and Conjugation to G5 PAMAM Dendrimers
Presenter: Lauren Luce
Faculty Mentor: Dr. Stassi DeMaggio

Poly(amideamine) (PAMAM) dendrimers can be used as a platform for drug delivery systems when conjugated to small, functional molecules. However, polydispersity in the conjugated products impedes their translation to the clinic. Due to the large polydispersity of PAMAM dendrimers, a method of isolating monodisperse populations was developed by the conjugation of the dendrimer to polar ligands followed by separation of the monodisperse populations using prep HPLC. The azide ligand, 3-(4-(2-azidoethoxy)phenyl) propanoic acid, was synthesized using a three-step method followed by the conjugation of the purified G5 PAMAM dendrimers through EDC/NHS coupling. High Performance Liquid Chromatography (HPLC) showed distinct resolved populations.

Incidence of Clostridium difficile Infections Related to the Administration of Broad-Spectrum Antibiotics and Proton Pump Inhibitors
Presenter: Jacob Foret
Faculty Mentor: Jeanne Hamner

The study was a retrospective chart review of discharged patients with a positive C. difficile culture during hospital admission. Data extracted was information related to the diagnosis of C. difficile. The study’s primary goal was to specify a single broad-spectrum antibiotic (BSA), a single proton pump inhibitor (PPI), or combination of both that occur more frequently in C. difficile diagnosed patients. Results include a significant correlation between the administration of a BSA and a PPI with a patient contracting C. difficile. Piperacillin/tazobactam accounted for the majority BSA administration in singularity, with other BSAs, and with PPIs.

NORTHWESTERN STATE UNIVERSITY

“The Friend and Helper and Advocate of Every Good Cause”: Victorian Print Culture and the Dissemination of the New Woman Movement
Presenter: Brandi Vincent
Faculty Mentor: Holly Stave, PhD

Recent non-violent demonstrations including Egypt’s Youth Movement and America’s Occupy Movement validate the media’s role in collective action efforts. However, media was used to mobilize long before the proliferation of the internet. Though largely ignored in scholarship, the New Woman Movement was manufactured and disseminated via the print media and fiction of the Victorian era. This project explores depictions of female cross-dressing from the 1890s to demonstrate contrasting representations of New Women, the media’s role in asserting the legitimacy of the movement, and proves that utilizing both press and fiction publications can provide the most holistic assessment of historical phenomena.

Neurological Effects of Caffeine on Individuals with Bipolar Disorder
Presenter: Destiny LaRue
Faculty Mentor: Curt Phifer, PhD

Neurological and psychological literature were searched for potential connections between the chemical effects of caffeine on neural function and neurological abnormalities...
associated with bipolar disorder. The analysis revealed several brain regions where caffeine actions and bipolar disorder abnormalities align. In particular, pathways involving the prefrontal and cingulate cortex, basal ganglia, thalamus, and hippocampus appear to be connected to both caffeine and bipolar correlates. Abnormalities in the pathways through the basal ganglia are thought to be a leading determinant of abnormal behavior in bipolar disorder. These findings, though correlational, give direction for future research on bipolar disorder mechanisms.

From Dolly to Loli?: Female Empowerment and the Lolita Fashion Subculture
Presenter: Randi Ditta
Faculty Mentor: Lisa Wolfe, PhD

This presentation discusses the relationship between the Japanese Lolita fashion subculture and the role of females in both Japanese and American society. Research from journals, dissertations/theses, other publications, and original surveys and interviews into the cultural, literary, and ideological origins of the style are used to demonstrate that Lolita fashion is both a youth movement and a girl power movement, opposing ideas are addressed, and the stigma attached to the name “Lolita” is challenged. Implications include the potential for future activism among Lolitas and the growth of the subculture.

A Theory of Inter-Generational Reparations in Nozick’s Historical Conception of Property Rights
Presenter: Jules Guidry
Faculty Mentor: Keith Dromm, PhD

In “Anarchy, State, and Utopia”, Robert Nozick argues for a conception of justice rooted in property rights, which are based on historical facts about the choices made by property owners, as opposed to a patterned distribution. While Nozick acknowledges that no world could be wholly just, and admits there is need for a way to rectify injustice, he gives almost no explanation as to how such a principle would work. Realizing a principle of rectification is important to the viability of his ideas, this project endeavors to present an acceptable principle which covers both immediate reparations and reparations between generations.

ORTHOC-ALKOXYLATION OF DIARYL KETOXIME ETHERS
Presenter: Elizabeth Kimball
Faculty Mentor: Dr. Debra Dolliver

This project describes the optimization of conditions for the palladium-catalyzed ortho-methoxylation reaction of diaryl ketoxime ethers. Reactions have been run under different conditions (temperature, concentration, time, type of oxidant, amount of oxidant, amount of catalyst, and solvent) to optimize
The reaction gives the (Z)-mono-, (E)-mono-, and di-methoxylated products, and the amounts of these products can be modified depending on conditions. A palladacycle of the oxime ether of benzophenone has been synthesized to help investigate the reaction mechanism. Yields with different substituents on the ring and with different alcohols will be discussed.

Beliefs in the Mickey Shunick Case: The Impact of Familiarity, Involvement and Individual Differences
Presenter: Emily Broussard, Ariel Guillory, Samantha Marks, Richard Nelson
Faculty Mentor: Amy Brown

In the early hours of May 19, 2012, a 21-year-old college student named Micheala “Mickey” Shunick went missing while riding her bike in her hometown of Lafayette, Louisiana. As family, friends, and community members became aware of her disappearance, serious efforts were made to locate her. Eventually thousands of individuals throughout the surrounding area and beyond rallied together in the search effort. During the several months of searching for Mickey, many opinions were shared regarding people’s fears, accusations, and concerns about the case. While some individuals—who were otherwise strangers to the family—helped to search for Mickey, others feared for themselves and their loved ones or blamed Mickey for riding her bike alone at night. The current study serves as a retrospective look at the predictors for the different attitudes and reactions that people had about the case. In this study, we found that people who were more familiar with Mickey tended to blame her and victims in general less. People more involved with the case also tended to use less victim blame. In addition, people more involved with the case tended to be more fearful during the time of the search for Mickey and presently. This research indicates that being involved in the case of a high-profile victim may reduce victim blame, but may also result in the negative consequence of increased fear.

No Glove, No Love: Predicting Condom Use Behaviors from Implicit and Explicit Attitudes and Psychological Flexibility
Presenter: Jessica Auzenne
Faculty Mentor: Emily K. Sandoz, PhD

College students engage in a variety of sexual behaviors with more partners than in the past, often without protection. Condoms are an easily accessible means of sexual protection, but they are often used inconsistently by college students (Murray & Miller, 2000). Although students are generally aware of the consequences of unprotected sex, this awareness does not strongly influence condom use (Prince & Bernard, 1998). Research has shown that attitudes about sex may be more influential on sexual behavior than knowledge about high-risk behavior. Negative attitudes about condoms have been linked to the avoidance of condom use, but there have been inconclusive results regarding their ability to predict sexual behavior (Gabler et al., 2004). It may be that attitudes have differential effects on behavior, depending on how students cope with uncomfortable experiences. For example, no prior studies have examined students’ flexibility with these attitudes. This study will measure how students’ psychological flexibility interacts with attitudes regarding condom use to determine whether or not these variables can be used to predict students’ condom use behavior in the following two weeks.

Examining Statistical and Practical Differences Among Life Expectancy Tables: Implications for Vocational Rehabilitation
Presenter: Morgan Soileau
Faculty Mentors: Dr. Theodore Scott Smith, Dr. Wesley Austin

Life expectancy tables represent a valuable tool for the vocational counselor, enabling a counselor to plan for assistive living needs, predict caregiver longevity, and, furthermore, offer a framework to compare and contrast both worklife and life expectancy. In the present study, projected life expectancies
were examined in the context of their respective life expectancy tables, with a goal to determine not only whether differences exist between selected tables (statistical differences), but also evaluate whether the inconsistencies resulted in variances related to projected lost wages across a lifespan (practical significance). While there was not a statistical difference across tables, using Analysis of Variance to compare means, there was a statistical difference when comparing individual ages, utilizing paired-samples t-tests. This suggests that while differences do not fluctuate across tables in globo, differences do exist for individual ages. Moreover, differences across tables vary significantly according to age, with dissimilarities varying more than a few months across tables for older individuals and several years for younger individuals. Differences are further examined in the context of three scenarios, depicting projected financial differences among the examined life expectancy tables. Depending on both wages and length of time that a worker with a disability may be restricted from working, various tables may be biased towards prospectively under or over-projecting specified wages. Further practical applications of the present research are further discussed.

UNIVERSITY OF LOUISIANA AT MONROE

Social Media and Racism: A State-by-State Analysis of Post 2012 Presidential Election Tweets
Presenter: Cory Williams
Faculty Mentor: Killian Garvey

In this study we examined state-by-state demographic differences in belief in God, political orientation, and IQ as predictors of racist tone in twitter messages right after Barack Obama was reelected president in November of 2012. While all measures were strongly correlated with racist tone, a multiple regression analysis found that only self-described higher belief in God explained the variance. While this finding might seem counterintuitive, we interpreted the findings as an indication of ingroup/outgroup orientation rather than a reflection of any specific religious doctrine.

Variations in Raindrop Size Distributions Associated with Diverse Storm Types and Structures
Presenter: Anthony Viramontez
Faculty Mentor: Larry J. Hopper, Jr.

Climatological radar algorithms that diagnose rain rates from radar reflectivity are derived from raindrop size distributions (DSDs) that exhibit large interstorm variations. These algorithms may inaccurately estimate rainfall accumulations if their underlying DSDs vary significantly from the climatology. This study quantifies microphysical variations in DSDs associated with different frontal and non-frontal storm types and structures (e.g., convective, deep convective stratiform, and non-convective stratiform) using a laser-optical Parsivel–2 disdrometer. Representative case studies and preliminary composite analyses of DSDs from September 2013–February 2014 indicate that cold frontal storms and predominantly convective structures produce the greatest concentrations of large diameter drops.

Stinking Lizaveta: the Humble Saint of The Brothers Karamazov
Presenter: Jillian Allbritton
Faculty Mentor: Dr. Jana Giles

This paper argues that the character from The Brothers Karamazov, Stinking Lizaveta, should be reexamined in the light of the religious tradition of the holy fool. As the mother of the murderous disturbed brother, Smerdyakov, she is usually considered feral or mentally disabled. However, a comparison to the saintly protagonist, Alyosha, historical feral children, and Russian iconography reveals her to be a devout and self-aware mendicant. Because she is a woman, the community is willing to mislabel her rather than regard her as devout, yet in accepting her role with grace, Lizaveta becomes the humble saint of The Brothers Karamazov.

UNIVERSITY OF NEW ORLEANS

Surface Modification of TiO2 Nanoparticles To Enhance Biocompatibility and Selectivity for Use in Photodynamic Therapy
Presenters: Alexander S. Lyons, Jr., Richard M. Prevost, Scott W. Gordon, Matthew A. Tarr

TiO₂ nanoparticles display excellent UV photoreactivity but are inactive in the visible due to a large band gap. Utilizing hydrothermal treatment of TiO₂, uniform (~20 nm diameter) TiO₂ nanoparticles were produced. Nanoparticle surfaces were modified with various organosilanes to produce water-stable colloids at biological pH while maintaining photoreactivity. Surface modifiers included a triamine and a thiol. Surface modification provided for both colloidal stability and functionalization of the nanoparticles, which allows for attachment of an antibody for selective biological targeting and eventual use in photodynamic cancer therapies. Improved colloidal stability and photocatalytic activity were observed for modified particles.
The Common Core Curriculum and Proposed Adaptations for Students with Mild to Moderate Disabilities
Presenter: Avarelle C. Williams

The Common Core Curriculum was implemented in schools across America, in efforts to prepare students for global competency and competitiveness through rigorous instruction, expectations and assessment. This research focuses on evidence-based practices in the form of strategies, accommodations and supports available to students with mild to moderate disabilities that teachers can utilize within their classrooms to assist all students in achieving the high expectations set forth by the Common Core standards. Universal Design for Learning (UDL) is a best practice that focuses on tailoring the curriculum to meet the individual learning preferences of students without altering the content.

Is a Picture Worth a Thousand Words? Testing the Effectiveness of Sports Ads
Presenters: Glenna Richmiller, Charles McMaster

UNO athletics recognized low attendance at basketball games. We conducted an experiment to test the effectiveness of different posters for those games. We utilized: an ad containing game information without a picture, an ad containing game information and a picture of a player, and an ad containing game information and a picture of fans. Drawing on herding theory (Cialdini, 2008), we predicted the advertisement with fans to be most effective. We surveyed 90 UNO students. There was no distinct preference for any advertisement. However, there was significant preference for text-only promotions among long commuters and visual promotions among short commuters.

Rougelot & Sons
Presenter: Sidney Rougelot

Non-history majors often produce research projects that help to resurrect seemingly lost history, especially when conducted by students whose family history is featured. This presentation features a mobile historical app created to preserve the history of Rougelot’s Department Store located on the corner of Esplanade and Decatur from 1891 to 1948. It was compiled from New Orleans directories, articles from said period, and personal family oral tradition and family tree. Upon collection of information, a comprehensive story was constructed about the store and life in the French Quarter/Marigny at the end of the 19th century and into the 20th.
GRAMBLING STATE UNIVERSITY

Cost and Time-Efficient Internet Car Sales
Presenters: Dairen Lambert, Shatay Holmes, Kerry Ann Warrington
Faculty Mentor: Dr. Y. B. Reddy

The objective of the project is to organize each individual’s desktop with minimal cost, time and effort to be more productive, cost efficient, timely, and competitive. The website is designed to make it easier for the employees by having one location where they are able to check their schedule to review the latest sales report. The website is created in java script and HTML. The Eclipse was used to create the database and to start the development of the site.

The Diagnosis-Remediation Connection: A Research Project for Assessing and Remediating Reading Skills
Presenters: Amber Lauderdale, Kaleisha Lewis, Kellie Love
Faculty Mentor: Dr. Loretta Jaggers

This field-based research project serves as the culminating signature assessment for ED 431 (Diagnosis and Correction of Reading Difficulties). This project provides an opportunity for the candidates to apply and transfer the information presented during the semester to the diagnosis-remediation process in the actual classroom setting. First, candidates are assigned a student by the cooperating teacher at the on-site partnership school. Second, each candidate administers formal and informal measures to gather data. Third, candidates analyze and interpret the results of the data collection process to identify appropriate strategies and resources for remediation.

The ClassMate App
Presenters: Abarnit Shrestha, George Spears
Faculty Mentor: Dr. Y. B. Reddy

This project helps to cut down the time spent on planning and executing group project meetings, and late night congregations to exchange or relay information and class updates to all group members. This is android-based app called ClassMate App. The app designed to perform functions such as enabling users to update class activities, take class notes that can be shared with other group members and access notes taken by other classmates. The app also enables users to view/edit the list of other students who are enrolled in the class.

Scrawler: A Hybrid of Snake and Scrabble
Presenters: Christopher Small, Abanit Shrestha, Olowofela Olotan, Germyma St. Croix
Faculty Mentor: Dr. Jaruwan Mesit

In this project, we present the game called Scrawler 3D which enables us to learn the programming language and how the codes can be used to create and manipulate visual information. Scrawler 3D will move the snake using up, down, left and right arrow keys, and then eating the randomly placed letters to make a word. Once the user makes a valid word, the score is added and the letters will be placed back on the board in random locations. We eventually plan to apply textures on the object and make the snake look more realistic.

A Home Security System Design
Presenters: Zhuocheng Jiang, Tyrric Nance
Faculty Mentor: Dr. Shueh-Ji Lee

Home security systems have always been in high demand for safety reasons. The objective of this project is to design a cohesive system with four different electronic detecting devices that are networked logically to process the detected signals. This system has three modes: Home, Off, and Away. The National Instruments Circuit Design Suite 12.0 was used to simulate, analyze, and troubleshoot this system. A prototype of the designed circuit was constructed on a breadboard and its performance was demonstrated experimentally. This system can be easily modified to include more input sensors and output alarm devices for other security applications.

A Racial Comparison of Longevity Among Veterans in Rural Cemeteries in Northern Louisiana
Presenters: Annette Johnson, Jorden Wynn, Latrabia Jackson, Khadejah Holden
Faculty Mentor: Dr. Francis Staten

Using tombstones monuments and grave markers, this exploratory study will compare the longevity among veterans born in the late 1800s who are buried in select black and white cemeteries in rural communities in Northern Louisiana. The major research question posed: do racial differences exist in living beyond or within the predicted life expectancy for the period of focus?
LOUISIANA TECH UNIVERSITY

Haiti: Out of the Rubble
Presenter: Mason Nabors

The residents of Haiti require unique and sustainable solutions to provide stable housing following the 2010 earthquake. A system can be deployed that would enable the population to both clean up and construct safe and permanent homes from the rubble. Gabion wall systems have long been used for retaining, however, the conditions present in Haiti lend themselves to using the rubble to construct structural wall systems. This approach mobilizes the population and uses local resources. Haitians can earn wages from crushing and sorting rubble, and the gabion wall system requires minimal construction knowledge to assemble.

The Efficacy and Effectiveness of a Mobile Data Collection System for Progress Monitoring with Young Children with Disabilities
Presenters: Sabra Norris, Logan Morrison

The subjects showed a noticeable increase in their mastery of the different trials over a three-month period. This could be due to the ease of inputting results into the catalyst program and being able to focus on the areas in which mastery had not yet been achieved. The Catalyst program provided ease in inputting results from trials and then deciphering these results so the instructors could pay more attention to the areas that needed improvement.

MCNEESE STATE UNIVERSITY

Evil and the God of Love
Presenter: Cassie Cubbison
Faculty Mentors: Alison Blevins, Dr. Todd Furman

This presentation examines "The Problem of Evil". This presentation examines the traditional Christian-Orthodoxy’s solution to "The Problem of Evil" and then an alternative. John Hick, a Christian theologian, does not feel that the Christian-Orthodoxy solution is the set retort to "The Problem of Evil”. Furthermore, this presentation will explore John Hick’s solution in his book, Evil and the God of Love, versus the Christian-Orthodoxy solution as well as my personal inference of the two.

Paid Employment Characteristics of BSN Students During the School Term: A Descriptive Study
Presenter: Lori Tarver
Faculty Mentors: Jennifer Barrow, Dr. Ann Warner

Significant numbers of college students in the United States participate in paid employment during the school year; however, data specifically describing the work patterns of undergraduate Bachelor degree nursing students are lacking. The purpose of this study is to describe the characteristics of BSN paid student employment during the school term. A 14-item online survey including demographic data and questions relating to employment status was completed by a convenience sample of BSN students from McNeese State University who have been accepted for clinical rotations.

The Rise of the Monarchical Presidency
Presenter: Kirsten Smith
Faculty Mentor: Dr. Thomas Laehn

Numerous scholars have observed that American presidents are increasingly using administrative devices such as executive orders and signing statements to circumvent Congress and to make policy unilaterally. In this presentation, we examine the causes underlying the growth of presidential government in the twentieth century. We predict that a president’s use of administrative devices to make policy unilaterally increases during times of crisis, during periods of divided government, as a result of natural disasters, during reconstructive presidencies, and in the wake of landslide elections.

Composition and Mosquitocidal Activity of Pycnanthemum tenuifolium
Presenter: Joshua Cooper
Faculty Mentors: Dr. Omar Christian, Dr. William Dees

The Lamiaceae (mint) family of plants is well recognized for its volatile constituents that display a range of insecticidal activities. Slender Mountain Mint, Pycnanthemum tenuifolium, has been used to make teas and a natural skin rub to repel pestiferous insects. In a preliminary Petri dish assay, mosquitoes exposed to cut buds exhibited 100% mortality within 24 hours. We obtained the essential oil of P. tenuifolium buds by hydrodistillation using a Clevenger apparatus. One of the components, pulegone, was identified by GC-MS and NMR. This study describes the evaluation of the essential oil of P. tenuifolium for mosquitocidal activity.
Political Communication in the Media
Presenter: Katherine McCartney
Faculty Mentor: Dr. Tracy Standley

During a heated political campaign, news coverage of candidates is often attacked. The purpose of this research is to analyze newspaper articles and determine differences between the types of articles written during two different time periods of the 2012 presidential campaign and which types of articles were written about each presidential candidate. To do this, a content analysis was conducted from news articles published in The Washington Post, USA Today, and The New York Times from two different weeks during the 2012 presidential campaign.

A Study of Vibration Characteristics of Planetary Gear Trains
Presenter: Philip Hedlesky, Ethan Leger
Faculty Mentor: Dr. Zhuang Li

Planetary gear trains are commonly used in industry due to their high torque capability and compact size. However, the geometry and kinematics of planetary gears are very complicated. The vibration analysis of planetary gearboxes are not fully developed. In this research, the signature frequencies of faulted sun, planet, and ring gears are derived for the fault diagnosis purpose. Simulations in the time domain were conducted for three models to illustrate the impacts caused by faulted gears. Experiments were carried out on a Drivetrain Diagnostics Simulator. The signal analyses in both the time and frequency domains validate the theoretical models.

NICHOLLS STATE UNIVERSITY
Effects of Music on Visual Memory
Presenter: Chante Singleton
Faculty Mentor: Dr. Denis Soignier

The quality of music students listen to has profound effects on academic performance: music genre means better concentration. To investigate effects of music on visual memory, thirty subjects were randomly divided into four groups of ten. Three groups were assigned a music genre and one white noise to listen to for ten minutes. A slideshow of 32 shapes was shown for three minutes for each group following the music. They studied shapes with a minute’s delay while listening to music. A test on shapes to find the original and survey shortly followed. There was no significant difference amongst the subjects.

Metal-Free Organocatalysts as Electrocatalysts for the Reduction of Carbon Dioxide to Liquid Fuels
Presenter: Mi Chen
Faculty Mentor: Dr. Vincent Sichula

The scientific objective of this research project is to synthesize metal-free organocatalysts and investigate their ability to electrocatalyze the reduction of CO₂ to methanol. Since there are limited reports on the use of metal-free organic compounds as electrocatalysts to reduce CO₂ to methanol, we proposed to investigate the use of flavinium and pyrazinium salts as metal-free organocatalysts for electrochemical reduction of CO₂ to methanol. We successfully synthesized pyrazinium salt catalyst and 3-methylumiflavinium salt catalyst. Both catalysts were demonstrated to exhibit electrocatalytic behavior by using cyclic voltammetric measurements. In the future work, we will also analyze the products of CO₂ reduction.

Allelopathic Effects of Cabbage and Garlic Slurries on Lettuce, Radish and Cabbage Seed Germination
Presenter: Michaela Hebert
Faculty Mentor: Dr. Allyse Ferrara

Allelopathy is the inhibitory or stimulatory influence of one plant on germination, growth, or survival of another. Our purpose was to develop a simple allelopathy experiment for an introductory biology laboratory to test inhibitory allelopathic effects of cabbage and garlic slurries on the germination of cabbage, radish, and lettuce seeds. Five-day trials (25 and 30°C) were run in triplicate for each seed type treated with garlic slurry, cabbage slurry or water as a control. Garlic slurry was more strongly allelopathic than cabbage slurry for all seed types and at 30°C allelopathic inhibition of germination was lower than at 25°C.

Vibrio parahemolyticus Bacteriophage: Restriction Enzyme Analysis
Presenter: Sambida Pradhan
Co-Authors: Elizabeth Mateer, Corey Melancon, Rajkumar Nathaniel, Angela Corbin
Faculty Mentor: Ms. Angela Corbin

Bacteriophages are host specific viruses that can be used to target bacterial pathogens. The purpose of this experiment was to isolate and purify several Vibrio parahaemolyticus bacteriophages isolated from oyster liquor and open marine waters. Eight phage isolates were tested against 12 different Vibrio sp. to determine host infectivity patterns. Restriction enzyme analysis using BamHI, HaeIII, HambI, ClaI, and EcoRI was performed on the DNA from four isolates. The resulting fragments were separated using electrophoresis. Our results suggest that these bacteriophage have the same fingerprint and therefore may be the same bacteriophage.
**Dinuclear Copper (KK) Complexes of Imidazole-4,5-Dicarboxylate**

Presenter: Merlin J. Dartez  
Faculty Mentors: August A. Gallo, Salah S. Massoud, Franz A. Mautner (Technische Universität Graz)

Imidazole-4,5-dicarboxylic acid (H$_3$Imdc) and its derivatives can bind metal ions in a variety of coordination bonding modes, depending on the successive deprotonation of H$_3$Imdc. Reactions of a methanolic solution containing the tridentate amines N,N-Bis(2-pyridylmethyl)-methylamine (MeDPA) or 2,6-[bis(pyrazol-1H-yl)methyl]pyridine (bpzpy) with an aqueous mixture containing equimolar amounts of Cu(ClO$_4$)$_2$·6H$_2$O and imidazole-4,5-dicarboxylic acid disodium salt (Na$_2$HImdc) afforded the dinuclear complexes [Cu$_2$(MeDPA)$_2$(µ$_4$-HImdc)(H$_2$O)(ClO$_4$)]ClO$_4$·3H$_2$O (1) and [Cu$_2$(bpzpy)$_2$(µ$_4$-HImdc)(H$_2$O)$_2$](ClO$_4$)$_2$·2½H$_2$O (2), respectively. The isolated complexes were characterized by elemental microanalyses, IR and UV-Vis spectroscopy, single crystal X-ray crystallography and by magnetic susceptibility measurements over the temperature range 2–295 K.

**Lost Circulation Problems and Solutions**

Presenter: Garrett Thibodeaux  
Faculty Mentor: Dr. S. Saleh

The basic outline of the project focuses on problems seen in the field due to lost circulation of drilling fluids in the wellbore. This is one of the biggest contributors to non-productive time while drilling a well. In the oil industry, any time lost is money that is lost. We use laboratory experiments such as permeability plugging testing to simulate fluid loss and use certain lost circulation materials to correct, reduce or eliminate this loss based on the particle sizes found in the mud and the LCMs.

**From the Plague to Rage**

Presenter: Cheryl Garrett  
Faculty Mentor: Allen Bauman, PhD

Artistic expression within narratives of different genres can be compared through close examination of the ways each genre treats particular scenes within similar plot structures to obtain parallel results. When the time frame between the two is great, other factors must be taken into consideration. Thus, a comparison of the attributes of two apocalyptic narratives, Daniel Defoe’s 300-year-old novel, *A Journal of the Plague Year*, and the contemporary zombie movie, *28 Days Later*, becomes possible only because the fluidity within modernity overcomes surface differences existing in different eras, revealing the constancy of human nature throughout the ages.

**Reaching the Point of No Return: An Analysis of Rehabilitation in the Louisiana Penal System**

Presenter: Kayla Jacob  
Faculty Mentor: Jim Picht, PhD

Rehabilitation is personal reformation inmates undergo while incarcerated, enabling them to return to society and live crime-free lives. Louisiana’s correctional facilities aid offenders in their rehabilitation by providing vocational, educational and religious programs that seek to assist them in obtaining skills to succeed in society. Louisiana, however, is still the prison capital of the world, and is faced with increasing prison populations and recidivism rates. This project analyzes the costs and benefits of rehabilitation in the Louisiana penal system to determine the lasting social and economic effects it has on the state.

**What is “Hooking Up”? An Analysis of the Hookup Definition**

Presenter: Hailey Suarez  
Faculty Mentor: Keith Dromm, PhD

The definition of “hooking up” ranges from kissing to vaginal sex and seems to rely on the eyes of the beholder. This makes it a family resemblance concept, a term for which there is no unique commonality between the activities it is meant to represent, and which can only be understood through various similarities to other family members. An alternate approach would be to define the term through necessary and sufficient conditions, however, in this case, such a definition is impossible. This research may be helpful for risk-awareness campaigns and therapists working with individuals who participate in hooking up.
GOM Deepwater Horizon Oil Spill: A Time Series Analysis of Variations in Spilled Hydrocarbons

Presenters: Christina Palomo, Masha Pitiranggon, Andreas Teske, Nigel D’Souza, Andy Juhl, Ajit Subramaniam, Amy Mckeena, Beizhan Yan
Faculty Mentor: Carol Chin, PhD

Approximately 210 million gallons of crude oil was released into the Gulf of Mexico from April 20 to July 15, 2010 during the Deepwater Horizon oil rig explosion. The spill caused financial, ecological, environmental, and health impacts and continues to affect the Gulf of Mexico. Sediment samples from distinct locations in the gulf and time frames from May to December 2010 were analyzed quantitatively via GC X GC-TOF MS for 41 hydrocarbons to identify the relative contributions of petrogenic and combustion sources from burning the spill in attempts to contain it. The October 2010 core was greatly affected by combustion sources.

The Influence of Aristotle’s Classification System and Scale of Nature from BC to Present

Presenter: Jessica Viator
Faculty Mentor: Margaret Cochran, PhD

Aristotle’s zoological works are the first known Western attempts to use scientific means to describe animals and their behaviors. In the following two thousand years, Aristotle’s work, particularly his classification system and his Scale of Nature, affected the works of other notable researchers. These two concepts are evident in Albert the Great’s zoological research and works by German writers in the fourteenth and fifteenth centuries. Even though the Scientific Revolution and the works of Carl Linnaeus and Charles Darwin affected the views of classification and animal hierarchy, Aristotle’s concepts are still visible in animal ethics and practices today.

The Go-Giver: A Little Story About a Powerful Business Idea

Presenter: Banessa Umana
Faculty Mentor: Dr. David Wyld

My poster presentation will go into detail of the five laws of stratospheric success mentioned in the book. These laws include: the law of value, the law of compensation, the law of influence, the law of authenticity, and the law of receptivity. Each of these laws has a story behind them that can not only impact one’s life, but impact the lives of many. I plan to create an illustration on how to use these laws in the business world, as well in other areas of everyday lifestyle. My overall goal is to change the mentality of business deals.

UNIVERSITY OF LOUISIANA AT LAFAYETTE

Use of Kenaf as an Adsorbent to Treat Wastewaters Generated by Pyrolysis of Biomass

Presenter: Alyssa V. Bienvenu
Faculty Mentors: William E. Holmes, Emmanuel D. Revellame, Rafael Hernandez, Prashanth Buchireddy, Mark E. Zappi

There are many chemical and physical processes available for the removal of organic compounds from waste waters. To enhance the sustainability, energy efficiency, and yield of biofuel production processes, it is desirable to recover and use these compounds using renewable raw materials. In this study, we have used a plant material, Kenaf (Hibiscus cannabinus), for adsorption of small molecular weight phenolic compounds and polyaromatic hydrocarbons generated during the pyrolysis of biomass and contained in the waste-water stream. Several pre-treatments of Kenaf were evaluated, ranging from simple water washing to ozone treatment or torrefaction. Torrefaction is gaining attention as an option to improve physical and chemical properties of biomass prior to pyrolysis or gasification. This process could also increase the surface area, porosity, and selectivity of biomass for adsorption applications. Kenaf was heated slowly in a reduced environment to a maximum temperature of approximately 200-300°C. This process can be considered a mild pyrolysis as it occurs at lower temperatures than a normal pyrolysis process. Torrefaction of Kenaf at a single treatment temperature of 270°C showed a 30% reduction in phenolic compounds and also showed a much higher affinity for higher molecular weight compounds then more volatile ones. The results of torrefaction of Kenaf...
are compared to other pre-treatments (e.g. ozonation and washing). Carbon black was used as a positive control, since it is a commercially established adsorption technology and can remove up to 98% of phenol from waste water. These comparisons are based on mass reduction of organics in the waste water. The resulting organic laden-Kenaf could be used within the pyrolysis process as an additional feedstock, resulting in a closed system for wastewater treatment and an enhanced yield of fuels from biomass. More experiments must be carried out at different temperatures to optimize the torrefaction process for adsorption of organic compounds.

**Virtual University on the University of Louisiana at Lafayette Campus**

Presenters: Brittany Hebert, Brad Jouty
Faculty Mentor: Dr. Carolina Cruz-Neira

This presentation will showcase the timeline and creative details for generating a three-dimensional interactive map of the University of Louisiana at Lafayette with mobile application capabilities. First, we began with architectural models of the buildings on campus and remodeled them using the computer-aided design software, Autodesk Maya. Our goal was to model and texture each building using the least number of polygons possible to ensure least load time for the mobile application of the campus. Next, all of the buildings were implemented into the game engine running the mobile application called Unity. The layout of the campus in the game engine matches exactly to the physical layout of the university. The user-interactive features of the campus application are programmed using the language JavaScript. These features are comprised of graphical user interface buttons and scripts that can detect taps on a touchscreen device. Features include navigating through campus with the motion of your finger on the iPhone or tablet and a pause menu which allows the user to move to any part of campus of his or her choosing. Future prospects for this project include adding more aesthetics to the virtual campus (trees, students, weather) and GPS capabilities.

**Alternative Energy in the Virtual World**

Presenters: Kristopher Meche, Gage Melancon
Faculty Mentor: Terrence L. Chambers, PhD, PE

This poster describes the re-creation of the green-energy production machines and the entire Alternative Energy Plant located in Crowley, Louisiana, in Virtual Reality. To achieve this, code was written in the JavaScript language using the Unity video game design engine. The end product is a completely immersive experience in which the user controls an in-game person who explores the plant. Complete with pop-up information boxes, the user is able to learn about each of the machines, turn the machines on and off, and view feedback based on their interactions.

**Mechanical Testing for Selectivity Reinforced Composite Materials**

Presenter: Cassidy Cohen
Faculty Mentors: Dr. Ahmed Khattab, Wan Shou

Currently, most techniques disperse nanoparticles throughout the entire laminates, rather than in selected areas or layers. In this presentation, a novel concept about selective reinforcement was applied in the manufacturing of polymer composite and its mechanical property was examined by three-point bending test. A six-layer-carbon-fabric was selectively reinforced by carbon nanofiber (CNF) and then molded through vacuum assisted resin transfer molding. The selectively reinforced composite was compared to two other common composites reinforced evenly throughout the laminates. The results showed an increase of flexure stress in the selective reinforced sample by using equal or even less amount of CNF.

**UNIVERSITY OF LOUISIANA AT MONROE**

**Comparative Analysis of A3, A4, and A10 Mycobacteriophages: Sequence Homology at the Repressor Binding Site Results in Homoimmunity of Related Mycobacteriophages**

Presenter: Erin Rizzo
Co-Authors: Stephen Jackson, Jobi Arceneaux, Rebecca Baudin, Rudolf Beutner, MaryBeth Borque, Lara Crawford, Amy Fontenot, Brice Gillikin, Mallorie Hayes, Rachel Johnston, Meghan Kurz, Maroutcha Mouawad, Abigayle Reed, Catherine Schilling, Zachary Streeter, John Vu, Tyriana Wilson, Amanda Scott, Meghan Richters, Dustin Lovas, Grant Jernigen, Thai Nguyen, Swapan Bhuiyan, J. Derek Jones, Brittany Miller, Jeremy Harmonson, Faculty Mentors: Christopher R. Gissendanner, Allison M.D. Wiedemeier, Ann M. Findley

Restriction digestion for cluster assignment was conducted using BamHI, Clal, EcoRI, HaeIII, and HindIII. A second enzyme panel was identified to distinguish between A2–A10 subcluster members. A lysogen culture of M. smegmatis (prophage Peaches, A4) was utilized to screen isolates for homo/heteroimmunity with Peaches. Rockstar and Trike don’t infect the lysogen culture and were assumed to be A4. The additional restriction panel and sequencing of Rockstar and Trike indicated they were A3 and A10 members, respectively. A repressor binding site sequence homology analysis furnishes evidence for the observed homoimmunity between members of these related, but not identical, cluster representatives.
Studying Protein Interactions of the *Caenorhabditis elegans* Protein PAN-1 using an RNA Interference Based Genetic Screen

Presenter: Nathan Simpson  
Co-Author: Derrick Cardin  
Faculty Mentor: Chris R. Gissendanner

PAN-1 is a member of the extracellular leucine-rich repeat family of proteins that is critical for stage specific events during the development of *C. elegans*. Pan-1 loss of functions alters proper cell proliferation and differentiation of somatic gonad tissue and inhibits proper molting at the late larval to adult transition. We are in the process of performing an RNAi screen to study the mechanisms that PAN-1 utilizes that makes it critical for proper development with a focus on potential protein interactions. During our screens, interest is given to genes whose RNAs causes decreased brood sizes and increase larval arrested.

A Web-Based Bio-Informatics Tool to Rotate, Align, and Match Scleral Ossicles Patterns

Presenter: Sailesh Wagle  
Faculty Mentors: J. Carr, P. D. Wiedemeier

The purpose of our research project was to design and create a web-based bioinformatics tool that rotates, aligns, and matches user-entered left and right scleral ossicle patterns for various turtle species. First, users submit the patterns. Our tool then rotates, aligns and gives the largest number of pattern matches between the two patterns. The benefits of using our tool are the users do not need to install software on their local machines, the code can be hosted on another Internet server, and it’s the only tool that provides the functionality as required by Dr. John Carr, Professor of Biology.

Isolation and Analysis of an Oleocanthal-Rich Fraction from Extra-Virgin Olive Oil and its Standardization as a New Dietary-Based c-Met Inhibitor for the Control of Metastatic Breast Malignancies

Presenter: Katherine Gary  
Co-Author: Mohamed Mohyeldin  
Faculty Mentor: Khalid El Sayed

Extra-virgin olive oil (EVOO) is a major component of the Mediterranean diet. Mediterranean populations have reduced risk for diseases including some malignancies. (-)-Oleocanthal is a naturally-occurring secoiridoid from EVOO. Oleocanthal-inhibited activation of c-Met kinase, an important aggressive malignancy marker. This study aims to extract EVOO-derived oleocanthal-rich fraction and quantify its oleocanthal content. It is important to discover simple, sensitive, and reproducible methods to standardize oleocanthal concentration for its future use with chemotherapy or for chemoprevention in people at high risk of cancer. Standardized oleocanthal-rich fractions may become future dietary supplements for use to control metastatic breast cancer.

Use of Bacteriophage in the Control of Crown Gall Disease Caused by *Agrobacterium tumefaciens* in Tomato Plants

Presenter: Ifeoluwa Babatunde  
Co-Authors: Cortez Davis, Brittnay Miller  
Faculty Mentor: Allison Wiedemeier

*Agrobacterium tumefaciens* is a pathogenic bacterium that causes crown gall disease in plants. Pathogenic strains of *A. tumefaciens* carry a T DNA which when transferred to the plant, integrates into the plant genome, expressing genes that cause disease symptoms. Bacteriophages are viruses that replicate within a bacterial host. A lysogenic infection occurs when the bacteriophage genome inserts into the host genome. Lytic infections release phage progeny. In this study we present data about the effectiveness of using lytic agrobacteriophage in the control of crown gall. Measurements of the crown gall grown in tomato, after pre-treatment of agrobacteriophage JP1 are presented.

Fear, Disgust, and Ontology: What Kind of Morality is at Stake?

Presenter: Kylen Smith  
Faculty Mentor: Killian Garvey

The theory of evolution is rejected by more than 50% of the American population, largely for moral reasons. While moral cognition is difficult to measure directly, current research has tied morality to disgust sensitivity. In this study, the Three Domain Disgust Scale (TDDS) was used to explore individual differences in disgust and morality associated with creationist beliefs as measured by the ten-item Creationist Evolution scale. Moral disgust did not factor into creationist beliefs while sexual disgust and pathogen sensitivity did. A follow-up multiple regression found that sexual disgust was the only significant predictor of creationism.

UNIVERSITY OF NEW ORLEANS

The Runaway Slave Women of New Orleans: An Urban Perspective in the Antebellum South

Presenter: Tara Garbutt

While working on a project collecting runaway slave ads, it became apparent that women slaves were less likely to run away.
So what can we learn from looking at those women who did run? Our team is working with the Times Picayune. These runaway slave ads provide fascinating detail about the fugitives: how they looked, spoke, who they traveled with, and where they were going. This poster provides insights into female runaways in the city (New Orleans), and compares our early results with those of our cohort in Mississippi and Alabama, where there were largely rural populations.

**Do Constructed Crevasses Obey Delta Laws? Implications for the Restoration of the Mississippi River Delta**

Presenter: Tara Yocum

This research will test if constructed crevasses obey delta-scaling laws, and examine whether successful or failed crevasses have comparable shapes, and utilize results to develop simple predictive tools. We populated a database of large deltas and added thirteen crevasses in Delta National Wildlife Refuge. Data was obtained using geospatial tools (ArcGIS and Google Earth®) and image analysis, while channel depths were obtained from CPRA. Crevase geometry exponentially decreases with bifurcation order; hence distance to the mouth bar versus bifurcation order is a reasonable first order estimate. Most crevases in the Mississippi River Delta appear to obey delta growth laws.

**Microwave Properties of Magnetic Nanowire Arrays**

Presenter: Daniel Joseph Adams

This study focused on examining high-frequency properties of magnetic nanowire arrays. The microwave was produced by a Vector Network Analyzer (VNA) and transmitted through coplanar waveguides (CPW). The CPWs are 300 µm long with signal line width of 20 µm, ensuring minimum losses due to radiation. CPWs were fabricated through the photolithography process. The magnetic nanowires were fabricated through e-beam lithography on top of the CPW. The VNA was used to feed the CPW and measurements of the FMR absorption allowed us to understand the effect of interaction between nanowires on their dynamic properties.

**Correlation between Supportive Body Language during the TSST and Relationship Satisfaction in Romantic Couples**

Presenters: Neil Barnett; Olga Miocevic; Yoojin Lee; Jeremy Peres; Jenny Phan; Elizabeth Shirtcliff

This study examined the correlation between overall relationship satisfaction and observed body language during an acute stressor in romantic couples. Data was collected from twelve long-term couples using both the Triangular Love Scale and observational coding of supporters watching their partners undergoing the Trier Social Stress Test. Observed body language was coded from videos by two independent raters across four scales (Agitation, Amusement, Discomfort, and Distraction). A one–way ANOVA examined self-reported relationship satisfaction as the independent variable and observed body language as the dependent variables. A statistical trend \(t(9)=-2.149, p=.060\) suggested TLS commitment scores positively correlate with high Discomfort scores.

**Romantic Partners’ Compatibility Beliefs Moderate Testosterone Reactivity to an Acute Stressor**

Presenters: Florencia Iturri, Jenny M. Phan, Yoojin Lee

Faculty Mentor: Elizabeth A. Shirtcliff, PhD

Laboratory stress affects testosterone, a masculinizing, relationship-oriented and stress-responsive hormone. Previously, Iturri (2013) found relationship quality predicted lower testosterone levels and higher testosterone stress reactivity. This study further examines testosterone stress reactivity within romantic partners \((N=30, \text{ age}=18–25 \text{ years})\). Supportiveness was indexed as relationship compatibility beliefs with a romantic partner. Women had greater testosterone reactivity than men \((b=-.26, p<.001)\); individuals, especially women, with higher compatibility had significantly stronger testosterone reactivity to the stressor \((b=-.29, p<.0001)\) and faster testosterone recovery \((b=-.43, p=.002)\). Results confirm testosterone is modulated by relationship factors and extend this observation into the acute stress setting with romantic couples.

**Investigating the Surface Modification of In₂O₃ Nanocrystals for Enhanced Chemical Sensing**

Presenters: Nooraldeen Alkurd, Sarah Wozny, Haiqiao Su, Weilie Zhou

In₂O₃, with a wide–band gap (3.6 eV), is an n–type semi–conductive material, which has been extensively studied in the field of chemical sensors. Pt deposition on metal oxide gas sensors was found to increase the sensitivity of the device towards specific gases. Our work focuses on comparing the effects of physical and chemical methods of Pt deposition on In₂O₃ nanocrystal thin films, on the sensitivity of the fabricated chemical sensors. A one-step synthesis was used to attach the Pt nanoparticles on the In₂O₃ nanocrystals. Devices fabricated using unmodified, physically modified, and chemically modified In₂O₃ were compared under H₂S atmosphere.
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