

February 22, 2018

Dear Conference Participants:

Welcome to the 20th Annual Texas National McNair Scholars Research Conference. The University of North Texas (UNT) McNair Scholars Program is proud, and honored, to serve as host for this conference. We recognize that the lifeblood of this conference is all the McNair Scholars, their program directors and staff, and the graduate recruiters who are here. Thank you all! We hope to see you again in 2019 at the 21th Annual Conference.

UNT is a university on the move. We hope you will explore and take advantage of your time here. If you can, take in some of UNT's history. As you stroll across campus, you may be walking in the footsteps of Don Henley, Norah Jones, Larry McMurtry, Bill Moyers, Pat Boone, Roy Orbison, or Mean Joe Greene. Here are a few of UNT's academic bragging points, our UNT "firsts" and "bests" through the years:

- Recognized as a Carnegie Tier One university in 2016
- First jazz studies program in the U.S. and consistently ranked as the nation's best
- Home to four Institutes of Research Excellence:
 - Advanced Environmental Research Institute
 - Advanced Materials and Manufacturing Processes Institute
 - BioDiscovery Institute
 - Logistics Systems Institute
- Named one of America's 100 Best College Buys® for 20 consecutive years
- First peace studies program in the Southwest
- UNT named a Best in the West college by The Princeton Review for six consecutive years
- Graduate counseling program ranked 1st in Texas and 13th in the nation by U.S. News and World Report
- First Ph.D. program in art education in Texas

We are proud of our university and grateful for the support it provides to our program through contributions of faculty time and direct support to the Scholars. We are forever indebted to all the wonderful mentors who give of their time to nurture our Scholars.

We hope you find this conference enlightening, informative, and enjoyable. We know you have many choices, and we are glad that you have chosen to be with us at our conference. Thank you.

Don't hesitate to connect with any of the UNT McNair staff and McNair Scholars if you have questions, need assistance, or want to find out more about UNT!

The Scholars and Staff of the UNT McNair Scholars Program

Our Appreciation To So Many

This conference, like all McNair Research conferences, is a collective and collaborative project. Many people contribute time, resources, ideas, and suggestions. Although we can never repay them for their contributions, we would like to thank the following University of North Texas units, groups, and individuals who have made this conference possible. We are grateful to them all.

Division of Enrollment

- Shannon Goodman, Vice President for Enrollment
- Rebecca Lothringer, Executive Director of Admissions
- Dana Mordecai, Assistant Director of Admissions

Toulouse Graduate School

- Victor Prybutok, Vice Provost for Graduate Education and Dean of the Toulouse Graduate School
- Joseph Oppong, Academic Associate Vice Provost
- Billy Roessler, Senior Director for Graduate Studies, the Toulouse Graduate School

Texas Academy of Mathematics and Sciences and the Honors College

- Glênisson de Oliveira, Dean
- Eric Gruver, Associate Dean for Academics
- James Duban, Associate Dean for Research and National Scholarships
- Roy Zumwalt, Director for IT Services
- Teresa Brooks, Administrative Coordinator for Finance and Operations
- Russ Stukel, Assistant Dean for Student Life
- Diana Dunklau, Marketing Director

The UNT McNair Faculty Mentors

The McNair Conference Evaluators

The McNair Conference Moderators

The UNT McNair Scholars

The Staff of the University Union

- The Event and Space Planning staff
- The Verde Catering staff

A hearty thank you from the entire UNT McNair staff!

Conference Schedule

Time	Event	Location
Thursday 2.22.2018		
4:00 PM – 7:00 PM	Welcome to the Conference Social Event & Check-ins for the Conference	Hilton Garden Inn Hotel
Friday 2.23.2018		
7:30 AM – 8:45 AM	Continental Breakfast & Conference Check-ins	Student Union 314 AB
8:45 AM – 9:00 AM	Conference Opening Session & Welcome <ul style="list-style-type: none"> • Billy Roessler, Senior Director, Graduate Studies for the Toulouse Graduate School • Glenisson de Oliveira, Dean of the Honors College and Texas Academy of Mathematics & Science 	Student Union 314 AB
9:00 AM – 10:15 AM	First Engagement Part 1, Panel Discussion: The Research Apprenticeship of the Graduate Student	Student Union 314 AB
10:15 AM – 10:30 AM	Morning Break	Student Union 314 AB
10:30 AM – Noon	Graduate Schools & Programs Recruitment Fair	Student Union 333 & 339
10:30 AM – 11:30 AM	First Engagement Part 2, Roundtable Discussion: The Research Apprenticeship of the Graduate Student	Student Union 314 AB
11:30 AM – 1:00 PM	Lunch	Student Union 314 AB
11:30 AM – 1:00 PM	Poster Set Up <ul style="list-style-type: none"> • Scholars put up posters for review and viewing 	Student Union 314 C
12:30 PM – 2:00 PM	Graduate Schools & Programs Recruitment Fair (cont.)	Student Union 333 & 339
1:00 PM – 2:00 PM	Networking Experience for all McNair Scholars	TBA
1:30 PM – 3:15 PM	Poster Presentations	Student Union 314 C
3:15 PM – 3:30 PM	Afternoon Break	Student Union 314 AB
3:30 PM – 5:00 PM	Second Engagement: Graduate Recruiters Panel	Student Union 333
3:30 PM – 5:00 PM	Workshop: Upping your Presentation Game	Senate Room
	Transitional Break	Lobby Area
6:00 PM – 7:00 PM	Opening Dinner	Student Union 314 AB
7:00 PM – 8:00 PM	Third Engagement: McNair Alumni - Their Paths to the Ph.D. and Beyond	Student Union 314 AB
8:00 PM →	On Your Own – Discover Denton!	

Conference Schedule (Cont.)

Time	Event	Location	Time
Saturday 2.24.2018			
8:30 AM – 9:45 AM	Hot Breakfast		Student Union 314 AB
	Refreshment is available throughout the day		
10:00 AM – 12:30 PM	McNair Scholars Oral Presentations See schedules in following pages for rooms / times		
12:30 PM – 1:30 PM	Lunch		Student Union 314 AB
1:30 PM – 5:00 PM	McNair Scholars Oral Presentations See schedules in following pages for rooms / times		
5:00 PM – 5:30 PM	Transitional Break		Lobby
6:00 PM – 7:00 PM	Celebration Dinner		Student Union 314 AB
7:00 PM – 8:00 PM	Fourth Engagement: Keynote Speaker • Dr. Yolanda Flores Niemann		Student Union 314 AB
8:00 PM →	On Your Own – Discover Denton!		
Sunday 2.25.2018			
8:00 AM – 11:00 AM	Farewell Breakfast/Brunch & Social • A social and networking event		Hilton Garden Inn Hotel

Food Events

Conference Social. Thursday, 2/22, 4:00-7:00pm. Hilton Garden Inn.

Build-your-own-sandwich bar with assorted meats, cheeses, vegetables, cookies and brownies.

Food Event 1: Continental Breakfast. Friday, 2/23, 7:30-8:45am. Student Union 314 AB.

Platters of assorted danishes, croissants, muffins, sweet breads, bagels, yogurt, and seasonal fruits.

Food Event 2: Lunch. Friday, 2/23, 11:30am-1:00pm, Student Union 314 AB.

Beef and chicken fajitas grilled with onions and peppers, warm flour tortillas, Mexican green salad, vegetarian charro beans, and Spanish rice.

Food Event 3: Opening Dinner. Friday, 2/23, 6:00-7:00pm, Student Union 314 AB.

Smoked beef brisket and chicken, vegetarian ranch beans, potato salad, and assorted sheet cakes.

Food Event 4: Hot Breakfast. Saturday, 2/24, 8:30-9:45am, Student Union 314 AB.

Country scrambled eggs, bacon, home fried potatoes, assorted cakes and breads, yogurt, and seasonal fruit.

Food Event 5: Lunch. Friday, 2/24, 12:30am-1:30pm, Student Union 314 AB.

Salads and potatoes buffet with a garden salad, black ben and roasted corn salad, and pasta primavera salad.

Food Event 6: Celebration Dinner. Friday, 2/24, 6:00-7:00pm, Student Union 314 AB.

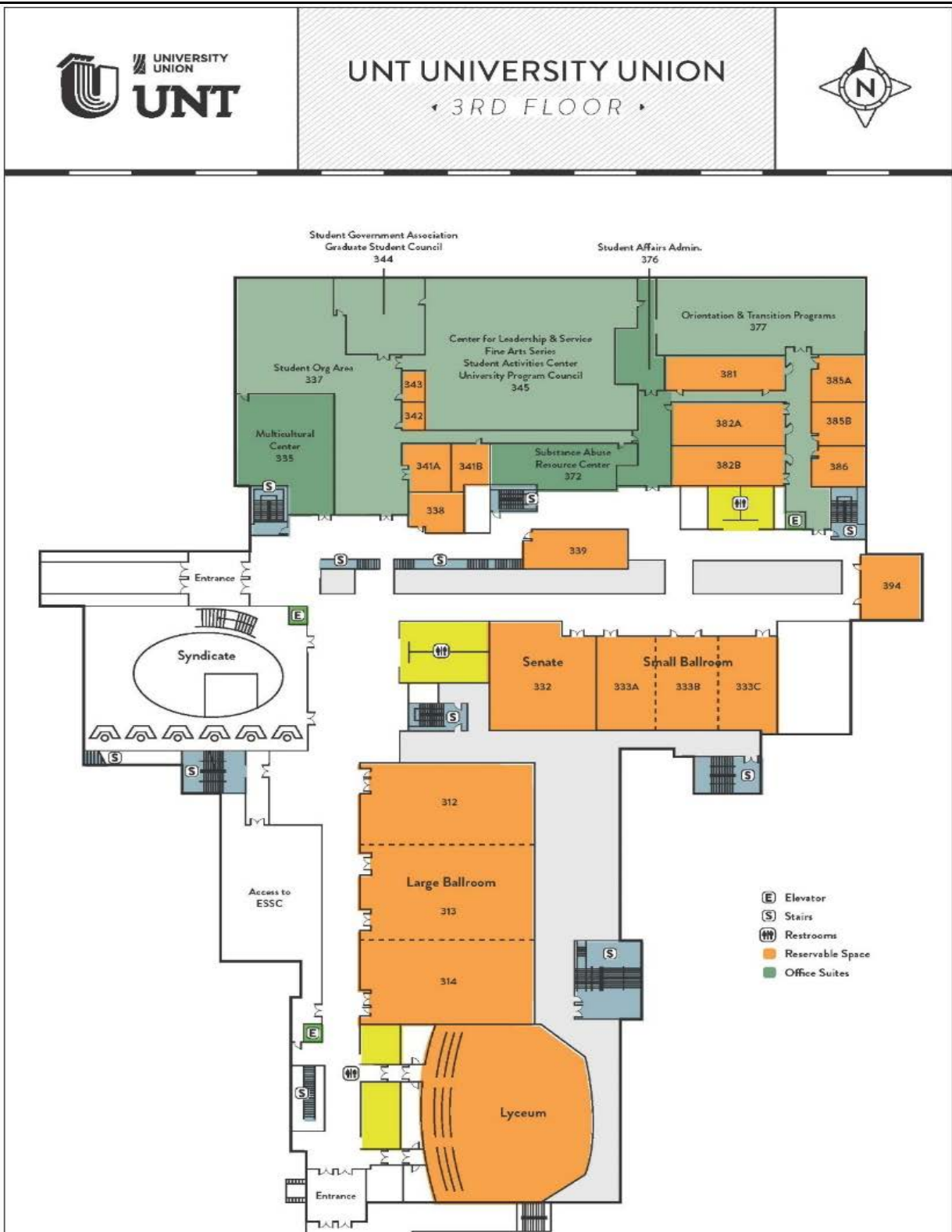
Grilled chicken breast marinated in olive oil, garlic, lemon juice and rosemary with field greens and roasted haricot verts.

Farewell Breakfast. Sunday, 2/25, 8:00-11:00am, Hilton Garden Inn.

Hot and continental breakfast with build-your-own- burrito buffet, a parfait station, and baked goods.

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Conference Floor Plan

- Discover new ideas
 - Create new knowledge
 - Share your wisdom

KEYNOTE SPEAKER – DR. YOLANDA FLORES NIEMANN



Yolanda Flores Niemann is Professor of Psychology at the University of North Texas (UNT). Previously, she served as Senior Vice Provost for Academic Affairs at UNT, Vice Provost and Dean of the College of Humanities, Arts, and Social Sciences at Utah State University, and held numerous administrative and faculty positions at Washington State University. She was also an American Council on Education (ACE) Fellow at Penn State. Most recently she was an invited panelist at the White House for the Initiative on Educational Excellence for Hispanics --*Fulfilling America's Future: Latinas in the U.S.*

Dr. Flores Niemann has been Principal Investigator of over 42 million dollars in federal outreach grants to prepare low socioeconomic status students for entry into and success in higher education. Her research interests include the psychological effects and social ecological contexts of tokenism – to the individual faculty member and to the tokenizing institution. She has recently developed a faculty training video to help prevent faculty to student microaggressions. Current research includes examination of stereotypes in superhero portrayals, and effective mentoring across demographic groups.

Her most recent books are *Surviving and Thriving in Academia: A Guide for Members of Marginalized Groups, Third Edition* (2017, coedited), and *Presumed Incompetent: The Intersections of Race and Class for Women in Academia* (coedited), which was featured in the *Chronicle of Higher Education*. Dr. Flores Niemann has several other books and many journal articles, including in *Peace Review, Journal of Applied Psychology; Journal of Applied Social Psychology; Sociological Perspectives; Personality and Social Psychology Bulletin; The Journal for the Theory of Social Behavior; Frontiers: A Journal of Women's Studies, and Hispanic Journal of Behavioral Sciences, The Journal of Social Issues, and The Counseling Psychologist*.

ENGAGEMENT SESSIONS

First Engagement Part 1, Panel Discussion

The Research Apprenticeship of the Graduate Student

Friday, 2/23, 9:00-10:15am. Student Union 314 AB.

A panel of UNT researchers discuss their expectations of new graduate students as research assistants. They identify some of the challenges new graduate students face and strategies for success during the research apprenticeship.

First Engagement Part 2, Roundtable Discussion

The Research Apprenticeship of the Graduate Student

Friday, 2/23, 10:30-11:30am. Student Union 314 AB.

This is a follow-up to Part 1. Join one of the roundtables facilitated by one or more UNT researcher to get your questions answered about the graduate student research apprenticeship. This will be particularly useful for seniors who will be graduate students in fall 2018.

Second Engagement

Graduate Recruiters Panel

Friday, 2/23, 3:30-5:00pm. Student Union 333.

An interactive session with a panel of graduate recruiters who will discuss all things related to graduate school applications, admissions, processes, and procedures.

Workshop: Upping Your Presentation Game.

Friday, 2/23, 3:30-5:00pm. Senate Room.

This is an opportunity to learn tactics and techniques to improve your oral research presentations. Four UNT senior graduate students will do research presentations and evaluators will identify strengths of those presentations. Interact with the presenters and evaluators to learn the do's of effective presentations.

Third Engagement

McNair Alumni & Their Paths to the Ph.D. and Beyond

Friday, 2/23, 7:00-8:00pm, following the opening dinner. Student Union 314 AB.

This panel of McNair alumni will discuss the role of their McNair experience on their personal paths through graduate school, the attainment of their doctorate degree, and their subsequent careers.

Fourth Engagement

Keynote Presentation: Dr. Yolanda Flores Niemann.

Saturday, 2/24, 7:00-8:00pm, following the celebration dinner. Student Union 314 AB.

Poster and Oral Presentation Information

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Poster Presentations – Presenter Information

Poster should be set up on Friday between 11:30 am to 1:00 pm in Union 314C. Be by your poster to present to reviewer at 1:30 pm.

Last Name	First Name	Institution	Classification	Major	Abstract #
Ale Thapa	Sabita	The University of Texas at Arlington	Senior	Biology	2
Badat	Mahera	The University of Texas at Austin	Senior	Islamic Studies and Psychology	6
Bakundukize	Emmanuel	University of North Texas	Senior	Biology	7
Faciane	Natalie	Xavier University of Louisiana	Junior	Biology	26
Goodes	Lauren	Xavier University of Louisiana	Junior	Neuroscience	31
Hamilton	Javonna	The University of Texas at Austin	Senior	Psychology	34
Hobbs	Jordan	Texas A&M University - Commerce	Senior	Psychology	38
Hughes	Kody	University of North Texas	Senior	Biochemistry	39
Jasper-Morris	Auriel	Xavier University of Louisiana	Senior	Psychology	40
Johnson	Jaleese	Xavier University of Louisiana	Junior	Sociology	42
Killingsworth	Tylor	University of Oklahoma	Junior	Mechanical Engineering	45
Landry	Bria	Xavier University of Louisiana	Senior	Psychology Pre-medicine	46
Marin Bernardez	Edelmy	Xavier University of Louisiana	Junior	Chemistry	53
Mora	Cristian	West Texas A&M University	Senior	English	57
Mozie	Chidalu	The University of Texas at Arlington	Senior	Biomedical Engineering	59
Pires	Melissa	University of Texas at Austin	Junior	Aerospace Engineering	67
Rodney	Arlysse	Xavier University of Louisiana	Junior	Public Health Science	73
Sherman	Josiah	Xavier University of Louisiana	Junior	Biology	75
Smith	Tatyana	Xavier University of Louisiana	Junior	Psychology	77
Van Vleet	Samuel	University of North Texas	Senior	Psychology	83
Vasquez	Liliana	West Texas A&M University	Senior	Biochemistry	84
Watkins	Taryn	Xavier University of Louisiana	Junior	Psychology	87
Wilder	Sommer	West Texas A&M	Senior	Psychology & Exercise Sciences	89
Young	Acacia	The University of Texas at Arlington	Senior	Biology	91

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Poster Presentations – Research Titles

Abstract #	Title
2	Effect of Photoperiod on the Sexual Reproduction of Freshwater Microcrustacean Daphnia
6	Utilizing Minority Stress Theory to Explore Islamophobia on the Emotional Health of Muslim Americans in the Trump era
7	Transgenerational Epigenetic Inheritance of Morphological Traits in the Brine Shrimp, <i>Artemia franciscana</i> .
26	Feasibility Studies of Cyclooxygenase-2 inhibition based drugs in Transdermal Delivery System
31	Increased Default Mode Network Functional Connectivity in Individuals with Greater Meditative Experience
34	Impostor Syndrome: Effects on the Black College Student Mind
38	Art as a Coping Skill for Adults with Elevated Anxiety and Autism Spectrum Disorder and/or Intellectual/Developmental Disabilities
39	Upland cotton (<i>Gossypium hirsutum</i>) bast fiber modification
40	Perspective Taking and Relationship Advice
42	Are You In Or Out? How Social Groups Shape Opinions Towards Immigrants and Refugees
45	Wettability Mechanisms of Nanostructures
46	The Effects of the Oxidation of Cytochrome 436/583 on the Aerobic Respiration of <i>Acidiplasma aeolicum</i> on Iron
53	Studies of Lipon coated metal oxides in lithium ion battery conversion reaction
57	"The Life of an Undergrad: How It Feels to be Me at One University" An Approach to Race and Ethnic Research
59	Bioengineered 3D Cell Culture Model for Testing Drug Sensitivity of Breast Cancer Cells
67	Hybrid Rockets
73	Racial Disparities Among High Risk Pre-diabetic Smokers
75	LRP-1 Targeted Neuroprotection in Diabetic Retinopathy
77	Are There Gender Differences in Response to an Intervention with Older Adults with Vision Loss?
83	The Big Five Demonstrate Different Relationships with Ageism and Aging Anxiety
84	Canine Oral Hygiene Product Efficacy on Bacteria from Canine Periodontal Disease
87	Examining the Associations of Age and Race on Violations of Probation
89	Physical and Psychological Effects of Laughter Yoga among Healthy Young Adults
91	Analysis of Form and Function in Snakes

Oral Presentations – Presenter Information

Last Name	First Name	Institution	Classification	Major	Abstract #
Alcala	Beatriz	University of Oklahoma	Junior	Chemical Engineering	1
Alvarez Guillen	Maira	Our Lady of the Lake University	Senior	Kinesiology	3
Amaya-Cisneros	Jose	Iowa State University	Sophomore	Kinesiology and Health	4
Andrew	Billy	East Central University	Senior	Computer Science/Physics	5
Barbosa	Karina	University of North Texas	Senior	Ecology for Environmental Science	8
Bard	Asja	St. John's University	Senior	History and Government	9
Barrera	Maria	Washington State University	Senior	Kinesiology and Psychology	11
Barrera	Maribel	University of North Texas	Junior	Chemistry BS	10
Beltran	Alberto	Eastern Washington University	Senior	international Affairs	12
Campbell	Dominique	University of North Texas	Senior	English Rhetoric and Writing	13
Castaneda	Krystalynn	University of North Texas	Senior	Anthropology	14
Ceville	Solana	University of Oklahoma	Junior	Psychology	15
Clymer	Robin	East Central University	Senior	Medical Physics	16
Collins	Noah	University of Oklahoma	Senior	Anthropology	17
Cruz	Katheryn	University of North Texas	Senior	Chemistry	19
Dadeboe	Ian	University of North Texas	Junior	Chemistry	20
Delwel	Isabel	University of North Texas	Senior	Biology	21
Duenas	Crystal	Washington State University	Junior	Psychology	22
Elliott	Taqiyah	Xavier University of Louisiana	Senior	Political Science	23
Escamilla	Edward	University of North Texas	Junior	Computer Engineering	24
Evans	Sha'Kurra	Iowa State University	Senior	Sociology	25
Finley	Jacob	University of Oklahoma	Junior	Mathematics	27
Garcia	Veronica	Washington State University	Junior	Sport Science	28
Garza	Stormie	University of North Texas	Senior	Biomedical Engineering	29
Gonzalez	Nicholas	Kansas State University	Senior	History	30

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Last Name	First Name	Institution	Classification	Major	Abstract #
Guerrero	Bryan	University of North Texas	Senior	Biomedical Engineering	32
Gutierrez	Julian	Our Lady of the Lake University	Senior	Psychology	33
Handley	Demond	Kansas State University	Senior	Mathematics	35
Harrison	Rashad	The University of Texas at Arlington	Senior	Sociology	36
Hayden	Daniel	University of Oklahoma	Junior	Plant Biology	37
Jesse	Sean	East Central University	Senior	Math	41
Jordan	Daisy	St. Mary's University	Senior	Criminal Justice	43
Kelly	Rose	The University of Texas at San Antonio	Senior	Communication	44
Leon	Marcela	University of North Texas	Senior	Psychology	47
Leung	Caroline	University of North Texas	Junior	Chemistry	48
Lopez	Brenda	St. Mary's University	Senior	Criminology	49
Lusk	Hannah	Kansas State University	Senior	Biochemistry	50
Mack	Jada	Xavier University of Louisiana	Senior	Biology	51
Manriquez	Gabriela	University of Oklahoma	Junior	International Studies	52
McDevitt	Owen	University of Oklahoma	Junior	Economics & Mathematics	54
Mckendall	Kristen	Xavier University of Louisiana	Senior	Biology	55
Mills	Kira	Texas A&M University - Commerce	Senior	Chemistry	56
Morgan Jr.	Andre	Xavier University of Louisiana	Senior	Communication Studies	58
Naquin-Eason	Amandamay	Sam Houston State University	Senior	Psychology and Criminal Justice	60
Navarrete	Jose Jose	West Texas A&M University	Junior	History	61
Nguyen	Tuong Vy	Xavier University of Louisiana	Senior	Psychology	62
Olguin-Aguirre	Rosario	University of North Texas	Senior	Psychology	63
Ortiz	Emmanuel	University of North Texas	Senior	Biology	64
Parent	Gunner	East Central University	Senior	Biology	65
Pimentel-Galvan	Michael	Texas A&M University - Commerce	Junior	Chemistry and Mathematics	66
Plange	Brittany	University of Oklahoma	Senior	African & African American Studies	68

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Last Name	First Name	Institution	Classification	Major	Abstract #
Potts	Eugene	Wichita State University	Junior	Political Science	69
Prado	Stephanie	University of Oklahoma	Junior	Mechanical Engineering	70
Prasatporn	Nicholas	The University of Texas at Arlington	Senior	Biological Sciences	71
Ramos	Byanka	Our Lady of the Lake University	Senior	Social Work	72
Samuel	Savannah	Xavier University of Louisiana	Senior	Chemistry Pre-Med	74
Smith	Raven	St. John's University	Senior	Speech Pathology	76
Soto-Levins	Andrew	The University of Texas at Arlington	Senior	Mathematics	78
Taber	Loni	Eastern Washington University	Senior	Philosophy	79
Tademy	Kaitlin	Sam Houston State University	Senior	Mathematics	80
Taylor	Shelbey	Kansas State University	Senior	Animal Science	81
Triece	Kelly	University of North Texas	Senior	English	82
Wages	Dylan	University of North Texas	Junior	Mechanical Engineering	85
Ware	Sarah	University of Oklahoma	Junior	Anthropology	86
White	Camille	Xavier University of Louisiana	Senior	Public Health	88
Wilson	Damere	St. John's University	Senior	Psychology	90
Zaragoza	Teresa	Washington State University	Junior	Sport Management	92

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Oral Presentations – Research Titles, Presentation Times, Rooms

Abstract #	Last Name	Room	Time	Title
1	Alcala	382B	10:00	Hydrophobic Enclosures in Bio-inspired Nanoreactors for Enhanced Phase Selectivity
3	Alvarez Guillen	385A	10:25	Accounting for workplace hazards: An exploratory study surveying Dominican-owned Hair Salons
4	Amaya-Cisneros	338	10:00	Peripheral markers of inflammation in people with Parkinson’s Disease, Progressive Supranuclear Palsy, and Multiple System Atrophy
5	Andrew	382B	10:25	Utilizing XLS Form and Kobo Toolbox to Digitize the Data for P.A.W.S.
8	Barbosa	382A	10:00	Odonate Development Across an Urban Pond Gradient
9	Bard	381	10:00	Operation Breakthrough: The Program that should have Marked Change for the Growing American Housing Industry and the Repressed Minority Citizenry
11	Barrera	338	10:25	Studying infant temperament: effects of maternal pregnancy-related anxiety.
10	Barrera	385A	10:50	Development of Abraham model correlations for describing the transfer of molecular solutes into propanenitrile and butanenitrile from water and from the gas phase
12	Beltran	385A	11:15	Venezuela's Economic Meltdown and Road to Recovery
13	Campbell	381	10:25	Systematic Degradation - A Rhetorical Analysis of the Supreme Court Vetting Process
14	Castaneda	385A	11:40	Latina Asylum Seekers
15	Ceville	385A	1:30	The Effects of Bystander Education on Preventing Sexual Assault
16	Clymer	338	10:50	The Effects of Temperature on the Attenuation Coefficient of Ultrasound
17	Collins	385A	1:55	Was your Grandmother a Cherokee Princess? A multifaceted examination of Native Identity
19	Cruz	382B	10:50	High performance supercapacitor based on two-dimensional molybdenum ditelluride (MoTe ₂) Film
20	Dadeboe	385A	2:45	Sleep characteristics and dropout rates in college students.

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Abstract #	Last Name	Room	Time	Title
21	Delwel	382A	10:25	Mapping the genetic basis of super restrictors in antiviral protein MxA
22	Duenas	381	3:35	Examining Teacher's Mindset and the Effects of their Implementation of the Response to Intervention Model on their Students
23	Elliott	381	4:00	Beyond the Preschool Classroom:How Family Involvement Relates to Task Engagement by Poverty Status
24	Escamilla	382B	11:15	Bluetooth Bracelet for victims at risk of human trafficking
25	Evans	385A	3:10	Race, Public Opinions, and Capital Punishment
27	Finley	382B	3:10	Exploring Board Games and Choice Management
28	Garcia	385A	3:35	Examining Mindfulness and Body Image in the Context of Yoga
29	Garza	382B	3:35	Relationship between Sodium and Cholesterol Levels, Insomnia and Sleep Parameters in College Students
30	Gonzalez	381	10:50	The Dispute for Land: The Erie Canal, Iroquois, and New York State
32	Guerrero	382B	11:40	Using Motion Analysis to Model the Effects of Deadlifting on the Spine
33	Gutierrez	385A	4:00	The Effect of Emotional Regulation in Attentional Bias
35	Handley	382B	4:00	Mathematical Modeling of Dermal Absorption of Natural Compounds
36	Harrison	385A	4:25	The Intersections between Social Class, Marital Status, and Family Composition among African Americans
37	Hayden	382A	10:50	Rice Cell Wall Components Alter Beneficial Fungal Colonization
41	Jesse	382B	1:30	Radio Waves to Electricity: Tesla's Blueprint
43	Jordan	385B	10:00	The impact of race and sex on media publicity of missing children cases
44	Kelly	385B	10:25	Child Abuse Factors Involving Communication Apprehension as a Conflict Management Strategy in Adult Romantic Relationships

Abstract #	Last Name	Room	Time	Title
47	Leon	385B	10:50	Gender Role Ideologies, Attachment, and Intimate Partner Violence Attitudes among College Students
48	Leung	338	11:15	Computational and Theoretical Studies of the Stability and Kinetics of NO ₂ - Acetylene Intermediates
49	Lopez	385B	11:15	An analysis of sexual assault rates for Texas colleges and universities: A comparison of public and private institutions
50	Lusk	382A	11:15	Identification and Characterization of an Arabidopsis Mutant with Alteration of Chloroplast Glycerolipid Species
51	Mack	382A	11:40	The Effects of Statin Treatment on Long QT Syndrome Type 2
52	Manriquez	385B	11:40	Responsibilities of the European Union and its Member States
54	McDevitt	385B	1:30	A Path to NBA Parity: examining the effects of the increased salary cap on relative player value
55	Mckendall	338	11:40	Manganese dioxide-mediated esterification of aliphatic and aromatic carboxylic acids via in situ formation of diazoalanes
56	Mills	338	1:30	Synthesis of Spirocyclic δ -Lactones by Asymmetric Organocatalytic Reactions of 3-Hydroxyoxindoles to α,β -Unsaturated Aldehydes in Aqueous Media
58	Morgan Jr.	385B	1:55	Performing Resistance in The Big Easy
60	Naquin-Eason	385B	2:45	Teacher Support, Parental Incarceration, and Low Academic Achievement in Justice-Involved Youth
61	Navarrete	381	11:15	The Evolution of Bilingual Education and its Spillover Effects in the Rio Grande Valley
62	Nguyen	385B	3:10	The Association between Non-Native Accents, Perceived Discrimination, and Depression among Vietnamese Americans
63	Olguin-Aguirre	385B	3:35	Perceptions of Potential Changes in U.S. Immigration Policies
64	Ortiz	382A	1:30	Cotton's Secret Fiber: Manipulating Lignin Biosynthesis for Bast Development
65	Parent	382A	1:55	Evaluation of the Blue River for Presence of <i>Campylobacter jejuni</i>

Abstract #	Last Name	Room	Time	Title
66	Pimentel-Galvan	338	1:55	Catalytic vs non Catalytic synthesis of bio-oil via the hydrothermal liquefaction of Biomass
68	Plange	381	11:40	Women's Domestic Labor in the Black Radical Tradition
69	Potts	385B	4:00	The Rise of White Nationalism in the American Political Discourse
70	Prado	382B	1:55	Studies of the Total Acid Number of Selected Neat Biodiesel, Diesel and their Blends
72	Ramos	385A	10:00	Do Leadership Style Preferences Vary Based on Degree Choice?
74	Samuel	382A	2:20	Development of hepatocellular carcinoma and TP73 expression: Does DNA methylation play a role?
76	Smith	385B	4:25	Exploring Code Switching in the Narrative and Expository Writing of Students from Linguistically Diverse Backgrounds
78	Soto-Levins	382B	4:25	Matrix Factorizations for Polynomials
79	Taber	381	1:30	A New Phenomenological Definition of Violence: Why the language we use matters
80	Tademy	338	2:20	The U-Polynomial on Virtual Knots and Links
81	Taylor	382A	3:10	Effect of protein supplementation on fiber disappearance and fermentation parameters using an equine cecal inoculum
82	Triece	381	1:55	From Tara to Trump Tower: the Gone with the Wind Origins of the Rhetoric that Won Donald Trump the 2016 Election
85	Wages	382B	2:20	Exoskeleton Using Artificial Muscles
86	Ware	381	2:45	An Ethnographic Study of Cuban Immigrants in Guymon, Oklahoma
88	White	382A	3:35	Depression in U.S. Black Women & the Usage of Advocacy in Community Health Workers
90	Wilson	381	3:10	Cross Sectional and Longitudinal Relationship of Discrimination to Sleep
92	Zaragoza	382A	4:00	Media Dialogue and Representation of Latinx Athletes in the Olympics

Oral Presentation Timetable and Abstract Number

Time Room	Arts & Humanities	Biological Sciences	Engineering	Social Sciences	Social Sciences	Physical Sciences
	381	382A	382B	385A	385B	338
10:00	9	8	1	72	43	4
10:25	13	21	5	3	44	10
10:50	30	37	19	11	47	16
11:15	61	50	24	12	49	48
11:40	68	51	32	14	52	55
Time Room	Arts & Humanities	Biological Sciences & Physical Sciences	Engineering & Mathematics	Social Sciences	Social Sciences	Physical Sciences
	381	382A	382B	385A	385B	338
1:30	79	64	41	15	54	56
1:55	82	65	70	17	58	66
2:20	BREAK	74	85	BREAK	BREAK	80
2:45	86	BREAK	BREAK	20	60	BREAK
3:10	90	81	27	25	62	
3:35	22	88	29	28	63	
4:00	23	92	35	33	69	
4:25			78	36	76	

Presentation Abstracts

Abstract # 1

Alcala, Beatriz

Daniel E. Resasco, Ph.D.

Major: Chemical Engineering

Oral

Room: 382B

Time: 10:00:00 AM

University of Oklahoma

Hydrophobic Enclosures in Bio-inspired Nanoreactors for Enhanced Phase Selectivity

In nature, selective reactions and effective separations are performed with precise control. A myriad of natural enzymatic processes occur at the water-lipid interface where separations are controlled according to hydrophobic and hydrophilic interactions. Although it is not possible to match the preciseness of enzymatic processes, the nature of their microenvironments can still be imitated in selective catalysis reactions. Selective catalysis reactions mimic the enzymatic processes in the way their microenvironments control the transport of substrates based on their relative solubility, which can be changed through external stimuli making them responsive and adaptable to needed functions. In this ongoing research project, change is accomplished by transforming the area of heterogeneous catalysis in biphasic liquid systems (e.g. water and a hydrophobic liquid such as oil) through controlled synthesis of nano-structured solid/liquid systems and analysis of the model reactions. This system can help attain a highly advanced level of reaction selectivity and minimization of catalyst deactivation not accomplished before, allowing for deeper insight of the effects that the hydrophobic cavity has on catalysis reactions.

Abstract # 2

Ale Thapa, Sabita

Dr. Sen Xu

Major: Biology

Poster

Room: 314 C

Time: 1:30:00 PM

The University of Texas at Arlington

Effect of Photoperiod on the Sexual Reproduction of Freshwater Microcrustacean Daphnia

Daphnia are cyclic parthenogens, so they reproduce asexually under favorable environmental conditions and sexually prior to harsh conditions. We used CP D. pulicaria, CP D. pulex, and OP D. pulex to test which photoperiod triggers sexual reproduction most efficiently and if there is any variation of photoperiod response with respect to their original geographic location. Two replicates of each clone were acclimatized at 18°C and 12-hour photoperiods. After establishment of third generation in acclimation incubator, replicates were distributed equally to two experimental incubators (10-hour and 17-hour photoperiod, 18°C). Then number of ephippia and asexual offspring produced were recorded for 15 days following day of sexual maturation. CP D. pulex reproduced sexually more in 17-hour photoperiod while D. pulicaria and OP D. pulex reproduced sexually more in 10-hour photoperiod. Slight variation in photoperiod response was observed within a species from different locations. Statistical test showed most of our data to be insignificant but we believe it was due to small sample size and presence of outliers. Even though our data do not show significant differences in reproduction mode of Daphnia at different photoperiods, our results can provide better understanding about effect of photoperiod on sexual reproduction of Daphnia for future studies.

Abstract # 3
Alvarez Guillen, Maira
Susan Murphy, Ph.D.
Major: Kinesiology

Oral
Room: 385A
Time: 10:25:00 AM
Our Lady of the Lake University

Accounting for workplace hazards: An exploratory study surveying Dominican-owned Hair Salons

The purpose of this research project is to conduct an interviewer-administered survey to gather information on workplace exposures and general health among Dominican hair salon workers. The study sought to better understand the hair care industry from three different perspectives: the salon owner, the employee and salon/facility assessment. Previous research indicates that long-term effects from beauty treatments and products used by hair salon workers negatively impact musculoskeletal disorders, respiratory problems etc. By comparing different types of chemicals in hair salon products we are working to determine what effects can be linked to product exposure. This work is invested in the needs of bi-lingual participants and also investigates whether or not safety precautions are taken for employees who may not be aware of the risks within the industry. Our goal with this project is to understand the work place environment, to ensure employees are aware of precautions and to provide recommendations to salon workers for both OSHA compliance and employee safety.

Abstract # 4
Amaya-Cisneros, Jose
Elizabeth Stegemoller
Major: Kinesiology and Health

Oral
Room: 338
Time: 10:00:00 AM
Iowa State University

Peripheral markers of inflammation in people with Parkinson's Disease, Progressive Supranuclear Palsy, and Multiple System Atrophy

Progressive Supranuclear Palsy (PSP) and Multiple System Atrophy (MSA) are neurodegenerative diseases often misdiagnosed as Parkinson's Disease (PD) due to similarity in symptoms. However, PSP and MSA tend to progress quicker and affect different areas of the brain. In the early stages of the three diseases, distinguishing one disease from another can prove difficult. Little research has explored the early stages and misdiagnosis occurring between the three diseases. This research examines differences in peripheral markers of inflammation between persons with PD, PSP, and MSA. Through the isolation of monocytes in blood samples from individuals with the diseases, we are working to treat and analyze cells for comparisons and differences. We expect a significant inflammatory difference between the three disorders that may aid in earlier detection and correct diagnosis.

Abstract # 5

Andrew, Billy

Dr. Jacob

Major: Computer Science/Physics

Oral

Room: 382B

Time: 10:25:00 AM

East Central University

Utilizing XLS Form and Kobo Toolbox to Digitize the Data for P.A.W.S.

Pontotoc Animal Welfare Society (PAWS), located in Ada Oklahoma, still collects paper based data for their daily operations. With a PetSmart Charities grant and support from the McNair Scholars Program at East Central University, we were able to obtain electronic data collection equipment and develop specialized forms for data entry utilizing Kobo Toolbox. Creating a working and efficient electronic form is vital in making this a viable method for data transfer and entry for PAWS, other humane societies, and small businesses. For non-profit organizations and small businesses, it is crucial to minimize the operating costs. Kobo Toolbox is free to use for research and humanitarian reasons, making it the perfect choice for this project. In the future, FormHub will be considered for small business and other types of originations. FormHub will be used much like Kobo Toolbox but is open source and can be implemented by the organization. We plan to analyze possible database methods. This includes Access, Open Office to build a specialized database to fit the needs of PAWS. The new databases will allow the employees at PAWS to manipulate the data from the field, make simple print outs for the adopters, and keep it updated to provide better adoption rates.

Abstract # 6

Badat, Mahera

Major: Islamic Studies and Psychology

Poster

Room: 314 C

Time: 1:30:00 PM

The University of Texas at Austin

Utilizing Minority Stress Theory to Explore Islamophobia on the Emotional Health of Muslim Americans in the Trump era

The purpose of this intensive literature review was to examine the effect of the Islamophobic rhetoric expressed by President Trump and his administration both pre-and post-election on the emotional health of Muslim-Americans. Although, there is much research conducted looking at how discrimination can affect mental health, this review examines religious discrimination and its effect on emotional health. Islamophobia, operationalized is discrimination against the religion of Islam. After analyzing the literature, three themes emerged which are racial and ethnic discrimination, media representation and hate crime trends. The theoretical framework informing this review is the Minority Stress Theory. The Minority Stress Theory describes chronically high levels of stress faced by members of stigmatized minority groups.

Abstract # 7

Bakundukize, Emmanuel

Warren Burggren, PhD

Major: Biology

Poster

Room: 314 C

Time: 1:30:00 PM

University of North Texas

Transgenerational Epigenetic Inheritance of Morphological Traits in the Brine Shrimp, Artemia franciscana

In changing ecological environment, the organisms evolve epigenetic changes that can bring selective advantages and contribute to the natural selection. Starting the summer 2017; under McNair Scholar Program funds at University of North Texas (UNT), this research project has been conducted to test and assess the survival, physiological resistance as responses to varying and non-ideal salinities, and transgenerational epigenetic inheritance of morphological traits in brine shrimp. First, the population of brine shrimp (*Artemia franciscana*) was exposed to varying salinities (10, 20, 30, 40, 50 to 90 ppt of Instant Ocean® Sea Salt) as adults. Then, their offspring were: 1) assessed for morphological changes and 2) tested with varying salinities for survival and physiological resistance to non-ideal salinities. Preliminary findings have supported our hypothesis that the brine shrimp can adapt and reproduce despite the harsh conditions of severely hypersaline environments imposed to their development. Furthermore; once exposed for long time, the brine shrimp are being tested for development of traits that can be transmitted from generation to generation.

Abstract # 8

Barbosa, Karina

Jim Kennedy, Ph.D.

Major: Ecology for Environmental Science

Oral

Room: 382A

Time: 10:00:00 AM

University of North Texas

Odonate Development Across an Urban Pond Gradient

Dragonflies and damselflies, both belonging to the family Odonata, are one of the most prolific and easily recognized aquatic insects. There are a little over 5,000 species of dragonflies worldwide and 40 different ones just within Denton. Current taxonomic keys allow identification to species level in the imago stage and the later instar stages of the nymphs. However, none exist to the species level for the earlier developmental stages. To differentiate the regional species of Odonata, nymphs eggs collected from ovipositing females are being reared to adults in the laboratory. This process takes between six to eight weeks, but is variable dependent on the photoperiod and temperature. Morphological changes and general observations are documented weekly in the developing nymphs. Cast nymph exuviae are collected after each molt. As part of this study, adult Odonata collected from six ponds, chosen as a representative urban gradient, within the City of Denton were analyzed for body size and wing asymmetry. Changes measured in the asymmetry measurement are being assessed as a tool for bioassessment of Odonata.

Abstract # 9

Bard, Asja

Kristin M. Szylvian, Ph.D.

Major: History and Government

Oral

Room: 381

Time: 10:00:00 AM

St. John's University

Operation Breakthrough: The Program that should have Marked Change for the Growing American Housing Industry and the Repressed Minority Citizenry

This study examined how Operation Breakthrough, a federal demonstration program set up to develop and establish industrialized housing construction methods in 1969, ultimately failed only five years later, in 1975, because many American citizens who worked in the varying fields of the housing market refused to be inclusive to black workers, homebuyers, and so forth, causing one of the main purposes, and ultimately the program, to crumble. While the program was not completely a failure because it did open a window to politically and socially discussing 'fair housing' in the 1970s as well as innovate new forms of housing construction, its end signaled towards America's current housing discrimination, economic segregation, and general racial division of low and high-level housing.

Abstract # 10

Barrera, Maribel

William Acree, PhD

Major: Chemistry BS

Oral

Room: 338

Time: 10:25:00 AM

University of North Texas

Development of Abraham model correlations for describing the transfer of molecular solutes into propanenitrile and butanenitrile from water and from the gas phase

Experimental solubilities were measured for 20 crystalline organic solutes dissolved in propanenitrile and for 13 crystalline organic solutes dissolved in butanenitrile at 298.15 K. Infinite dilution activity coefficient data for solutes dissolved in propanenitrile and butanenitrile have been compiled from the published chemical and engineering literature and converted into gas-to-liquid partition coefficients and water-to-organic solvent partition coefficients through standard thermodynamic relationships. Abraham model correlations were developed for describing solute transfer into both propanenitrile and butanenitrile by combining our measured solubility data with the partition coefficients that we calculated from the published activity coefficient data. The derived Abraham model correlations were found to back-calculate the observed partition coefficients and molar solubility data to within 0.14 log units.

Abstract # 11

Barrera, Maria

Masha Gartstein, PhD

Major: Kinesiology and Psychology

Oral

Room: 385A

Time: 10:50:00 AM

Washington State University

Studying infant temperament: effects of maternal pregnancy-related anxiety

The purpose of this study is to examine the relationship between maternal prenatal health and infant outcomes, focusing on pregnancy-specific anxiety and infant temperament. Pregnancy represents a unique opportunity for information to be transmitted to the offspring. That is, maternal anxiety impacts the fetus by activating the stress response, changing maternal physiology and inter-uterine environment in turn. Understanding the linkage between mothers' pregnancy-specific anxiety and infant temperament outcomes is important because temperament attributes set the stage for later psychopathology, offering either risk or protection. If maternal pregnancy-specific anxiety is linked with increased reactivity and poorer regulation as expected, children exposed to maternal symptoms in-utero are likely to experience emotional/behavioral issues of their own. Using a correlation design, we will follow women from the 3rd trimester until the infants' 2nd month of life, in a short-term prospective longitudinal study. Mothers will answer questions regarding anxiety: fear of giving birth, bearing a handicapped child, and appearance concerns during pregnancy, at 36-weeks, also providing information concerning infant temperament: negative emotionality, positive affectivity/surgency, and regulatory capacity/orienting. Minimal research has been performed regarding this topic with humans to date, and the present study is expected to make an important contribution to this emerging field.

Abstract # 12

Beltran, Alberto

Dr. Kristin Edquist

Major: international Affairs

Oral

Room: 385A

Time: 11:15:00 AM

Eastern Washington University

Venezuela's Economic Meltdown and Road to Recovery

Venezuela, once a robust economy in Latin America, has changed since Hugo Chavez was elected president. His radical economic and political moves raised some eyebrows on the American continent. Chavez was very clear during his tenure about his discontent with open market policies, and he then decided to implement state-oriented economic ones. These changes created an economic bubble which burst with the recent drop in oil prices, exposing the weakness of its non-oil infrastructures and industries. This paper analyzes Venezuela's dilemma of how to grow its infrastructure and industries, and contends that it should target two specific fronts. First, Venezuela must reform its economic policies by encouraging Foreign Direct Investments (FDI) via mimicking the structural changes that China did decades ago by opening up to FDI, while protecting its national interests. One way of doing so is by protecting against massive repatriation funds, while giving those investors protections and guarantees. The second front involves the creation of a Sovereign Wealth Fund similar to the one created in Norway. These two fronts can be only successfully addressed by the strengthening and autonomy of Venezuela's institutions. Ultimately, I argue that non-oil-dependent economic growth is achievable in Venezuela.

Abstract # 13

Campbell, Dominique

Kyle, Jensen, Ph.D

Major: English Rhetoric and Writing

Oral

Room: 381

Time: 10:25:00 AM

University of North Texas

Systematic Degradation - A Rhetorical Analysis of the Supreme Court Vetting Process

During the Supreme Court vetting process, Senators conduct hearings to determine who they deem suitable to serve lifetime appointments and rule on cases that determine the laws of our country. Considering that these Senators are elected representatives of the American people, by studying the vetting process we can gain insight into the core values of the American society. Although there are a plethora of values one could focus on to evaluate our society, I chose to focus on gender by conducting a rhetorical analysis of Elena Kagan's confirmation hearing. The content of the hearings reveals that Kagan, despite her accomplished legal background, is still being evaluated based on her gender rather than her legal qualifications. The vetting process is designed to evaluate the legal qualifications of a candidate and yet the Senators are using historical, stereotypical tropes about women such as the deceitfulness or irrationality of women.

As elected representatives of the nation, these Senators' actions are indicative of the nation, so if a candidate with the utmost qualifications can be questioned on her ability to make rational decisions after a lifetime career dedicated to law, then it becomes clear that these perceptions of women go beyond just Elena Kagan. With a current administration that seems to deem women unsuitable for holding distinguished government positions, it is imperative that we critically evaluate the role gender plays in this vetting process.

Abstract # 14

Castaneda, Krystalynn

Mariela Nunez-Janes, Ph.D.

Major: Anthropology

Oral

Room: 385A

Time: 11:40:00 AM

University of North Texas

Latina Asylum Seekers

This study examines the personal impacts that applying for asylum has on individuals and their stories of migration. Asylum is one form of relief immigrants can apply for based on credible fear of returning to their country. The goal is to present the perspectives of asylum applicants often unacknowledged in public and legislative debates about immigration. The study was carried out through observations at a pro se legal clinic, open-ended interviews with two Central American women in different stages of the asylum process, and open-ended interviews with five clinic volunteers. The women's interviews were transcribed, coded and compared to the narratives expressed in the asylum application. The volunteers' interviews were transcribed and coded to identify and gaps between the volunteer's and applicant's expectation of the application process. The preliminary findings indicate that the woman further along in her application process was able to share more information regarding her emotions throughout her experienced persecution, interactions with ICE agents and judges, and daily stresses. Comparatively, the other participant shared limited responses regarding the same themes. This work will contribute to the scholarship on migration by documenting the impact that asylum policies have on the lives of Central American women seeking asylum.

Abstract # 15

Ceville, Solana

Sophia Morren, Ph.D.

Major: Psychology

Oral

Room: 385A

Time: 1:30:00 PM

University of Oklahoma

The Effects of Bystander Education on Preventing Sexual Assault

The 'bystander effect' is when individuals fail to take action in an emergency situation when in a group setting (Darley & Latane, 1968). This concept is relevant to situations of sexual assault on college campuses, which are often associated with the unique group setting of parties. Research shows that "between one-fifth and one-quarter of women are the victims of completed or attempted rape while in college" (Armstrong et al., 2006). In the past decade, researchers and higher education professionals have utilized bystander education to help prevent sexual assault on college campuses. This project critically reviews the history of the bystander effect from development of the concept to current studies. I conclude that the use of bystander education on college campuses is effective in helping prevent sexual assault.

Abstract # 16

Clymer, Robin

Dr. Williams

Major: Medical Physics

Oral

Room: 338

Time: 10:50:00 AM

East Central University

The Effects of Temperature on the Attenuation Coefficient of Ultrasound

Attenuation is an important property of ultrasound that must be known for its different applications, such as food processing and medical imaging. This property factors in the amount of energy lost with distance traveled (Williams, 2017). I observed the effects of temperature on the attenuation coefficient of ultrasound. Due to the diverse properties of oils, I expected to see a connection between temperature and the attenuation. With the results, I hope to inform future users of ultrasound of an important factor that should be considered when determining a medium's attenuation coefficient. Using an Ultrasonic Echoscope, a 4 MHz frequency transducer, and a computer with A-Scan software, I obtained different values of factors found within Beer's law: $A_2 = A_1 e^{(-\alpha F(2x))}$. I repeated this at a range of depths and temperatures to solve for multiple attenuation coefficient values, αF . With Graphical Analysis, I plotted multiple attenuation coefficient vs temperature graphs at small temperature intervals. Once I collected all my data and composed the graphs, I observed that though there is a connection between the attenuation coefficient and temperature, there needs to be a broad range of temperatures for this to be seen. I accomplished this by using: sunflower oil, coconut oil, and corn oil.

Abstract # 17

Collins, Noah

Susan Ryan, Ph.D.

Major: Anthropology

Oral

Room: 385A

Time: 1:55:00 PM

University of Oklahoma

Was your Grandmother a Cherokee Princess? A multifaceted examination of Native Identity

There is a difference between the methods used to include members of a Native American community in the modern day versus the practices that existed pre-European influence. Before European influence, there were far fewer selective processes in place to filter who was and was not a member of the community. These pre-Euro processes tended to be more social, such as in the cases of the Navajo, Hopi, and Zuni Nations. After European influence the methods used to determine an individual's indigeneity became focused on "biological identity". Some of these methods include mitochondrial DNA (mtDNA), nuclear DNA, and blood quantum. Biological identification systems are often applied in an arbitrary manner and have negative cultural implications for Native American communities. In reality, Native American identity is variable depending on the tribe and falls on a scale, creating cultural insiders and outsiders of different degrees. The methods used for this research project were a combination of literature comparisons, participant observation, and personal communications. The most important sources for relevant information were personal communication and participant observation.

Abstract # 19

Cruz, Katheryn

Wonbong Choi, Ph.D., Mumukshu Patel, Jihun Kang, Juhong Park, Eunho Cha

Major: Chemistry

Oral

Room: 382B

Time: 10:50:00 AM

University of North Texas

High performance supercapacitor based on two-dimensional molybdenum ditelluride (MoTe₂) Film

Two-dimensional (2D) layered transition metal dichalcogenides (TMDs) materials have unique physical and chemical properties which make TMDs a promising candidate as an electrode for supercapacitors. Supercapacitors have advantages over other energy storing devices such as excellent power density, fast charge and discharge times, long life cycle, and relatively low cost. Development of 2D TMDs and their fabrication techniques, for high capacitance supercapacitor electrodes will provide new opportunities for high efficiency supercapacitors. 1T'-MoTe₂ has favorable electrochemical properties due to the overlap of energy bands near the Fermi level, and is semimetallic which aids in the conductivity, making 1T'-MoTe₂ a promising electrode material in supercapacitors. Here, we have grown molybdenum ditelluride (MoTe₂) directly onto molybdenum using a magnetron sputtering technique. The synthesized electrodes were then used in a double-layer supercapacitor configuration using a gel electrolyte/separator made of PVA and LiOH between the two electrodes. The configuration provides a small, flexible energy storage option that would be ideal for future flexible, wearable electronics. The supercapacitor has shown an areal capacitance of 35.21 mF/cm² for a sample of 450nm thickness. An efficient MoTe₂ electrode for supercapacitors could open a new area of high-efficiency flexible energy storage devices.

Abstract # 20

Dadeboe, Ian

Daniel Taylor, PhD

Major: Chemistry

Oral

Room: 385A

Time: 2:45:00 PM

University of North Texas

Sleep characteristics and dropout rates in college students

Introduction:

Previous studies have linked sleep variables like insomnia, sleep duration, and chronotype to academic performance and retention. However, to date no study has examined these sleep factors as a predictor of college degree completion. The current study seeks to understand the relationship between insomnia, sleep duration (mean and variability), and chronotype as predictors of college degree completion after controlling for cumulative grade point average (GPA).

Methods:

Participants were 543 college students (76% female; mean age 20.7 years [SD = 3.7]) who were administered a paper-and-pencil psychosocial questionnaire battery including the Insomnia Severity Index and a reduced Morningness-Eveningness Questionnaire. Sleep duration was assessed with one week of daily sleep diaries, and both mean and standard deviation were used in the model. Degree completion information and GPA was obtained from the registrar's office.

Results:

The omnibus logistic regression was significant, $F(5,537) = 16.7$, $p < .001$ and accounted for 13.5% of the variance in degree completion ($R^2 = .14$). The only meaningful predictors were variability in total sleep time ($\beta = -.16$) and GPA ($\beta = .29$).

Conclusion:

Surprisingly, the results demonstrated greater variability in total sleep time was related to higher likelihood of earning an undergraduate degree, which may reflect study habits, lower vulnerability to sleep loss, or greater sleep flexibility. Mean sleep duration, chronotype, and insomnia symptoms were not significant predictors of degree completion. These results highlight the importance of examining variability in sleep variables in predicting outcomes. Future research should use a combination of objective and subjective measures to explore the impact of sleep factors including variability on degree completion and other important academic metrics.

Abstract # 21

Delwel, Isabel

Lee Hughes, PhD

Major: Biology

Oral

Room: 382A

Time: 10:25:00 AM

University of North Texas

Mapping the genetic basis of super restrictors in antiviral protein MxA

The innate arm of mammalian immunity encodes hundreds of antiviral proteins that act cell-autonomously to block viral replication, often by binding virally encoded proteins. To respond to rapid viral evolution, antiviral genes evolve at an accelerated rate. Signatures of diversifying selection can be used to successfully predict antiviral protein surfaces that are used to recognize viral pathogens. Functional studies have demonstrated that the binding specificity to viral targets is governed by only a few rapidly evolving residues at the interaction interfaces. Previously, studies showed that single amino acid residue changes in positively selected residues of Loop L4 dictate the antiviral specificity of the broadly antiviral protein, MxA. A library of human MxA variants that encode every possible five amino acid combination at the rapidly evolving sites in L4 were assessed for their antiviral functionality against the Thogoto virus (THOV). The screen revealed that all active MxA variants (~5%) had a strict preference for phenylalanine (F), tryptophan (W) or tyrosine (Y) at position 561. A rare set of variants with enhanced antiviral activity against THOV when compared to human MxA was found. To determine the genetic basis of super restriction, we generated the intermediate sequence variants between WT human MxA and the super restrictors and assessed their functionality in the THOV replication assay. Use of combinatorial mutagenesis in residues subject to diversifying selection during evolution could provide a means to potentially increase antiviral efficacy of proteins like MxA, for therapeutic use.

Abstract # 22

Duenas, Crystal

Brenda Barrio, PhD

Major: Psychology

Oral

Room: 381

Time: 3:35:00 PM

Washington State University

Examining Teacher's Mindset and the Effects of their Implementation of the Response to Intervention Model on their Students

Carol Dweck's mindset theory has set up the foundation for students' educational success. Mindset is a theory based on the concept that intelligence is not just about genetics. The way an individual perceives society, an activity, or tasks can be all be predictors of how an individual will grow as an academic learner. Mindset can be a concept used to shape young minds, an influencer to those minds can be evaluated in educators as students' core values are exposed to them in the classroom setting. Exploring the mindset theory in relation to teachers' implementation of RTI can lead to better understanding of the RTI model's success. Following Dweck's mindset theory, this research study seeks to explore if general and special education teachers' mindsets and their belief in the Response to Intervention (RTI) model have any relationship with student expectation. More specifically, we seek to investigate if there are any barriers in teachers' mindset as it relates to the implementation of RTI as students receive the intervention. Differences between general education and special education teachers will be a key component of this research. A review of the current literature will be further discussed.

Abstract # 23

Elliott, Taqiyyah

Dr. Khara Turnbull

Major: Political Science

Oral

Room: 381

Time: 4:00:00 PM

Xavier University of Louisiana

Beyond the Preschool Classroom: How Family Involvement Relates to Task Engagement by Poverty Status

Early childhood education research exploring children's engagement in learning tasks in the classroom, typically considers such classroom-level factors as the provision of engaging learning materials and the quality of teacher-child interactions (Battistich et al., 1996; Bredekamp & Copple, 1997; Kern & Clemens, 2007). Although research suggests positive connections between family provision of educational practices in the home and specific aspects of school readiness, such as literacy, math, and social skills (e.g., Van Voorhis, Maier, Epstein, & Lloyd, 2013), there is limited research concerning how family provision of educational practices relates to children's engagement in learning tasks in the preschool classroom, and how that might vary as a function by poverty status. The present study addresses these gaps, in part, through the following two aims: 1) To examine the extent to which family providing educational practices relates to preschool children's observed task engagement and teacher-reported learning behaviors, and 2) To determine whether and how these associations differ by poverty status.

Abstract # 24

Escamilla, Edward

Dr. Shahla Ala'i-Rosales

Major: Computer Engineering

Oral

Room: 382B

Time: 11:15:00 AM

University of North Texas

Bluetooth Bracelet for victims at risk of human trafficking

Human trafficking is the modern day slavery. Every year, millions of people are trafficked in many countries around the world. Currently, there aren't many solid protocols to prevent human trafficking. We are proposing a to create method to combat human trafficking by equipping those who are at risk of human trafficking, such as those who are living in shelters, unstable homes, or homeless, with bracelets that have an integrated Bluetooth module that will serve as a type of beacon. These bracelets are activated when excessive force is detected or manually whenever the victim feels like they are unsafe. By using the IBeacon protocol, we can detect these beacons, determine their location, and send the information to the appropriate authorities. This could in turn help reduce the number of human trafficking cases while additional combat methods are being developed.

Abstract # 25

Evans, Sha'Kurra

Kyle Burgason, Ph.D

Major: Sociology

Oral

Room: 385A

Time: 3:10:00 PM

Iowa State University

Race, Public Opinions, and Capital Punishment

Public opinions in support of capital punishment contribute to the perpetuation of the death penalty in the United States. Previous research has shown that race is “the demographic characteristic that most distinguishes death penalty proponents from opponents” (Bohm, 2012, p. 448). This notion, in addition to the influence of public opinions favoring capital punishment, illustrates the relationship between race and American death penalty legislation. This study examines the relationship between racial group membership and public opinions about capital punishment. To analyze this relationship, the study utilized a series of vignettes with specific focuses on the influence of the race of the victim as well as the offender, living in an abolitionist compared to a retentionist state, and general knowledge about the application of capital punishment in the U.S. It is hypothesized that White respondents will be more influenced by the race of the victim and the offender when selecting a sanction for murder. It is also expected that White respondents living in a retentionist state will more likely favor capital punishment than those living in an abolitionist state. The final anticipated finding is that respondents who are more knowledgeable about capital punishment will be less likely to support it.

Abstract # 26
Faciane, Natalie
Dr. Morris
Major: Biology

Poster
Room: 314 C
Time: 1:30:00 PM
Xavier University of Louisiana

Feasibility Studies of Cyclooxygenase-2 inhibition based drugs in Transdermal Delivery System

The main problem of drug delivery lies in the penetration of cellular membranes. The development of agents that can cross the epidermis membranes and deliver therapeutic agents through transdermal delivery has attracted favorable increased attention. Transdermal drug delivery offers advantages over injectable and oral routes by increasing patient compliance and avoiding the first-pass metabolism, respectively. However, at present, a limited number of marketed transdermal delivery patch dosage forms exist. This is largely due to the challenge of transmitting acceptable levels of drug absorption through the skin. The recent renewed interest in this dosage form is fueled by a number of innovations. Many focus on ways to enhance transport of the drug through the epidermal layer of the skin.

Our current research focuses on the preparation and testing of transdermal patch technology followed by efforts to optimize formulations of meloxicam and celecoxib. Both of these drugs have demonstrated excellent cyclooxygenase-2 enzyme inhibition resulting in analgesic/anti-inflammatory properties. The objective of this study is to compare in vitro permeability of a preliminary “drug-in-adhesive” meloxicam patch formulation to a meloxicam topical gel formulation that contains polaxamer 407. The purpose of this work is to generate baseline data from these two dosage forms that will aid our optimization efforts in developing a commercializable topical dosage form of meloxicam and/or celecoxib.

Abstract # 27

Finley, Jacob

Krishnan Shankar, Ph.D.

Major: Mathematics

Oral

Room: 382B

Time: 3:10:00 PM

University of Oklahoma

Exploring Board Games and Choice Management

Games at their core are a series of actions and payoffs, and depending on the game, these actions can vary. Sometimes player action is expressed through entirely chance events, such as dice rolls or card draws. Sometimes players are able to make a deliberate choice or series of choices, called strategy, such as in the placement of a piece or movement of a pawn. Other times games may feature a hybrid of the two; allowing for the player to make active choices that then may have elements of chance incorporated within them. Within mathematics, games are used as a way of studying and understanding choice in an environment of clearly stated options and possible payoffs or outcomes. Games range from the purely abstract non-chance variety, called pure strategy, to real world environments where situations are abstracted into a series of possible actions and payoffs for 2 or more 'players', or groups, either in direct or indirect competition. Most popular board games, such as Monopoly or The Settlers of Catan, feature some direct player choice, but rely heavily on chance actions, namely in dice rolls at the start of every turn. However, there is a subgenre of board game called 'euro-style', or German style, that is characterized by an emphasis on indirect competition between players, very little or no chance elements, and some theme or setting that ties together the game and all the actions. As a whole, euro-style games don't look much like their more popular counterparts, but, more closely mirror a real world game situation with defined possible actions and payoffs, much like a mathematical model. From this I took inspiration to study the euro-style board game Trajan to hopefully understand how it models balancing a series of actions and efficient time usage.

Abstract # 28

Garcia, Veronica

Anne Cox, PhD

Major: Sport Science

Oral

Room: 385A

Time: 3:35:00 PM

Washington State University

Examining Mindfulness and Body Image in the Context of Yoga

In previous studies, negative body image has been associated with low self-esteem, eating disorders, and mental illnesses. Many young girls are dissatisfied with their bodies, even at an early age, and this has been shown to continue and worsen over time. Individuals with negative body image have a tendency to have adverse thoughts about their body and appearance. The purpose of this study is to examine the relationships of mindfulness and self-compassion to body surveillance and body appreciation in women during a 16-week yoga course. It was hypothesized that higher mindfulness during yoga classes and greater increases in self-compassion will predict decreases in body surveillance and increases in body appreciation over the 16 weeks. Understanding the relationships among these variables is essential so that women can begin to work on implementing strategies that would support more positive body image.

Abstract # 29

Garza, Stormie

Daniel Taylor, Ph.D

Major: Biomedical Engineering

Oral

Room: 382B

Time: 3:35:00 PM

University of North Texas

Relationship between Sodium and Cholesterol Levels, Insomnia and Sleep Parameters in College Students

Previous studies have demonstrated a relationship between sleep patterns and objective health markers, such as serum lipids, lipoproteins, and body mass index. These studies have primarily investigated these characteristics in working adults and school-age children, but to our knowledge none have examined the emerging adult population. The purpose of the current study is to examine the association between sodium and cholesterol levels and insomnia in college students. College students demonstrate unique sleep patterns and previous studies have shown that they have a very high prevalence of sleep disturbances. Using regression, analysis was conducted on a dataset consisting of sleep duration, insomnia status, and their interaction as the independent variables, and cholesterol and sodium as the dependent variables. The results of this study demonstrated little to no association between the independent variables (sleep duration and insomnia status) and the dependent variables (sodium and cholesterol). There are several potential explanations for these null results, such as restriction of range due to the general health of college students. In the future, the study can be broadened to include a broader range of health status in this population or focus on other indicators of healthy function.

Abstract # 30

Gonzalez, Nicholas

Dr. MJ Morgan

Major: History

Oral

Room: 381

Time: 10:50:00 AM

Kansas State University

The Dispute for Land: The Erie Canal, Iroquois, and New York State

This research shows how the land attained for the creation of the Erie Canal affected the Iroquois Indians living in the area during the eighteenth and nineteenth centuries. It also examines how the Euro-American settlers were affected by the Canal and its construction. The author used maps, government documents, New York county histories, books, articles, letters, treaties, speech transcripts, gazetteers, immigration data, census data, and first-person accounts during the research process. Although the Erie Canal was a great achievement for the United States, its effects were permanently felt by the Euro-American settlers and Iroquois people who got in its way.

Abstract # 31
Goodes, Lauren

Major: Neuroscience

Poster
Room: 314 C
Time: 1:30:00 PM
Xavier University of Louisiana

Increased Default Mode Network Functional Connectivity in Individuals with Greater Meditative Experience

In those that have practiced mindfulness meditation over a long period of time, research suggests increased functional connectivity within the default mode network (DMN) between dorsomedial prefrontal cortex and right inferior parietal lobule. The current study examined the relationship between resting-state functional connectivity of the DMN and meditation experience in 40 subjects (M=20; F=20) from the Nathan Kline Institute Rockland-Sample. Subjects ranged in age from 20-40 (M=30.1 SD=5.5) who provided a self report measure of their experience with meditation. SPM12 and the CONN toolbox were used to preprocess subject brain data and conduct functional connectivity analyses, using self report scores of meditation experience as a covariate across subjects. DMN regions were selected as seed regions. Results from this study indicate that increased meditative experience is correlated with an increase in functional connectivity of the right superior parietal lobule with both the right and left nucleus accumbens. Previous research of persons in the meditative state has identified alterations in activity of the superior parietal lobule, potentially related to its function of awareness of the self in spatial relation to one's surroundings. Nucleus accumbens involvement may be a novel finding associated with meditation and is intriguing in light of its associating with reward processing. Data here supports that more experienced meditators show greater functional connectivity between brain regions that are involved in reward and self-awareness. Future work will seek to replicate these results in a larger sample and investigate potential similar correlations with various reward-related regions.

Abstract # 32
Guerrero, Bryan
Rita M. Patterson, Ph.D.
Major: Biomedical Engineering

Oral
Room: 382B
Time: 11:40:00 AM
University of North Texas

Using Motion Analysis to Model the Effects of Deadlifting on the Spine

Deadlifts are one of the most well-known exercises that strengthen and target the back, gluteus maximus, and leg muscles. Deadlifts provide a wide range of benefits to athletes, bodybuilders, and everyday people trying to increase the strength and size of their lower back muscles. Although is a great way to strengthen a person's back and leg muscles; they also come with the risk of injury to the lifter. This research will focus on analyzing the effects of deadlifting on the vertebrae of the spine by specifically focusing on L5, S1, T8, and T9. The techniques this study will focus on is the sumo deadlift, hack lift, Romanian deadlift and the conventional deadlift which is the most common. Data will be collected using the Motion Analysis hardware and software (Motion Analysis Corp, Santa Rosa, CA

Abstract # 33

Gutierrez, Julian

Loranel Graham, PhD

Major: Psychology

Oral

Room: 385A

Time: 4:00:00 PM

Our Lady of the Lake University

The Effect of Emotional Regulation in Attentional Bias

Mental health concerns have increased over the past two decades due to the increase of domestic terrorist attacks, drug use, and suicides in the United States. Psychologists have developed new strategies for improving overall well-being such as cognitive behavioral therapy and expanded research on emotional regulation (Gross, 2014). Emotional regulation is the ability to accept and identify emotions/feelings as they occur in one's life. The Difficulties in Emotional Regulation Scale also indicates that emotional regulation does have a significant impact in mental health, and that this may be affected by attention bias due to difficulties in disengaging or shifting focus from threatening stimuli (Yiend & Mathews, 2001) while also increasing levels of anxiety and depression.

The purpose of this study then, is to examine the variables of emotional regulation and attentional bias. It was predicted that participants who have difficulty with emotion regulation would show an attentional bias to emotion or threat information compared to individuals who have less difficulty with emotion regulation.

Abstract # 34

Hamilton, Javonna

Major: Psychology

Poster

Room: 314 C

Time: 1:30:00 PM

The University of Texas at Austin

Impostor Syndrome: Effects on the Black College Student Mind

The Impostor Phenomenon has been widely studied across different fields, yet there is a lack of literature that covers the phenomenon within African American college students. Black students deal with minority status stress in addition to typical college stress. This secondary analysis looks at the impostor phenomenon in African American college students and examines its relationship with depression, anxiety, and academic performance.

Abstract # 35

Handley, Demond

Majid Jaber-Douraki, Ph.D.

Major: Mathematics

Oral

Room: 382B

Time: 4:00:00 PM

Kansas State University

Mathematical Modeling of Dermal Absorption of Natural Compounds

Parameter estimation is an important part of mathematical modeling, especially in the case of dermal absorption where rates must be determined for measurement of the permeant as it penetrates from one layer of the next over a predetermined period. This study is concerned with the estimation of flux parameters concerning a Physiologically Based Pharmacokinetic Model. The model consisted of a system of ordinary differential equations designed to measure concentration permeant over time. We have estimated the flux parameters for measuring the dermal absorption of fourteen natural compounds along with the control ethanol. We also determined the percent flux as the permeant passed through the stratum corneum and dermis. One the parameters are optimized, we then performed sensitivity analysis to determine which parameters had the most effect on the output of the model. Seven parameters were optimized during this study. After sensitivity analysis, we determined if this model is efficient in predicting the absorption of natural compounds into the skin.

Abstract # 36

Harrison, Rashad

Dr. Jason Shelton

Major: Sociology

Oral

Room: 385A

Time: 4:25:00 PM

The University of Texas at Arlington

The Intersections between Social Class, Marital Status, and Family Composition among African Americans

This article explores the marriage rate among African Americans and the root causes for its decline. The 1965 Moynihan Report boosted the debate on what has caused marriages among African Americans to wane more than other American racial or ethnic groups. Notable sociologists have argued that the reasons for the decline are due to cultural obstructions, while others have asserted that it is rooted in slavery and segregation. There have been multiple publications on the social class, marital formation, and the family structures of African Americans, which researchers have used for their argument. Data from the 1972-2016 General Social Survey (GSS) is used to answer questions on how African Americans could counteract the marriage decline, while also examining their education level and family composition in comparison with Whites. Results indicate that the more African Americans achieve a higher education, the more the marriage gap closes.

Abstract # 37

Hayden, Daniel

Laura Bartley, Ph.D.

Major: Plant Biology

Oral

Room: 382A

Time: 10:50:00 AM

University of Oklahoma

Rice Cell Wall Components Alter Beneficial Fungal Colonization

Cereal crop productivity is critical for producing food, feed, fiber, and industrial chemicals for a growing population. Arbuscular mycorrhiza (AM), a beneficial plant-fungal interaction in roots, influences productivity in plants while increasing tolerance to environmental stresses. Grasses, including cereals, contain an abundance of the phenolic compound Ferulic Acid (FA) that crosslinks sugar polysaccharides of the cell wall structure and increase cell wall integrity. FA crosslinks could act as a physical barrier to AM fungi and reducing FA crosslinks could increase AM colonization. This experiment tested the hypothesis by inoculating the rice mutant AT10-D1, with 60% less FA, with AM fungus *Rhizophagus irregularis*. After 3 weeks, AM colonization increased significantly in pooled AT10-D1 plants by 1.5-fold. Furthermore, lateral roots, roots grown from the main roots and most colonized by AM fungi, did not exhibit an increase in AT10-D1 as seen in wild-type plants. Assuming most colonization occurred on the lateral roots, the calculated ratio of AM colonization to lateral root number for AT10-D1 increased by 2-fold. These results indicate that AM colonization in AT10-D1 may be greatly enhanced in the lateral roots due to the reduction of FA crosslinking, facilitating AM fungal root penetration and association. Cereal crops with enhanced AM formation might attain higher productivity and better survive the environmental stresses that are becoming more apparent through climate change.

Abstract # 38

Hobbs, Jordan

Dr. Kelly Carerro

Major: Psychology

Poster

Room: 314 C

Time: 1:30:00 PM

Texas A&M University - Commerce

Art as a Coping Skill for Adults with Elevated Anxiety and Autism Spectrum Disorder and/or Intellectual/Developmental Disabilities

Art therapy is an Emerging approach for people with mental health concerns. This poster will present results of a study examining methods for teaching adults with autism and/or intellectual /developmental disabilities how to identify when they are experiencing anxiety and the effectiveness of using art-based activities to decrease anxiety.

Learner Outcomes:

- Participants will be able to describe the approach to teaching adults with ASD and/or IDD how to identify when they are beginning to become anxious.
- Participants will be able to list and describe the empirical support for using art-based therapy for people with elevated anxiety.
- Participants will be able to describe the effectiveness of using art-based activities to describe anxiety for adults with ASD or IDD and elevated anxiety.

Abstract # 39

Hughes, Kody

Brian Ayre, PhD

Major: Biochemistry

Poster

Room: 314 C

Time: 1:30:00 PM

University of North Texas

Upland cotton (*Gossypium hirsutum*) bast fiber modification

Cotton, like hemp, jute, and kenaf, produces long fibers in the bast layer of stalks. These fibers are left to rot in the field after the bolls are harvested because the high lignin content makes them too stiff for many textile uses. However, silencing the genes required for lignin biosynthesis should result in more supple fibers, thereby creating a new source of green-economy fibers and increasing agricultural profit.

Abstract # 40

Jasper-Morris, Auriel

Dr. Amelia Talley

Major: Psychology

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

Perspective Taking and Relationship Advice

The objective of the current research was to test whether a friend's advice to leave an abusive relationship would change depending on their motivational perspective. We also sought to examine which aspects of the abusive relationship might alter the advice given. MTurk workers (N=626) were randomly assigned to an ecosystem or egosystem motivational manipulation, read over a vignette, and completed the Ready to Go Scale (Jasper-Morris, Anderson, Vincent, & Potts, 2017). Results confirmed the hypotheses. The findings provide insight as to how different motivational perspectives alter a person's readiness to give advice to leave an abusive relationship.

Abstract # 41

Jesse, Sean

Dr. Wells

Major: Mathematics

Oral

Room: 382B

Time: 1:30:00 PM

East Central University

Radio Waves to Electricity: Tesla's Blueprint

The main source for this project came from a blueprint from Nikola Tesla's designs that was presented online along with the main parts needed, which is what I have based most of my build on. The objectives of this project included first being able to confirm that it was possible to create electricity (direct current in this case) by means of converting radio waves through the device created, optimization of the creation to produce a better range of electricity generated, and then powering something with said energy with potential conversions using a transformer.

Abstract # 42

Johnson, Jaleese

Dr. Ariela Schachter

Major: Sociology

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

Are You In Or Out? How Social Groups Shape Opinions Towards Immigrants and Refugees

Previous research investigates American attitudes towards immigrants and refugees (Schachter 2016; Bullard 2015; Hainmueller and Hopkins 2015). Self-Categorization Theory and related literature looks at the way ingroups and outgroups shape opinions (Reicher, Spears, and Haslam 2010; Sindic and Condor 2014). This study aims to combine these two ideas and test whether individual's opinions towards immigrants and refugees are shaped by their ingroups' and outgroups' opinions. Also, using a survey experiment this study investigates how people rank and define their ingroups based on four social groups: Gender, Education, Generation, and Religion. Results will indicate the importance of how people identify themselves and their subsequent attitudes towards immigrants and refugees.

Abstract # 43

Jordan, Daisy

Armando Abney

Major: Criminal Justice

Oral

Room: 385B

Time: 10:00:00 AM

St. Mary's University

The impact of race and sex on media publicity of missing children cases

The purpose of this study is to examine open cases of missing children in Texas to assess differences in media publicity based upon gender, and race, specifically white and minority children. The study will also explore the media portrayal of minority and white females and test the "white women" syndrome of media selection bias. Cases (N = 64) from 2016 were randomly selected from the Texas Center for Missing and Exploited Children database and coded for gender, ethnicity (e.g., latino/a, white, black, and biracial), and the frequency of media portrayal in outlets including Facebook, Twitter, local news, articles, and television. Results indicate that minority children except for black children were more frequently publicized. In fact, biracial children were twice as likely to appear in news media outlets than black children. Comparisons between minority and white children indicate that overall white children, including white females are portrayed less often than most minority children.

Abstract # 44

Kelly, Rose

Stacey A. Passalacqua, Ph.D.

Major: Communication

Oral

Room: 385B

Time: 10:25:00 AM

The University of Texas at San Antonio

Child Abuse Factors Involving Communication Apprehension as a Conflict Management Strategy in Adult Romantic Relationships

This project explores existing research on the effects of various types of child abuses on adult romantic relationships and will be investigated within the context of what factors, if any, of child abuse may contribute to adult survivor's overall patterns of conflict management styles within the context of conflict avoidance, communication apprehension, and reasons for non-disclosure. During the course of adult romantic relationships stressors can occur where conflict regarding a variety of difficult subjects occurs. The ability to manage discussions with a partner has significant effects on the level of relational quality as well as serious physical, emotional, and mental health consequences. Previous and current scholarly research will be studied for factors ranging from severity and type of abuse to established predictors of disclosure versus nondisclosure, possible factors for disclosure apprehension and reticence, self-disclosure by topic or situation, and perceived levels of stress in dyadic communication. The literature suggests a positive correlation between the various abuses and increased difficulties applying healthy or positive conflict resolution strategies. Through assessing the literature, I have posed a suggestion for continued research on the impact of child abuse as it relates to the communication effects on romantic relationships.

Abstract # 45

Killingsworth, Tylor

Wilson Merchan-Merchan, Ph.D.

Major: Mechanical Engineering

Poster

Room: 314 C

Time: 1:30:00 PM

University of Oklahoma

Wettability Mechanisms of Nanostructures

This research was designed to study the surfaces of various types of leaves. Determined their structural characteristics and how those structures contribute to their wettability properties. The focus is to understand the type of morphology naturally present on the surface of a leaf and how may contribute for either of their hydrophobic or hydrophilic properties. The idea is to mimic these naturally formed structures into a synthetic application and to help understand the underlying mechanisms of hydrophobicity on surfaces. The surface of leaves from various plants were tested for their wettability and compared to each other. The contact angles of the droplets positioned on their surface were also measured and compared to the adaxial (top) and abaxial (bottom) surfaces. In order to test the hydrophobic properties, a drop of water was placed on each leaf/side and a picture was taken using a highly magnified camera. From these images, the contact angle was measured for each droplet. Larger contact angles correlate with greater hydrophobicity of the leaf. Microscale views of the leaf's surface morphology was observed using a light microscope, viewing the leaves at magnifications up to 6.6x. In order to further observe detailed characteristics of the leave, a scanning electron microscope (SEM) was used to observe the microstructures on selected leaf surfaces. The abaxial sides of each leaf was observed to have a higher contact angle than its' adaxial side. Leaves with microstructures present on the surface were observed as having a higher contact angle. Flat leaves, and leaves with disrupted microstructures, were observed to have smaller contact angles. Additionally, a high speed camera was employed to study the bouncing effects of droplets on selected leaves and on the surface of a hydrophobic fiber.

Abstract # 46

Landry, Bria

Dr. Robert Blake II

Major: Psychology Pre-medicine

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

The Effects of the Oxidation of Cytochrome 436/583 on the Aerobic Respiration of Acidiplasma aeolicum on Iron

Acidiplasma aeolicum falls into the category of weird extremophiles that lie within the Euryarchaeota phylum and, particularly, thrives at a temperature of 45C and a pH of 1.5. It is also one of the various forms of bacteria that gain pertinent energy needed for survival from the oxidation of iron. It was assumed that the data found, using the intact cells, would show that the reduced cytochrome436/583 is an obligatory steady state intermediate in the iron respiratory chain of this bacterium. We used an Integrating Cavity Absorption Meter (ICAM) to observe colored cytochromes within intact archaeal cells. This instrumentation allowed us to collect data related to the absorbance of the suspension of the intact cells that scatter light. We found that the cytochromes for Ap. aeolicum had absorbance peaks at 436 and 583nm in the reduced state. The results and observations agreed with our hypothesis that reduced cytochrome436/583 is a mandatory steady state in the iron respiratory chain for Ap. aeolicum. These findings allow for the advancement and continuation of the examination of intact cells without having to manipulate or disturb the live cellular environment, which is very complex.

Abstract # 47

Leon, Marcela

Chiachih Wang, Ph.D.

Major: Psychology

Oral

Room: 385B

Time: 10:50:00 AM

University of North Texas

Gender Role Ideologies, Attachment, and Intimate Partner Violence Attitudes among College Students

Traditional gender role ideologies (TGRI) and insecure attachment have each been identified to be positively correlated with attitudes condoning intimate partner violence (IPV). However, existing studies often fail to include variables that measures female gender role attitudes or exclude women from their samples altogether. Furthermore, no studies can be located that examined the possible interactional effect of TGRI and insecure attachment on IPV attitudes. The present study aims to evaluate the direct effect of TGRI on IPV attitudes, using a sample with both female and male participants and measuring both male and female gender role attitudes. The moderator role of adult attachment for the path between gender role ideologies and IPV attitudes was also examined. It was hypothesized that high TGRI would predict greater acceptance attitudes of IPV and that insecure attachment would moderate this relationship.

Abstract # 48

Leung, Caroline

Paul Marshall, Ph.D.

Major: Chemistry

Oral

Room: 338

Time: 11:15:00 AM

University of North Texas

Computational and Theoretical Studies of the Stability and Kinetics of NO₂ - Acetylene Intermediates

Collaborating with researchers at the Technical University of Denmark (DTU), our goal is to conduct computational studies to determine the stability and reactivity of short-lived molecules important in combustion chemistry, with a focus on the oxidation of acetylene by nitrogen dioxide (NO₂). Using computational methods implemented with the Gaussian 2009 and 2016 programs, we simulate and optimize potential molecular structures, observe energies of molecules, and connect transition states (TS) through various methods. From the data then gathered, we determine the possible reaction pathways of NO₂ with acetylene. We have determined that the optimum pathway, with the lowest overall energy barrier, begins with an attack by an O atom in the NO₂ to create an initial intermediate with a C-O bond which can then isomerize. The rate determining step is analyzed to determine the kinetics of this process.

Abstract # 49

Lopez, Brenda

Dr. Armando Abney

Major: Criminology

Oral

Room: 385B

Time: 11:15:00 AM

St. Mary's University

An analysis of sexual assault rates for Texas colleges and universities: A comparison of public and private institutions

The purpose of this study is to examine the sexual assault rates of private and public universities in Texas from 2004-2015. We analyze data from the Uniform Crime Reports; a database that gathers monthly reports from police agencies all around the United States and Texas. This study suggests that sexual assaults vary by type of institution. Specifically, private institutions reflect higher rates of reported sexual assaults than public institutions. However, this study suggests that over a twelve-year period rates of sexual assaults for both public and private institutions have decreased slightly. This may be due, in part, to the impact of the 1986 Clery Act that led to an increased emphasis on sexual assault prevention programs on college and university campuses. Future studies should analyze sexual assault data from college and university campuses in other states to see if the trends found in this study apply.

Keywords: rape, sexual assaults, uniform crime report, private and public colleges

Abstract # 50

Lusk, Hannah

Ruth Welti, Ph.D.

Major: Biochemistry

Oral

Room: 382A

Time: 11:15:00 AM

Kansas State University

Identification and Characterization of an Arabidopsis Mutant with Alteration of Chloroplast Glycerolipid Species

Hannah J Lusk¹, Madeline Colter¹, Sunitha Shiva¹, Mary Roth¹, Sujon Sarowar², Jyoti Shah², Timothy Durrett³, Kathrin Schrick¹, and Ruth Welti¹

¹Division of Biology, Kansas State University

²Department of Biological Sciences, University of North Texas

³Department of Biochemistry and Molecular Biophysics, Kansas State University

Lipid analysis of leaves from the Arabidopsis T-DNA insertion line Salk_109175C revealed a significantly decreased ratio between two monogalactosyldiacylglycerol molecular species, MGDG(18:3/16:3) and MGDG(18:3/18:3), as well as other chloroplast assembled lipid species alterations.. Salk_109175C has an insertion in the gene At5g64790, which is mostly expressed in pollen. To confirm that the lipid phenotype observed was due to the known insertion, the Salk line was crossed to WT and the heterozygous progeny of this cross were self-pollinated to obtain an F2 generation. Analyzing the F2 generation to identify plants with the altered lipid composition and genotyping to identify plants containing the insertion in At5g64790 demonstrated that the insertion mutation and the lipid phenotype were not linked. These results indicate that the mutation causing the phenotype must be in another gene. We are using map-based cloning to identify the locus associated the lipid compositional alterations and conducting phenotypic assays to study the effect of this alteration on plant physiology.

Abstract # 51

Mack, Jada

Dr. Peter Martinat

Major: Biology

Oral

Room: 382A

Time: 11:40:00 AM

Xavier University of Louisiana

The Effects of Statin Treatment on Long QT Syndrome Type 2

Long QT Syndrome (LQTS) is characterized by a prolongation of QT intervals in the electrocardiogram (ECG). It can lead to syncope, aborted cardiac arrest, and sudden cardiac death. LQTS can be caused by mutations in cardiac ion channels (inherited). LQTS Type 2 (LQT2) is caused by mutations in the KCNH2 gene, encoding a potassium channel that controls cardiac repolarization. Mutant channels associated with LQT2 shows decreased electrical currents, resulting in delayed cellular repolarization and prolonged cardiac repolarization. Statin has been suggested to prevent cardiac arrhythmias. However, data from the Lopes Lab based on the LQTS registry shows that patients with LQTS2 treated with statins have an increased risk for cardiac events. In particular, patients with mutations in the N-terminus and C-terminus of the channel were shown to have cardiac events when treated with statin. In the lab, statins were shown to inhibit membrane expression of wild-type KCNH2 channel. N-terminus KCNH2 mutant channels, but not mutants in transmembrane domains, showed decreases in current when treated with statins. The goal of this project was to generate mutants located in the C-terminus of the channel, and determine the effects of statin on these mutants. We tested the hypothesis that C-term and N-term mutations increased statin effects on KNCH2 trafficking using Western Blots. Our data suggests that statins are harmful to LQT2 patients. We suggest the increase in risk for arrhythmias is due to statin inhibition of KCNH2 trafficking to the membrane, and that channels with mutations in the C-terminus and N-terminus of the channel have an increased sensitivity to statin inhibition, which would explain the increased cardiac events for these patients.

Abstract # 52

Manriquez, Gabriela

Mitchell Smith, Ph.D.

Major: International Studies

Oral

Room: 385B

Time: 11:40:00 AM

University of Oklahoma

Responsibilities of the European Union and its Member States

The purpose of this research is to gain a better understanding of the responsibilities member states have to the European Union and each other by analyzing the events that took place before and after the Relocation Mechanism was implemented. The European Union implemented the Relocation Mechanism in September of 2015 as a temporary measure to help Greece manage the overwhelming number of migrants arriving in Italy and Greece by committing all EU states to sharing in the relocation process. Several countries were strongly opposed to the Relocation scheme and refused to comply. The European Union brought infringement proceedings against those countries. Slovakia and Hungary challenged the relocation scheme in court arguing that the EU was not legally justified in implementing it. However, the European Court of Justice ruled against them. The European Union is governed by rule of law, now that the mechanism has been established by a legal process it must be implemented by all governments. By analyzing the treaties, court cases, and infringement proceedings involved we are able to see that the European Union has a high expectation that its member states stand with each other in solidarity by supporting each other and working together during difficult times.

Abstract # 53

Marin Bernardez, Edelmy

Dr. Meda

Major: Chemistry, ACS Certified

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

Studies of Lipon coated metal oxides in lithium ion battery conversion reaction

Lithium phosphorus oxynitride (LiPON) thin films have been deposited by a physical vapor deposition method. LiPON thin films were deposited on approximately 0.2 μm thick Au-coated ceramic substrates in a pure N₂ plasma atmosphere at 9×10^{-2} torr, a power of 70 W, using a lithium phosphate (Li₃PO₄) target. LiPON growth thicknesses varied from 2 to 3 μm in a 24-hour deposition time. X-ray powder diffraction showed that the films were amorphous, and elemental dispersive x-ray spectroscopy revealed approximately 4 atomic % N in the films. The ionic conductivity of LiPON was measured by electrochemical impedance spectroscopy to be approximately 8.0 $\mu\text{S/cm}$, which is consistent with the literature value of this electrolyte. Furthermore, The LiPON layer is deposited onto RuO₂ nanoarchitected by the Radio-Frequency-magnetron sputtering method, which showed improvement in cycle life compared to bare RuO₂ upon cycling between 4.0 and 0.1 V vs Li/Li⁺. Lipon-coated RuO₂ exhibits excellent high capacity retention and Coulombic efficiency during the first five cycles unlike the bare RuO₂, which showed a continuous loss in capacity after each cycle. LiPON provides interfacial stability and stable reversible capacities under high-current rate

Abstract # 54

McDevitt, Owen

Myongjin Kim, Ph.D.

Major: Economics & Mathematics

Oral

Room: 385B

Time: 1:30:00 PM

University of Oklahoma

A Path to NBA Parity: examining the effects of the increased salary cap on relative player value

The National Basketball Association (NBA) has had both a maximum individual contract and a soft team salary-cap since 1999. A Collective Bargaining Agreement (CBA) agreed upon by players and owners dictates these caps. The 2017 CBA included the most significant raise to max contract value and team salary cap since the initial provisions were introduced in the 1999 CBA. This research examines how the increase affects the free agency market by looking at determinants of relative player contract value in free agency before and after the new CBA using player and team salary data from 2013-14 and 2017-18. The results indicate that smaller market teams were likely to sign a relatively less valuable contract in 2013-14 free agency, but in 2017-18 following the CBA, market size had no relationship with player contract value. This is likely an indication that the new CBA will help increase league parity.

Abstract # 55

McKendall, Kristen

Dr. Kathleen Morgan

Major: Biology

Oral

Room: 338

Time: 11:40:00 AM

Xavier University of Louisiana

Manganese dioxide-mediated esterification of aliphatic and aromatic carboxylic acids via in situ formation of diazoalkanes

Esters are found in relevant natural products, are used as pharmaceutical agents, and are used as carboxylic acid protecting groups. Diazo compounds have been found to be very useful for the purposes of synthesizing esters, but they are thermally unstable and also highly toxic. For these reasons, it is necessary to develop methods that require more stable and less toxic materials for the synthesis of functionalized esters. Dr. Jared Shaw and co-workers have recently reported a method that involves the reaction of hydrazones with manganese oxide to generate diazoalkanes in situ without the isolation of the thermally unstable species, which is then followed by a reaction with carboxylic acid to have access to functionalized esters. We have explored the scope and its limitations of this method by the preparation of functionalized esters in moderate to excellent yields.

Abstract # 56

Mills, Kira

Dr. Bukuo Ni

Major: Chemistry - ACS Prof.

Oral

Room: 338

Time: 1:30:00 PM

Texas A&M University - Commerce

Synthesis of Spirocyclic δ -Lactones by Asymmetric Organocatalytic Reactions of 3-Hydroxyoxindoles to α,β -Unsaturated Aldehydes in Aqueous Media

Over the past two decades, a new class of purely organic, metal-free catalysts has emerged for use in asymmetric reactions. These organocatalysts are beneficial not just for providing new opportunities for development, but are also generally stable and simple to synthesize. Natural products and their derivatives have specifically shown great promise in catalytic ability and are especially favorable due to the ease of obtaining them. Among these, the amino acid L-proline has emerged as a particularly useful organocatalyst in several reaction mechanisms. Numerous L-proline derivatives have been designed and synthesized and their catalytic abilities tested. Herein, one such L-proline derivative, diarylpyrrolinol silyl ether, was synthesized and screened in combination with benzoic acid as a catalyst for an asymmetric [3 + 2] cycloaddition of α,β -unsaturated aldehydes and 3-hydroxyoxindoles in aqueous media. The reaction afforded the desired products spirocyclic δ -lactones bearing two vicinal stereogenic centers in good to high yields with high enantioselectivity under mild reaction conditions.

Abstract # 57

Mora, Cristian

Dr. Pat Tryer

Major: English

Poster

Room: 314 C

Time: 1:30:00 PM

West Texas A&M University

"The Life of an Undergrad: How It Feels to be Me at One University" An Approach to Race and Ethnic Research

Reviewing a collection of essays exploring the questions of how it feels to be a minority student in a predominantly white university. The aim of this research is finding the most accurate method of expressing the experiences beyond statistical studies. Through the methodology of Critical Race Theory, the creative nonfiction essays emphasize the experiential perspective from minority students at West Texas A&M University and uses the narratives as data. The data, beyond the demographic of minorities and their majors, is collected from interviews and oral histories. While demographic numbers can be analyzed to interpret the lives of minority college students, it continues to silence their perspectives and experiences. This collection of narratives from three perspectives with the combination of interviews gives the opportunity for minority students to speak for themselves.

Abstract # 58

Morgan Jr., Andre

Dr. Kimberly Chandler

Major: Communication Studies

Oral

Room: 385B

Time: 1:55:00 PM

Xavier University of Louisiana

Performing Resistance in The Big Easy

Historically, the African American GLBTQ community has been an important contributor to the fight for civil and human rights in the American South. However, this community is relatively invisible due to stigmatization and marginalization by the Black community as well as larger dominant society. While this community has been on the front lines, fighting for gay rights and against injustice for some time, their lived experiences are virtually unknown. Using interviews and focus groups, the proposed project will examine the ways in which the African American GLBTQ community in New Orleans performs gender as a tool of resistance. Using performativity as a theoretical framework, the project will focus on the distinctive ways they do gender to positively impact social change. The project seeks to make visible this community's significant contributions through a scholarly publication, interactive website archive and public exhibition of videos, photographs and narratives focusing on their unique lives.

Abstract # 59

Mozie, Chidalu

Dr. Young-Tae Kim

Major: Biomedical Engineering

Poster

Room: 314 C

Time: 1:30:00 PM

The University of Texas at Arlington

Bioengineered 3D Cell Culture Model for Testing Drug Sensitivity of Breast Cancer Cells

Proper design of 3D culture techniques is becoming of great importance in intensive cancer research. This is because these 3D models simulate a microenvironment that mimics the strategic interactions between cancer cells and their extracellular matrix (ECM). As a result, 3D culture techniques play a crucial role in the development and testing of cancer therapies in the laboratory. However, there are only few viable 3D platforms available that permit the study of these interactions in vitro. Our research entails the development of a bioengineered cell culture film that would mimic the biochemical and mechanical characteristics of the ECM, as well as the crucial cell-cell matrix interactions. A Western blot was performed to evaluate the difference in proteins released from MDA-MB-231 breast cancer cells grown in 2D culture vs those grown on our culture film. The results showed a significant difference in protein expression by the cells grown on the 3D culture film. Also, an MTS assay was carried out to quantify the cell response to drugs in 2D vs 3D culture, using the drugs Paclitaxel and Doxorubicin. The results indicated that there is no significant difference between the viability of the cells grown in the two culture conditions.

Abstract # 60

Naquin-Eason, Amandamay

Dr. Amanda Venta

Major: Psychology and Criminal Justice

Oral

Room: 385B

Time: 2:45:00 PM

Sam Houston State University

Teacher Support, Parental Incarceration, and Low Academic Achievement in Justice-Involved Youth

Just over two million youth under the age of 18 were arrested in 2008 (Gottesman & Schwarz, 2011). Many of these youth also have incarcerated parents (Eddy & Reid, 2003). Given well documented links between parental incarceration, juvenile delinquency, and low academic achievement (Denno, 1990; Dallaire, 2007; Phillips, Burns, Wagner, Kramer, & Robbins, 2002), the current study examined teacher support as a mechanism for explaining the link between parental incarceration and low academic achievement. Identifying the potential protective role of teacher support could help improve education and prevention practices for justice-involved youth.

The current study analyzed longitudinal data from the Pathways to Desistance study. Results indicated that 52.1% of adolescents reported having an incarcerated biological parent. Academic achievement was generally low: approximately 40.5% reported earning some D's or below. Teacher bonding was associated with higher academic achievement ($p < .001$). Results indicated no significant effect of maternal incarceration on teacher bonding (Chi-Square = 2.816, $p = 0.93$). Results were nearly identical when considering paternal incarceration. Findings suggest that teacher bonding plays an important role in the academic achievement of justice-involved youth.

Keywords: Teacher Support, Parental Incarceration, Academic Achievement, Adolescents

Abstract # 61
Navarrete, Jose
Dr. Tim Bowman
Major: History

Oral
Room: 381
Time: 11:15:00 AM
West Texas A&M University

The Evolution of Bilingual Education and its Spillover Effects in the Rio Grande Valley

Bilingual education has been studied by many historians due to the contemporary conflicts brought on from both sides of the political aisle. However, these studies have either looked at the effects of bilingual education as political phenomenon or have focused on bilingual education's effect on minority student's test performances. This study in particular focuses on both arguments, but also includes Aimee Chin's theory of a "spillover effect" from the bilingual education program. Chin provides mathematical evidence, but does not provide a story that interprets the data. This study will provide that missing story and will examine this spillover effect by using data from Brownsville ISD, which has a majority of Hispanic students. With this majority, the test results from the minority non-Hispanics will show that this spillover effect exists and should be further studied.

Abstract # 62
Nguyen, Tuong Vy
Dr. Elliott D. Hammer
Major: Psychology

Oral
Room: 385B
Time: 3:10:00 PM
Xavier University of Louisiana

The Association between Non-Native Accents, Perceived Discrimination, and Depression among Vietnamese Americans

At a time of heightened hostility toward immigrant groups, language accents can be a precarious indicator of group membership. Past research on language has focused primarily on language ability or proficiency rather than accents. However, the experiences of Vietnamese Americans with non-native accents and its associated stigmatization are important because these individuals are at risk for discrimination and consequently poor mental health. In the current study, Vietnamese Americans at churches, temples, and supermarket respond to measures of their perceived experiences and identity in their choice of English or Vietnamese. We predict that perceived discrimination will mediate the relation between non-native accent and negative mental health outcome. Further, we predict that high ethnic identity and a bi-cultural worldview will buffer the negative effects of perceived discrimination on depressive symptoms among Vietnamese Americans. These findings should inform the literature on the experiences of ethnic minorities, especially immigrant communities.

Abstract # 63

Olguin-Aguirre, Rosario

Adriel Boals, Ph.D.

Major: Psychology

Oral

Room: 385B

Time: 3:35:00 PM

University of North Texas

Perceptions of Potential Changes in U.S. Immigration Policies

For as long as it can be remembered, the policies of immigration in the United States (U.S) have had a history of controversy and change. The most recent presidential election has made the topic of immigration a hotly debated topic once again. Since the election, current U.S. President, Donald Trump has promised radical changes to the current U.S. immigration policies. Such radical policy changes are likely to have wide-reaching and highly consequential consequences, some of which are intentional and some unintentional. One such unintentional consequence is an increase in distress levels in those who may be directly or indirectly affected. This potential increase in distress is likely to negatively impact academic performance in students. The current study will examine changes in distress levels in students who are and are not affected by potential immigration policy changes, including measures of general distress and distress specific to immigration. In addition, semester GPA in the semesters before and after the immigration policy changes were introduced will be assessed. We hypothesize that, in comparison to students who are not affected, students who are affected by potential immigration policy changes will evidence increases in distress which will account for subsequent decreases in academic performance.

Abstract # 64

Ortiz, Emmanuel

Unassigned

Major: Biology

Oral

Room: 382A

Time: 1:30:00 PM

University of North Texas

Cotton's Secret Fiber: Manipulating Lignin Biosynthesis for Bast Development

Cotton (*Gossypium* spp.) is the world's premier fiber crop with molecular tools available to modify its flowering and architecture. In addition to its familiar seed coat fibers, cotton also produces bast fibers along the length of its stalk comparable to those found in jute, hemp, and kenaf. The purpose of this study was to determine if these tools may be applied to modify cotton's lignin biosynthesis, thereby altering the properties of its bast to make it a desirable green-economy fiber. We found tobacco rattle virus to be an effective vector for this purpose.

Abstract # 65

Parent, Gunner

Dr. Nesbit

Major: Biology

Oral

Room: 382A

Time: 1:55:00 PM

East Central University

Evaluation of the Blue River for Presence of Campylobacter jejuni

Campylobacter jejuni is a bacterial species associated with cattle and poultry that can cause campylobacteriosis, a severe intestinal infection. The Blue River is a water source for many people and livestock in Southeast Oklahoma, and the Oka' Yanahli preserve includes one mile of the Blue River near the headwaters. For human and animal safety, I sampled for the presence of C. jejuni in the portion of the Blue River contained within the Oka' Yanahli preserve. Sediment and water samples were collected from six locations along the Blue River. Water samples were diluted using serial dilution protocols and placed on C. jejuni, Campylobacter bloodfree selective medium. Plates were grown at 42°C for 24 hours under aerobic conditions and grown at 37°C for 72 hours under anaerobic conditions. Eleven bacterial colonies of interest were isolated followed by gram staining and eight biochemical tests. Three anaerobic colonies were isolated followed by gram staining. Initial results suggest that none of the isolated colonies are C. jejuni, although some of the tests need to be repeated. Future work includes testing additional colonies using standard microbial techniques and confirming our initial isolates with DNA bar coding.

Abstract # 66

Pimentel-Galvan, Michael

Dr. Ben Jang

Major: Chemistry and Mathematics

Oral

Room: 338

Time: 1:55:00 PM

Texas A&M University - Commerce

Catalytic vs non Catalytic synthesis of bio-oil via the hydrothermal liquefaction of Biomass

The objective of this study is to investigate alternatives to fossil fuels by using different biomass via hydrothermal liquefaction. We studied algae (Chlorella Vulgaris) and wastewater sludge. Sludge is a waste material produced from wastewater treatment to provide clean water; the sludge we use would otherwise be buried at a landfill or burned into the atmosphere. Since sludge is rich in lipids, carbohydrates, and proteins it can be used to produce bio-oil and biofuel. Although the sludge may vary from different water treatment plants, we selected this from a neighboring facility as our biomass because of convenience. Finding a use for the waste would be environmentally and economically beneficial.

Hydrothermal liquefaction is carried out in a 100 mL Parr reactor. We are experimenting to find an efficient reaction method of generating bio-oil. The reaction parameters include temperature of the reactor, catalyst use, catalyst loading, the ratio of water to biomass, etc. to find the optimal yield. The reaction conditions include water/biomass ratios of 8/1 to 12/1 at temperatures of 250°C to 350°C and with catalyst loadings of 0-5% to break down components of organic matter within the biomass. The energy content and percent yield of the bio-oil reactions will be compared. The catalysts include Y zeolite, Ca(NO₃)₂, etc. The average percent yield of an uncatalyzed sample of sludge is 14.3% and the energy content of the bio-oil is about 36.0MJ/kg. Although the average percent yield of a 1% Ca(NO₃)₂ catalyzed reaction is only 8.0 % and the energy content of the bio-oil is about 34.5MJ/kg, there is promise that further adjusting the experiment parameters a better yield/energy content could be produced.

Abstract # 67

Pires, Melissa

Major: Aerospace Engineering

Poster

Room: 314 C

Time: 1:30:00 PM

University of Texas at Austin

Hybrid Rockets

The purpose of my research is to make an analysis of the chemical complexity and mechanical straightforwardness of hybrid rockets. This research project will provide insight into and answer the problem statement inquiries by taking into consideration the advantages and disadvantages of hybrid propulsion, conceivable applications, the stage of the hybrid rocket preparedness state and ongoing research. Furthermore, the obstacles that needed to be overcome for hybrid rocket propulsion to be a doable option over solid and liquid rockets. In the subsequent discussion, it will become evident that hybrid rockets are very straightforward mechanically, which makes them simple to work with, but chemically very complex, which makes them difficult to comprehend and express an outcome in advance.

Abstract # 68

Plange, Brittany

Maria del Guadalupe Davidson, Ph.D.

Major: African & African American Studies

Oral

Room: 381

Time: 11:40:00 AM

University of Oklahoma

Women's Domestic Labor in the Black Radical Tradition

In 1994 the film "Corrina, Corrina", starring Ray Liotta, Whoopi Goldberg, and Tina Majorino, hit the big screens. The movie, is set in 1950s Los Angeles, and is about a father, Manny, who is searching for a new nanny for his seven-year-old daughter, Molly, due to his wife's recent death. He ends up hiring Corrina, played by Whoopi Goldberg. The most notable and controversial way was the beginning of a romantic relationship between Manny and Corrina. While the film never was a box office hit, it reveals the ways in which black women's domestic labor in white households is always a point of contestation and a position overlooked in the Black Radical Tradition. The film shows three different perspectives of the interracial relationship between Manny and Corrina, as well as three different perspectives on the work Corrina does for Manny. These perspectives embody the notions civil society has about black women's labor and will be the conceptual anchors I use to analyze the "outsider-within" position black women are fixed into, as discussed by Dr. Patricia Hill Collins in her work "Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment". The first perspective is that of the white family, Manny and Molly, who will function to represent white civil society. The second perspective is that of Corrina's family and community, who will represent the black community. The last perspective is that of Corrina, who will represent the black women who have historically been overlooked and how they grapple with the conflicting perspectives of their black families and the white ones they work for. Ultimately, my research aims to understand and unpack why it is that black women continuously find themselves being, "...the best nanny and the worst mother.", and how we can analyze our labor without making black women placeholders for our freedom.

Abstract # 69

Potts, Eugene

Michael Hall, PhD

Major: Political Science

Oral

Room: 385B

Time: 4:00:00 PM

Wichita State University

The Rise of White Nationalism in the American Political Discourse

This study seeks to examine whether the political rise of Barack Obama coincided with a rise in White nationalist rhetoric in the American political discourse. It is important to look at white nationalism from a historical context and explore how it has been woven through American politics since the founding of the United States. White nationalism is different than White supremacy. White nationalism is a political ideology that at its foundation believes in an ethno-White state, whereas White supremacy is the belief that being White is supreme over everything. White nationalism gives racism the veneer of credibility and facilitates the passage of racist policy. Using data from longitudinal surveys such as the Pew Research Center and Quinnipiac University, this study will track White nationalist rhetoric in American political discourse, four years before the rise of Barack Obama, and compare it to White Nationalist rhetoric after the Barack Obama won the Iowa caucus till present day.

Abstract # 70

Prado, Stephanie

Wilson E. Merchan-Merchan, Ph.D.

Major: Mechanical Engineering

Oral

Room: 382B

Time: 1:55:00 PM

University of Oklahoma

Studies of the Total Acid Number of Selected Neat Biodiesel, Diesel and their Blends

In this experimental work the total acid number (TAN) of selected neat (B100) biodiesel (BD), No. 2 diesel, and its blends (BD/No.2 diesel) is measured. BD is a renewable form of fuel created from vegetable oils and animal fats through a transesterification process. It is well established that the burning of BD has the tendency to produce much lower carbon emissions during a combustion process compared to diesel. However, despite the many advantages of BD over petro-fuel, recent research has shown that BD has substantial drawbacks. One of the primary concerns of BD are its corrosive properties and hence this study focuses on the measurement of the TAN of several selected neat BD, No. 2 diesel (for comparison) and BD/No. 2 diesel using a titration method. High TAN values in BD could lead to the increase of corrosion, which can become an issue when used as fuel in a combustion process (engines). The effect of the TAN on fuel blending (BD/No. 2 diesel) and thermal effect were also studied by using various percentages (volumetric) in the mixture and by exposing them to a heating process. It was found that the TAN value of the No. 2 diesel was measured to be always lower than the TAN of the studied BD. This implies that No. 2 diesel tends to be less corrosive than BD. It was also found that the TAN value increases as the BD percentage increases in the mixture (as BD becomes the parent fuel in the binary fuel mixture). To study the effect of temperature on the TAN of the tested fuels, samples were thermally treated (~75 to 88 Celsius for three hours). At this thermal condition values for the TAN did not significantly vary from those measured prior to the heating treatment.

Abstract # 71

Prasatporn, Nicholas

Dr. Young-Tae Kim

Major: Biomedical Engineering

Oral

Room: 382A

Time: 4:25:00 PM

The University of Texas at Arlington

Measuring the Effects of Culturing A549 Non Small Lung Cancer Cells on Collagen, Engineered Basal Lamina, and Traditional 2D Cell Culture

One of the most vital components to oncological research is the environment cells are cultured in. 2D cultures have been used the longest time, they are rather inexpensive and more ethical than animal or human testing, but they are not as accurate as modern 3D cultures. Our research investigates the dissimilarities between traditional 2D cell culture in a well plate and an engineered basal lamina (EBL) composed of collagen and extracellular matrix (ECM). Western blot was conducted to discern differences in proteins from A549 lung cancer cells cultured in polystyrene (2D culture) and the EBL. The proteins expressed suggest that the cells grown in the EBL further progressed into metastatic conditions. The proteins also suggested that cells grown in the 2D culture were not as healthy as those grown in the EBL. A MTS assay was also used to test chemoresistance of the cells, using DMSO, Temozolomide and Doxorubicin in 3 different concentrations for each. Cells in the EBL had higher viability in most of the conditions and therefore higher resistance to the drugs used. Further testing will help develop a better 3D culture.

Abstract # 72

Ramos, Byanka

Karina Gil, PhD

Major: Social Work

Oral

Room: 385A

Time: 10:00:00 AM

Our Lady of the Lake University

Do Leadership Style Preferences Vary Based on Degree Choice?

This study examined leadership style preferences among graduate and undergraduate students at a private Catholic university. Sections 2 and 4 of the Alpha form of the Global Leadership and Organizational Behavior Effectiveness Questionnaire (GLOBE) by House et. al (2004) were used to determine leadership style preferences. Being aware of leadership style preferences of future employees in either the public or private work sector will help management shape their leadership styles to be responsive to the needs of new employees. Results indicated a difference in leadership style preferences as compared to social work majors and non-social work majors.

Abstract # 73

Rodney, Arlysse

Dr. Faye Grimsley

Major: Public Health Science

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

Racial Disparities Among High Risk Pre-diabetic Smokers

Smoking remains the leading preventable cause of poor health outcomes in the US, including type 2 diabetes and cardio-metabolic complications. Smoking also impacts pre-diabetes – higher than normal blood sugar levels not high enough for a diabetes diagnosis. Current smoking among adults in Louisiana (22.8%) exceed the national average (17%) with higher rates seen among low-income disadvantaged populations. In 2002, Louisiana’s public hospital system and state School of Public Health addressed high smoking rates among public hospital patients by employing evidence-based strategies to integrate routine tobacco use screening and treatment. This study examines differences in smoking prevalence, cardio-metabolic risk factors, and cessation treatment and outcomes among pre-diabetic adult primary care patients in the state’s safety-net system. A retrospective data analysis looks at unique patients 18 and older visiting clinics between 2004 and 2012. We defined pre-diabetics as patients having a hemoglobin A1c (HbA1c) level of 5.7% to 6.4% and current smokers as patients reporting tobacco use in the past thirty days at the time of the clinic visit. Preliminary results show that among subjects with at least one HbA1c test in the study period 17,190 were pre-diabetic, of which 3,715 (21.6%) were current smokers.

Abstract # 74

Samuel, Savannah

Dr. Payton-Stewart

Major: Chemistry Pre-Med

Oral

Room: 382A

Time: 2:20:00 PM

Xavier University of Louisiana

Development of hepatocellular carcinoma and TP73 expression: Does DNA methylation play a role?

TP73 is a member of the TP53 family of proteins that is currently actively being studied for its role in tumor promotion or suppression in human cancers. As a transcription factor, the TP73 protein is involved in cellular responses to stress and development. The gene maps to chromosome 1p36 that is rich in tumor suppressor genes but is frequently deleted in neuroblastoma and other tumors. Alternative gene splicing has produced many isoforms of the TP73 protein, but the biological validity of some of the variants have not been yet determined. In this study, we wish to investigate the role of TP73 in the tumorigenesis of hepatocellular carcinoma. We first established primary cell lines from the hepatic tissues of a young (HEPC-y) and old (HEPC-o) healthy individuals to use as controls in our study. We determined the level of TP73 gene expression in human Hepatocellular carcinoma (HCC) cell lines by RT-PCR. We also analyzed the TP73 protein level in normal and cancer patients’ tumor tissues by immunohistochemistry. Our findings were quite surprising. TP73 was only expressed in the tumor cells but not in the healthy liver cells. Moreover, methylation-specific PCR results show that TP73 gene expression is regulated by DNA methylation.

Abstract # 75

Sherman, Josiah

Dr. Partha Bhattacharjee

Major: Biology

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

LRP-1 Targeted Neuroprotection in Diabetic Retinopathy

Diabetic retinopathy (DR), a visual complication of diabetes mellitus, is a leading cause of visual impairment across the world. Retinal neurodegeneration has been shown to precede the vascular abnormalities that are key clinical indicators of DR. Two important features of retinal neurodegeneration include apoptosis of retinal ganglion cells (RGCs), nerve cells that receive impulses from photoreceptors and form the optic nerve, and hyperactivity of retinal Müller glial cells (RMGs), the chief support cells in the retina. Previous studies with a genetically modified db/db mouse (mimicking human type 2 diabetes mellitus) eye model indicate a lipid metabolism-related signaling pathway involving low-density lipoprotein receptor-related protein 1 (LRP-1) in protecting neurons from apoptosis. Additionally, our results suggest that LRP-1 activation prevents apoptosis of RGCs in the retina by regulating the PI3K/Akt pro-survival pathway in the retina. We suggest a new therapeutic strategy of inhibiting neuronal apoptosis in the diabetic retina, which may also contribute to interventional approaches against other retinal neurodegenerative diseases such as age-related macular degeneration (AMD) and glaucoma.

Abstract # 76

Smith, Raven

Rebecca Wiseheart, Ph.D.

Major: Speech Pathology

Oral

Room: 385B

Time: 4:25:00 PM

St. John's University

Exploring Code Switching in the Narrative and Expository Writing of Students from Linguistically Diverse Backgrounds

Background: Writing can be difficult for students who speak more than one language or dialect. Informal spoken language can influence formal written language which deviates from conventions of classroom writing.

Aims: This study focuses on informal and formal writing of fourth grade students from various cultural and linguistic backgrounds. The goal of this pilot intervention study was to help students understand the difference between informal and formal language in their school writing assignments.

Methods and Procedures:

The researchers provided writing lessons on informal and formal language following the guidelines described in Rebecca Wheeler's "Code Switching". Students were given pre and post surveys to assess knowledge of standard American English grammar. Students were asked to judge the grammaticality of statements on a Likert-type scale.

Results: A one way paired t-test of the pre/post tests showed no change in students' grammaticality judgments. These results showed a slight positive change in students' ability to judge statements using have/has which was a target area; no other changes were shown.

Conclusion: This pilot intervention study did not result in significant changes in students' understanding of grammaticality in informal and formal language. However, the results provided a basis for future direction for this study.

Abstract # 77

Smith, Tatyana

Dr. Jeremy Cohen

Major: Psychology

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

Are There Gender Differences in Response to an Intervention with Older Adults with Vision Loss?

Previous literature found evidence that psychosocial interventions with older adults with vision loss are effective in preventing depression, but there is scarce literature examining whether there are gender differences in responses. The purpose of this study was to determine whether older men and women with macular degeneration differed in their response to a preventive problem-solving intervention regarding depression and loneliness, compared to the control condition. Two hypotheses were examined using data from baseline and immediate post-intervention assessments in the Macular Degeneration and Aging Study (Sørensen et al., 2015): (1) gender will moderate the treatment effect of the preventive problem-solving intervention on depression symptoms; (2) gender will moderate the treatment effect of the preventive problem-solving intervention on loneliness. The intervention involved attending four weekly vision education classes, after which participants were randomized to a preventive problem solving intervention (PREPSI) or a life and health review intervention (LIHRI). Results showed that gender did not moderate the effect of the intervention on depression symptoms, but that it may differentially affect loneliness responses. It is informative to assess intervention outcomes beyond depression, such as loneliness, because men and women may differ regarding some treatment outcomes. Future studies might also control perceived social support, as this may be affected more strongly by the control than treatment condition.

Abstract # 78

Soto-Levins, Andrew

Dr. David Jorgensen

Major: Mathematics

Oral

Room: 382B

Time: 4:25:00 PM

The University of Texas at Arlington

Matrix Factorizations for Polynomials

Irreducible polynomials are not factorable in the conventional sense, so having another method to factor these polynomials is important. The factorization method we discuss in this paper uses matrices. The method is called matrix factorization and works whether the polynomial is irreducible or not. Regarding the question of the existence of matrix factorizations, we prove that it suffices to show every homogeneous polynomial has a matrix factorization. We then show that every homogeneous polynomial does in fact have a matrix factorization. These results have been obtained by starting with polynomials of one term and working up from there. When factoring polynomials in the conventional sense, there is only one way to factor them. However, using matrix factorizations, more than one factorization is possible. These factorizations will look different, so we need a precise notion of equivalence. We discuss two definitions of equivalence, Eisenbuds and homotopy equivalence. Results include a theorem showing the conditions required for a polynomial to be factored using a two-by-two matrix, a proposition showing how to make a matrix factorization for a given polynomial and homogenize it for the homogenization of the polynomial, and a theorem showing how to make an arbitrary factorization homogeneous for a homogeneous polynomial.

Abstract # 79

Taber, Loni

Christopher Kirby, PhD

Major: Philosophy

Oral

Room: 381

Time: 1:30:00 PM

Eastern Washington University

A New Phenomenological Definition of Violence: Why the language we use matters

The current definition of violence is limited and contributes to the overall rationalization of violence as a means to an end. Through investigating the issue of violence in relation to the overarching problem of domination, it is my goal to reveal through Hannah Arendt's scholarship the proposal to "deal with violence as a phenomenon in its own right."¹ The current understanding of violence is obfuscated by the inherent wrongness implied by its etymology coupled with the continued justification of its utility. Therefore, to make progress in reducing violence and changing the way in which humans interact, it is necessary to establish a new foundation for our understanding. By providing a new phenomenological definition of violence, the goal of this paper is to create a platform of discourse that enables compassion and humaneness to fundamentally motivate public and private affairs. This research was conducted with a qualitative mixed methodology. It employs a hermeneutics of restoration, genealogical investigations, feminist methodologies, and a phenomenological analysis of violence. The purpose of which seeks to cultivate an obligation to co-create a more humane world by redefining the language we use to understand it.

Key Words: Phenomenology / Violence / Resist / Experience / Political

¹Arendt, On Violence (New York: Harcourt Press, 1970), 35.

Abstract # 80

Tademy, Kaitlin

Dr. Brian Loft

Major: Mathematics

Oral

Room: 338

Time: 2:20:00 PM

Sam Houston State University

The U-Polynomial on Virtual Knots and Links

This study examines how the U-Polynomial can be modified so that it can extend to virtual knots and links. Also, we will examine its properties under certain knot/link diagram changes, including connected sums; mirror image, flips, inverses, and switches; nontrivial knots/links with trivial polynomial; methods of virtualization and related properties. The U-Polynomial modifications will be dependent on our concerns as they relate to virtual knot/link distinction. These concerns include writhe and state sums, change in correction factor, detection of trivial knot, change in orientation. Once modifications are complete, the polynomial will be tested under Reidemeister moves and Virtual Reidemeister moves to hold that the polynomial is an invariant. Results will warrant more modifications to make it a more complete invariant. This study will further the advancement of the study of Virtual Knot Theory.

Abstract # 81

Taylor, Shelbey

James Lattimer, Ph.D.

Major: Animal Science

Oral

Room: 382A

Time: 3:10:00 PM

Kansas State University

Effect of protein supplementation on fiber disappearance and fermentation parameters using an equine cecal inoculum

Four cecally cannulated Quarter Horses were used to examine the effect of protein supplementation on fiber disappearance and fermentation parameters in vitro. Fermentation bottles containing buffered cecal fluid were used in a 2 x 5 factorial with four replications (horse). Factors consisted of substrate (alfalfa and native prairie hay) and sodium caseinate level (0%, 0.5%, 1.0%, 2.0% and 4.0%). Bottles were incubated for 48 h, at which time fluid and digesta was collected for pH, DM, NDF and ADF analyses. Sodium caseinate had no effect on pH, DM, NDF or ADF in bottles containing alfalfa. Bottles containing prairie hay and supplemented with 0.5%, 1.0%, 2.0% and 4.0% sodium caseinate had lower ($p < 0.05$) pH when compared to the control. Dry matter, NDF and ADF disappearance were greater ($p < 0.05$) in bottles containing prairie hay supplemented with 1.0%, 2.0% and 4.0% sodium caseinate when compared to the control. No differences were observed for any response variable between the 2.0% and 4.0% levels of sodium caseinate. Results from this study show that fiber disappearance can be enhanced by supplementing sodium caseinate to a low protein forage. This can be attributed to an increase in microbial fermentation activity or population. Supplementing sodium caseinate at a rate of 2.0% appears to be the most efficacious.

Abstract # 82

Triece, Kelly

Jean Roelke, PhD. & Courtney Welch, PhD.

Major: English

Oral

Room: 381

Time: 1:55:00 PM

University of North Texas

From Tara to Trump Tower: the Gone with the Wind Origins of the Rhetoric that Won Donald Trump the 2016 Election

Trump employed populist rhetoric in his 2016 campaign speeches that conveyed sympathy for American workers, but this discourse also induced fear of racial minorities and threatened to shut down programs such as the Affordable Care Act that provided health insurance to low income workers. Scholars have traced populist rhetoric among some conservative groups as early as the 1970s. However, this study finds that the 1930s novel *Gone with the Wind* offers an antecedent example of the merger of conservatism and populist rhetoric that sympathizes with white workers, promotes American individualism, induces fear of racial minorities, vilifies taxation, and generates distrust toward the federal government. Furthermore, the two rhetoric's tend to merge in reaction to the expansion of the federal government and the manifestation of the Working Class as a political interest group.

Abstract # 83

Van Vleet, Samuel

Dr. Michael Barnett

Major: Psychology

Poster

Room: 314 C

Time: 1:30:00 PM

University of North Texas

The Big Five Demonstrate Different Relationships with Ageism and Aging Anxiety

Ageism is one of the most common forms of prejudice, and it has been seen to have negative impacts on the lives of older adults. Among younger adults, ageism has been linked with aging anxiety. The Big Five personality traits have been associated with aspects of intolerance (e.g., racism and sexism). Previous research has found links between ageism and agreeableness and openness to experience, as well as links between aging anxiety and neuroticism. Determining which personality traits are associated with ageism and aging anxiety may clarify the nature of both constructs. The purpose of this study was to investigate links between the big five and both ageism and aging anxiety among younger adults. Younger adults age 18-29 (N = 637) completed a survey which included the BFI-2-XS, the Anxiety about Ageing Scale, and the Fabroni Scale of Ageism. Among young adults, ageism was associated with lower agreeableness and openness to experience, and aging anxiety was associated with higher neuroticism. The result that lower agreeableness and openness were associated with higher ageism among younger adults may be due to lower empathy or being less likely to engage in activities with older adults. Overall, the results suggest that ageism and aging anxiety are associated with different core personality traits.

Abstract # 84

Vasquez, Liliana

Dr. Carolyn Bouma

Major: Biochemistry

Poster

Room: 314 C

Time: 1:30:00 PM

West Texas A&M University

Canine Oral Hygiene Product Efficacy on Bacteria from Canine Periodontal Disease

Periodontal disease (PD) is a highly preventable condition that affects the oral cavity of dogs and can cause other serious conditions. Although maintaining good oral hygiene, such as brushing, can prevent PD, many dog owners are either unaware of its importance or are hesitant to take the necessary action to prevent it. The purpose of this study is to find an alternative method to tooth brushing in dogs that is not only effective in reducing plaque-causing bacteria but is also simple to use. This study involved the collection of saliva samples from 24 dogs using Super•SAL™ saliva collection devices. Samples were enriched in BHI broth before being inoculated onto agar plates. Paper disks containing each of four canine oral hygiene products were placed on the agar. The products used included: Tropiclean® water additive, Nylabone® mouthwash, Petzlife® oral spray, and a homemade canine oral rinse (sterile 0.9% NaCl). The results demonstrated that the Tropiclean® water additive exhibited, on average, the largest zone of inhibition. The homemade oral rinse was the least effective in reducing bacterial growth on all samples. Because the oral flora in each dog differs based on factors such as their diet, age, and breed, certain products produced varying results from one dog to another. However, the Tropiclean® water additive had the most consistent effect on inhibiting oral bacterial growth overall.

Abstract # 85

Wages, Dylan

Vijay Vaidyanathan

Major: Mechanical Engineering

Oral

Room: 382B

Time: 2:20:00 PM

University of North Texas

Exoskeleton Using Artificial Muscles

The purpose of this research is to prove that artificial muscles are a more efficient alternative to pneumatics, hydraulics, or electric motors in an exoskeleton system. Soldiers in the military are constantly expected to carry more equipment that could slow down the soldier in dire situations. An unpowered exoskeleton puts the weight of the equipment into the ground to reduce the stress the soldier feels, but the range of motion could still be negatively affected. Soft exoskeletons allow full range of motion, but the weight force of the equipment still moves through the soldier which could have a long term impact on the soldier. Current exoskeletons are using pneumatics, hydraulics, and electric motors to move which are heavy, expensive, and have too many moving parts that could potentially fail. Artificial muscles are light, cheap, and used together to create larger forces to assist the soldier.

Abstract # 86

Ware, Sarah

Tassie Katherine Hirschfeld, Ph.D.

Major: Anthropology

Oral

Room: 381

Time: 2:45:00 PM

University of Oklahoma

An Ethnographic Study of Cuban Immigrants in Guymon, Oklahoma

In 2016, there were nearly 1.3 million immigrants of Cuban descent living in the United States. The majority arrived between 1960 and 1970, in part due to a unique immigration policy called 'wet-foot, dry-foot'. Those fleeing communist countries were granted political asylum in the United States if they were found on land. If they were found at sea, they would be sent back to their country of origin. This immigration policy was recently repealed during the Obama administration, which poses an interesting question about future Cuban immigration to the United States. Most recently arrived Cubans have settled in large, multiethnic cities like Miami and New York, but a small number have been, unexpectedly, sent by resettlement agencies to live and work in the isolated agricultural community of Guymon, Oklahoma. Due to the isolated location and lack of employment options, Cubans in Guymon presumably live very differently from those in larger cities. This ongoing project is being conducted through formal and informal conversations and structured and unstructured interviews in Guymon. Expected results are that the Cuban population in Guymon will show a different way of life than those living in larger cities, but the same social ties will be present.

Abstract # 87

Watkins, Taryn

Dr. Diane Morse

Major: Psychology

Poster

Room: 314 C

Time: 1:30:00 PM

Xavier University of Louisiana

Examining the Associations of Age and Race on Violations of Probation

Much of the literature surrounding the criminal justice system discusses past trauma on incarceration and the characteristics of an incarcerated individual such as race/ethnicity, gender, and age. However, there is not much that surrounds violations of probation. The main study, Monroe County FOCUS Probation, aims to reduce rates of recidivism for women on probation and the effectiveness of the WISH-TC program at Medicine in psychiatric services. The proposed hypothesis is that age and race will show associations with the number of violations of probation that an individual in the criminal justice system has. Results showed that age and race do not have associations with violations of probation.

Abstract # 88

White, Camille

Julie Kvedar

Major: Public Health

Oral

Room: 382A

Time: 3:35:00 PM

Xavier University of Louisiana

Depression in U.S. Black Women & the Usage of Advocacy in Community Health Workers

This study examines the effectiveness of utilizing the advocacy role of Community Health Workers to aid depressed black women in the United States. Because of historical and social trauma, black women are exposed to high levels of stressors, which can lead to physical and mental issues. Online databases were used to search for literature on this topic. Past research has shown that Community Health Workers in the advocacy role benefit a community when examining physical health problems, such as asthma. Extending the advocacy role of CHWs to include the mental wellbeing of others has a chance of decreasing the risk of continuing the cyclic pattern of depression.

Abstract # 89

Wilder, Sommer

Dr. Danney Rasco

Major: Psychology & Exercise Sciences

Poster

Room: 314 C

Time: 1:30:00 PM

West Texas A&M

Physical and Psychological Effects of Laughter Yoga among Healthy Young Adults

Laughter yoga (LY) is a combination of stimulated laughter, deep breathing, and exercises. Previous studies suggests LY has positive physiological and psychological benefits, although the research focused on clinical and geriatric populations and used correlational and pre-post designs without a control group to account for natural improvement. Our study adds to this literature by focusing on healthy young adults and using an experimental design; young adults completed a LY session or attended a brief seminar on LY. Physiological factors (i.e., heart rate, oxygen saturation, and lung capacity) were measured before and after the intervention. Psychological variables (i.e., satisfaction with life, positive affect, and negative affect) were measured after the intervention. Participating in LY, compared to attending the seminar on LY, resulted in lower heart rate, higher lung capacity, and lower negative affect. This study supports the potential benefits of LY even in a relatively healthy young adult population.

Abstract # 90

Wilson, Damere

Raymond A. DiGiuseppe

Major: Psychology

Oral

Room: 381

Time: 3:10:00 PM

St. John's University

Cross Sectional and Longitudinal Relationship of Discrimination to Sleep

Discrimination has been consistently linked to poor sleep. However, the mechanisms that maintain the link between discrimination and sleep remain unclear. Our cross sectional studies revealed that negative relational schemas mediated this relationship. The current longitudinal study examines whether increases in exposure to discrimination were associated with increases in sleep impairments. Although the relationship between discrimination and sleep persisted, relational schemas did not mediate the effects.

Abstract # 91

Young, Acacia

Dr. Todd Castoe

Major: Biology

Poster

Room: 314 C

Time: 1:30:00 PM

The University of Texas at Arlington

Analysis of Form and Function in Snakes

In its native environment, due to nutritional scarcity, the Burmese python (*Python molurus bivittatus*) can regulate its intestinal form and function, rapidly down-regulating during extended periods of fasting between meals and up-regulating after meal consumption. Considerable research has been focused on this specific species, yet few studies have focused on additional species, some of which exhibit similar regenerative phenotypes following feeding, and some of which do not. This experiment sought to observe and compare changes in cellular phenotypes during post-feeding regenerative intestinal growth across several snake species, including species that are known to do negligible regulation. Histological samples taken from the small intestines of Burmese pythons, Diamondback water snakes (*Nerodia rhombifer*) and Prairie rattlesnakes (*Crotalus viridis*) at multiple timepoints spanning the digestive response were stained and imaged. The images were analyzed for temporal changes in cell size to determine if there was variation among the species. It was found that all the species studied displayed an increase in cell size from a fasting state to several days post feeding. Additionally, although thought to do little internal regulation, the Diamondback water snake was found to display intestinal cell growth on par with snakes known to regulate their intestinal form.

Abstract # 92

Zaragoza, Teresa

Simon Licen, PhD

Major: Sport Management

Oral

Room: 382A

Time: 4:00:00 PM

Washington State University

Media Dialogue and Representation of Latinx Athletes in the Olympics

Media representation amongst Latinx athletes competing in the Olympics is scarce. The representation of these athletes competing does not compare to those whom are of other ethnicities. This study will examine the dialogue of Latinx athletes through two media outlets. Television broadcasts of the Olympics has the widest range of mass audience. With television selection of whom is represented in the media, how often they are represented, and who is excluded plays a role in the representation of these Latinx athletes. The second outlet is newspaper articles in which the dialogue communicated can limit the representation of Latinx athletes. Over 200 countries and over 11,000 athletes competed in the 2016 Rio Olympics. However, the representation of Latina/-o athletes in the Olympics and in the media is scarce, often leaving little to no focus within the television broadcasts and newspaper articles. The outcome of this research will identify how often Latinx athletes are represented and misrepresented compared to other ethnicities.

McNair Scholars Attending

The following McNair Scholars are attending the conference, here to support their colleagues who are presenting.

Last Name	First Name	Major	Institution
Albritton	Claude	Biology	Xavier University of Louisiana
Aleshire	Jewel	Anthropology	University of North Texas
Ambrosio	Luis	Health & Exercise Science	University of Oklahoma
Avila	Alex	Child Development	Texas Christian University
Baltazar	Cesar	Marketing	University of North Texas
Bowen	Mikala	Speech Pathology & Spanish	Xavier University of Louisiana
Braham	Kaiya	Public Health	Xavier University of Louisiana
Carroll	Michael	Sociology	Texas Christian University
Castillo	Summer	Animal Science	Iowa State University
Cervantes	Arriana	Psychology	Texas Christian University
Chukwuma	Rochelle	Professional Writing	University of Oklahoma
Cline	Katherine	Biology	University of North Texas
Coleman	Keairez	Biology	Xavier University of Louisiana
Cortez	Jared	Psychology	University of North Texas
Daniels	Fre'Dasia	Psychology	University of North Texas
Dawson	Caralyn	Ecology	University of North Texas
Ekechukwu	Gabriel	Biology	Xavier University of Louisiana
Espinoza	Jonathan	Communications	West Texas A&M University
Fletcher	Lashunda	Biology	Xavier University of Louisiana
Fuentes	Nayeli	Chemistry	Texas A&M University-Commerce
Gesalla	Mohamed	Electrical Engineering	Iowa State University
Hodges	Raven	Social Work	Wichita State University
Hood	Cory	Political Science	Texas Christian University
Karwoski	Logan	Psychology	University of North Texas
Lewis	Camika	Math Education	Texas Christian University
Lopez	Rosa	Mechanical Engineering	University of Oklahoma
McNeill	Madison	Biology	East Central University
Miller	QuaDreon	Psychology	University of North Texas
Molina-Lomeli	Crystal	Psychology	Texas Christian University
Myskey	Kourtney	Biology	East Central University
Newberg	Dominique	Social Studies Education	University of Oklahoma
Perez	Idalys	History & Anthropology	University of North Texas
Quick	Samuel	Economics	University of Oklahoma
Reese	Nicholas	Communications	Xavier University of Louisiana

Last Name	First Name	Major	Institution
Romena	Nikki	Psychology	Texas Christian University
Saldana	Christian	Economics	Wichita State University
Sanders	Marti	Biology	University of North Texas
Vanegas	Erica	Psychology	University of North Texas
Vargas	Inneke	Psychology	Wichita State University
Vargas	Zeles	Anthropology, Psychology	University of North Texas
Velasquez	Julissa	Chemistry	University of North Texas
Williams	Mikayla	Electrical Engineering	The University of Texas at San Antonio
Wilson-Nealy	Tahlia	Sport Psychology	Texas Christian University

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Xavier University of Louisiana	Perkins	Logan	Graduate Opportunity Program Coordinator/ Pre Graduate Advisor	lperkin1@xula.edu

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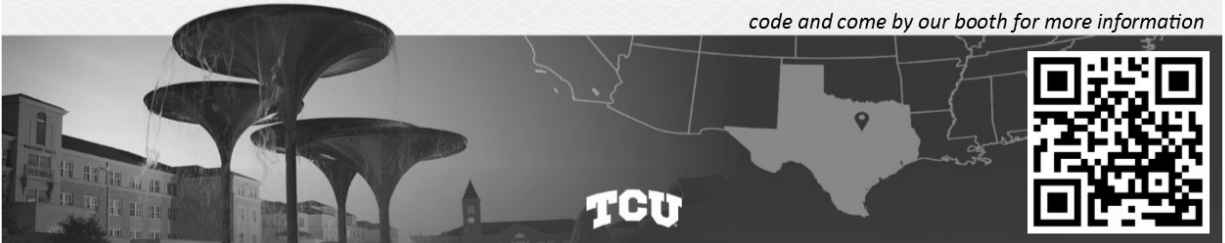


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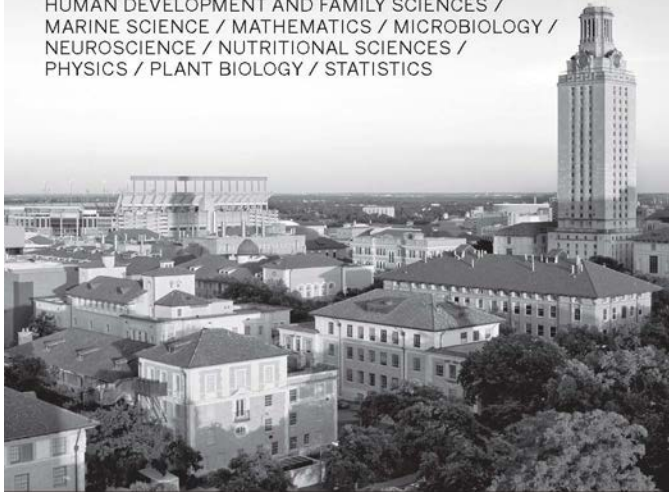
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