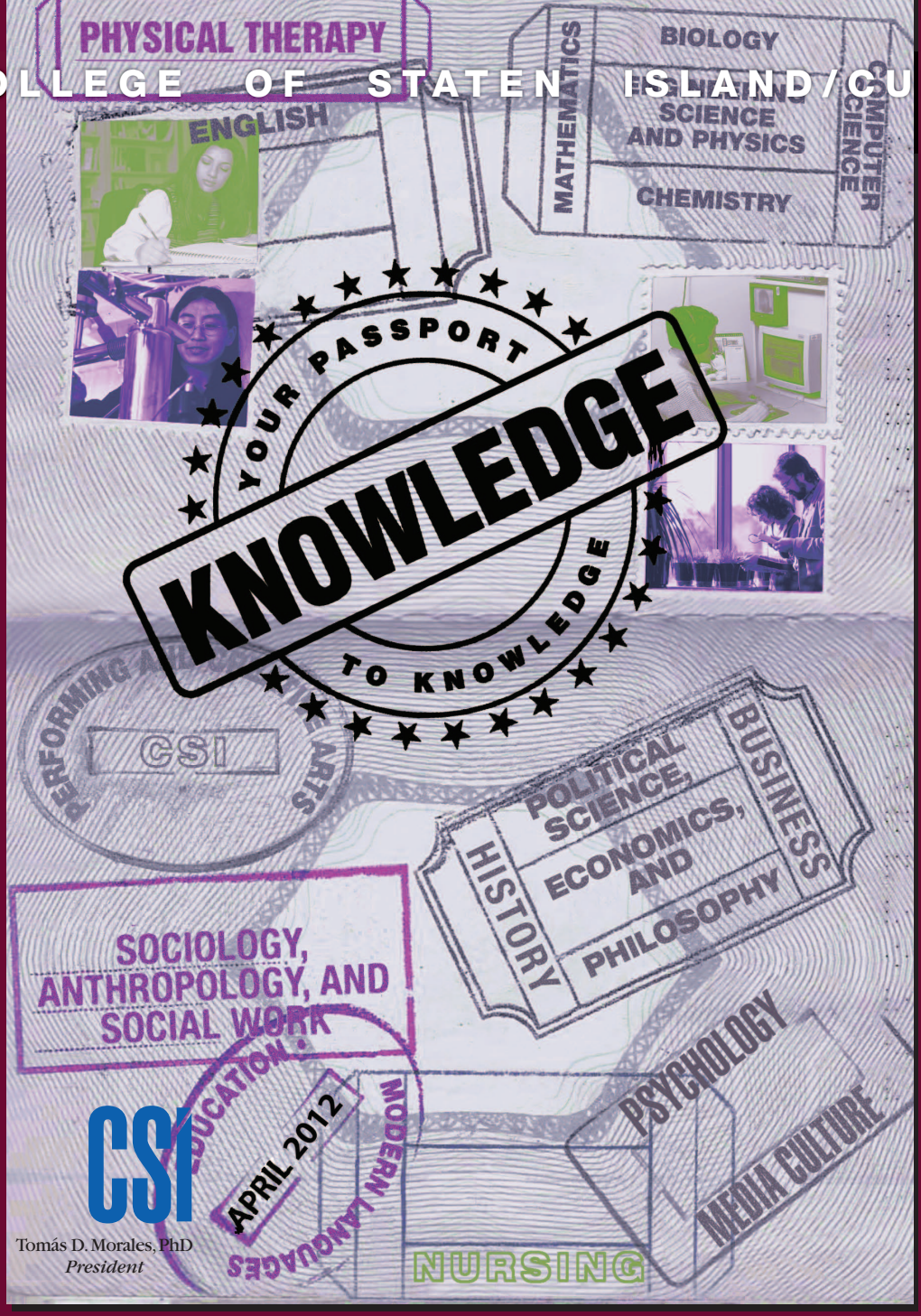
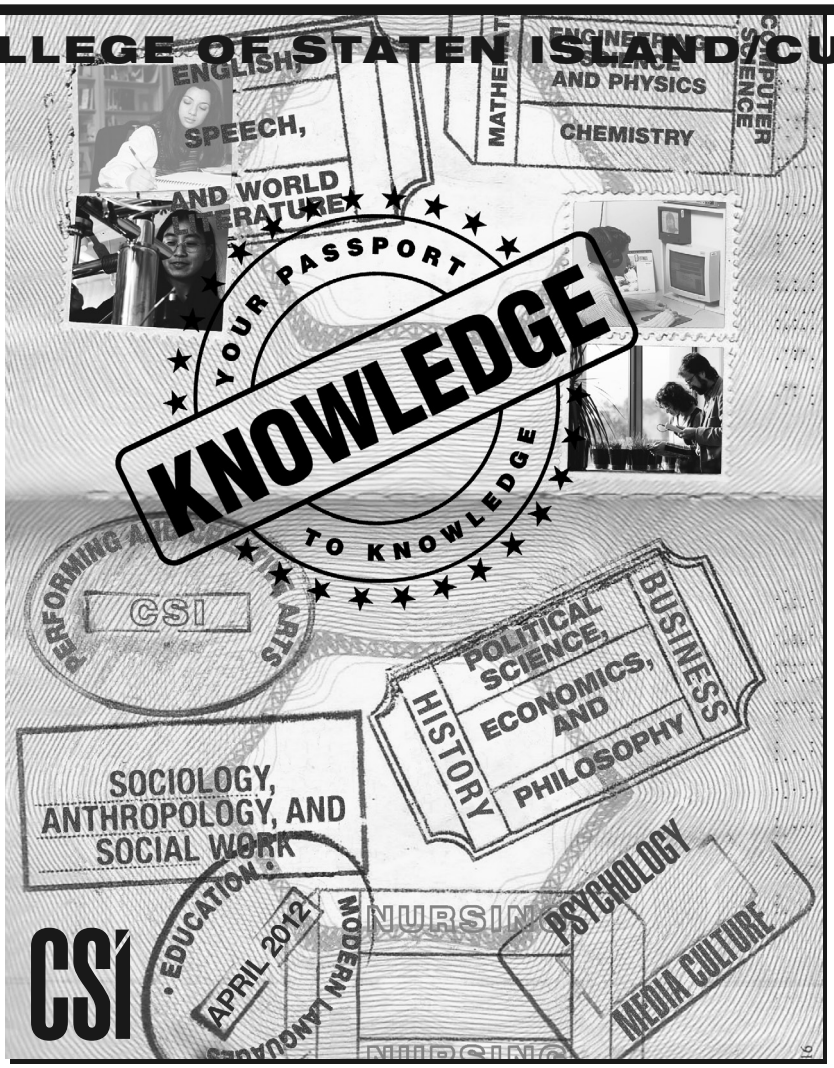
COLLEGE OF STATEN ISLAND/CUNY



CSI UNDERGRADUATE CONFERENCE ON RESEARCH, SCHOLARSHIP, AND PERFORMANCE

THURSDAY, APRIL 26, 2012

COLLEGE OF STATEN ISLAND CUNY



CSI UNDERGRADUATE CONFERENCE ON RESEARCH, SCHOLARSHIP, AND PERFORMANCE*

April 26, 2012
Center for the Arts, 1P-Atrium
11:00am – 4:30pm

*Sponsored by the Division of Academic Affairs with funding from
the CSI Student Government, the Office of Alumni Relations, and the CSI Foundation

Conference Schedule – Friday May 11, 2012

10:15 am – 11:15am

Writing Across the Curriculum
Location: 3N-104
From First Year to Honors Seminar: A Revised Queens College Writing Curriculum

Location: 3N-214
The Pursuit of Happiness in First-Year Composition

Ethnographies of Work: Teaching Students to Think About a Career Path

Engaged Learning
Location: 3N-215
The Humor in Information Literacy

Plagiarism as Learning: The Role of Patchwriting in Pedagogy

Location: 5N-110
Relinquishing Learning to Students

Assessment
Location: 5N-215
No Non-Sense Approach to Assess and Improve Academic and Student Support Services

Integrative Assignments: Assessment and Redesign

Online Teaching and Learning
Location: 5N-216
Launching a Successful Online Orientation to Enhance Retention

Growing Online and Hybrid Instruction at CUNY through a Foundational Faculty Development Workshop

College Readiness/Success
Location: 5N-102
CUNY's Acceleration Strategies

Location: 5N-216A
Defining College and Career Readiness Benchmarks

12:15 am – 1:15pm

Writing Across the Curriculum
Location: 3N-104
Challenges and Successes of Teaching Hybrid Writing-intensive Classes for First-Year Students

Location: 3N-214
A Multidisciplinary Project about Alzheimer's Disease: Transforming Inert-Knowledge into Knowledge in Use

Engaged Learning
Location: 3N-215
Transformative Teaching: Getting Undergraduate Students Out of the Classroom, Bringing the World to Them

Using Brooklyn's History to Enhance the First-Year Experience of City Tech's Students

Location: 5N-110
Reflective Practices for Improving Student Learning of Physics

Creating a Pathway to Excellence in Undergraduate Education

Assessment
Location: 5N-215
Determining Causality in Evaluations of High Impact Interventions

Using Logic Models to Understand, Plan, and Assess First College Year Programs

Faculty Development
Location: 5N-216
The Stickiness of Thought: Exploring Cognitive Science, Pedagogy, and Collegiality at Lehman College

Implementing the ASCE Exceed Model to Form Effective Teachers

College Readiness/Success
Location: 5N-102
Effects of Service Learning on Development Students at an Urban Community School

Leadership Panel
Location: 5N-216A
Pathways and the First-Year Experience

12:30pm – 1:45pm

Luncheon
Location: 1C-Green Dolphin Lounge
Meeting Generation NeXt
Understanding, Teaching and Serving Today's Students

Conference Schedule – Friday May 11, 2012

2:15pm – 3:45pm

Mark Taylor Breakout
Location: 3N-104
Methods and Techniques for Today's Learners

Engaged Learning
Location: 3N-214
Business and Arts in Harmony

Avoiding Intercultural Miscommunication in the Classroom
Location: 5N-110
General Education in Practice in "A Living Laboratory"

Note Taking Will Never be a Nuisance!

College Readiness/Success
Location: 3N-215
The CUNY/ NYCDOE Partnership for College Readiness and Success: Graduate NYC!

Location: 5N-102
Developing Cross-Disciplinary Competencies Through College Algebra

Navigating Through College to Success

Retention Strategies
Location: 5N-215
Academic Evolution and Revolution: The Progressive Movement of Students from Associate to Baccalaureate Degrees

What Impacts Student Success at an Urban Community College?

Location: 5N-216
Cardinal Pulse: Connecting First-Year Students to the College Community Through Technology

Finish in Four: John Jay College's Pilot to Increase Retention and Graduation Rates, and Improve Academic Advisement

Technology
Location: 5N-216A
Using Free Software to Improve Educational Outcomes

Building and Supporting a Media-Rich Learning Environment at Baruch College

3:30pm – 4:30pm

Writing Across the Curriculum
Location: 3N-104
Making Connections Between Ecological Processes, Our Egos and Our Oikos

Writing as Thinking Within the Introductory Art History Classroom

Location: 3N-214
Undergraduate Student Research at a Minority Serving Community College

Undergraduate Research and Mentoring Initiatives at New York City College of Technology

Engaged Learning
Location: 3N-215
Inter-Collegiate Academic Competitions as Educational Devices and as a Means of Student

Engagement: Lessons to Be Learned From the Mock Trial

Active Learning in a Large Classroom

Location: 5N-110
Framing Teaching Research Questions Through Class Inter-Visitation

Assessment
Location: 5N-215
Enhancing the First-Year Experience via the Use of ePortfolio within Student Affairs

Retention Strategies
Location: 5N-216
Faculty Diversity Development at CUNY: A Framework to Enhance Black Student Success

Hostos Center for Teaching and Learning on Tour: Sharing and Passing on Effective Strategies for Retention

College Readiness/Success
Location: 5N-102
Understanding First-Year Students: A Preliminary Investigation of College Success Factors

Increasing Student Retention and Graduation: ASAP Comprehensive Supports and Assessment

Location: 5N-216A
Promoting Success Through Innovative Approaches in Math Immersion Workshops

Image as Text: A Unique Model for Teaching English Language Learners

CSI Undergraduate Conference on Research, Scholarship, and Performance

Message from the President

It is my pleasure to welcome you to the 11th Annual Undergraduate Conference on Research, Scholarship, and Performance.

The conference theme, "Your Passport to Knowledge," exemplifies the breadth and depth of knowledge and talent of our undergraduate students. This annual event showcases the intellect and talent of CSI students, as well as the commitment of our faculty to provide a world-class education for our students. It is through the guidance of and the collaboration with CSI faculty that our students are able to construct research, scholarship, and performances of the outstanding caliber that you will enjoy today.

This year we have more than 300 participants in the Conference, representing an extensive range of disciplines within the College. There are 121 abstracts being presented either by a single student or groups of students, 96 performers, and 68 students displaying their works of art. Today, you will have the opportunity to immerse yourself in complex musical and dance performances, rigorous analyses of social scientific and literary ideas and theories, and meticulous scientific investigations and inquiries.

It is important to note that 16 of our students' research projects were supported through CSI Undergraduate Research Awards sponsored by the CSI Foundation. In addition, we are extremely grateful to the CSI Student Government and the Division of Academic Affairs for their financial support.

I would like to acknowledge Kristen Lindtvedt and Dr. Alan Benimoff, who have assisted our student participants by providing workshops and technical assistance that enabled them to enhance the visual components of their presentations; and Jessica Stein, Office of the Associate Provost for Undergraduate Studies and Academic Programs; and Debbie Mahoney, Delia Rios, and Barbara Verteramo, Office of the Provost—a great team that handled a myriad of tasks and details. Lastly, I would like to thank Associate Provost for Undergraduate Studies and Academic Programs Dr. Deborah Vess for coordinating the Conference.

I would also like to thank the Alumni Association for donating t-shirts for the volunteers, Design Services for printing the Conference program and designing the Conference logo, the Center for the Arts for their technical support, the Undergraduate Research Conference Committee members for reviewing abstracts and planning the program, and The Verrazano School volunteers for taking the time to assist with the organization of this event.

I am indeed proud that this Conference represents a true collaboration of the College community, and I appreciate the many roles played by all in presenting this Conference, which highlights the critical research and experimentation that define and enhance the college experience.

Congratulations to each and every one of today's participants!

Sincerely,

Tomás D. Morales, PhD
President

The Department of Performing and Creative Arts

Presents

An Art, Dance, and Music Exposition

at

The Eleventh Annual
CSI Undergraduate Conference
on Research, Scholarship,
and Performance

The Atrium, The Springer Concert Hall,
The Recital Hall, The Amphitheatre, The Dance Studio,
and The Student Art Gallery

Center for the Arts
Thursday, April 26, 2012

THE RECITAL HALL 1P-120

CSI MUSIC RECITAL and DANCE PERFORMANCE

11:00am –12:00pm

A showcase of chamber music featuring faculty and students of the CSI Music Program
Dr. William Bauer, Performance Coordinator

An original African dance
Professor Charles Thomas, composer and choreographer

Program

Sonata and Partita for solo violin .....J.S. Bach (1685-1750)
Partita No.2 in E, BWV 1006 "Preludio"
Stephanie Geraci, violin

From Six Impromptus Op.6 Picture from the East (Bilder aus Osten).....Robert Schumann (1810-1856)
1. Lebhaft
5. Lebhaft
Hosea Mak, piano (Piano primo in No.5) Kirill Zaitsev, piano (Piano primo in No.1)

El Noi de La Mare - Spanish Traditional .....arr. Miguel Llobet (1878-1938)
Study in E, Op.35 no. 8.....Fernando Sor (1778-1839)
Bryan Karundeng, guitar

Duet for violin and guitar.....Niccolo Paganini (1782-1840)
Cantabile
Stephanie Geraci, violin Bryan Karundeng, guitar

The Negro Speaks of Rivers.....Margaret Bonds (1913-1972)
Ashley Gill, soprano Dr. William Bauer, piano
"Rites of Passage"
Traditional African Rhythms.....Charles Thomas
Dancers Samuel Pasewe, Edwin Santiago, Christopher Moore and Maxwell Adjei
Professor Charles Thomas, percussion

The Negro Speaks of Rivers by Langston Hughes

I've known rivers:
I've known rivers ancient as the world and older than the
flow of human blood in human veins.

My soul has grown deep like the rivers.

I bathed in the Euphrates when dawns were young.
I built my hut near the Congo and it lulled me to sleep.
I looked upon the Nile and raised the pyramids above it.
I heard the singing of the Mississippi when Abe Lincoln
went down to New Orleans, and I've seen its muddy
bosom turn all golden in the sunset.

I've known rivers:
Ancient, dusky rivers.

My soul has grown deep like the rivers.

THE AMPITHEATRE – COURTYARD BEHIND 1P

JAZZ REPERTORY COMBO

12:15pm-1:15pm

Professor Michael Morreale - director

James Fletcher - tenor saxophone Miles James – trombone
Linda Soria - voice
Eric Roces – guitar Padraic Lynch – bass Darryl Todman - drums

Program to include:

CTA ..... Jimmy Heath
Song for My Father ..... Horace Silver
Parker's Mood ..... Charlie Parker
Tenor Madness ..... Sonny Rollins

THE SPRINGER CONCERT HALL, 1P-117

CSI BIG BAND

2:45pm-3:30pm

The CSI Big Band explores literature of that genre ranging from swing to modern with an emphasis on clarity and ensemble performance and development of each individual player's musicianship.

Professor Michael Morreale, Director

The CSI Big Band

Dominick Bartolone - alto saxophone
Mathew Goldberg - tenor saxophone
Shaker Krit - baritone saxophone
Francis Rogers, Elise Sledge, Alberto Reyes-Llinas - trumpet
Thomas Cropley, Miles James, Christian Alonzo - trombone
Alfred DeRosa, Faith Walton - piano, Adan Paz, Eduard Manvelyan, Ari Parness - guitar
Alan Rogozin, Patrick Wakie - electric bass
Darryl Todman - drums

Program

I Mean You.....Thelonious Monk
Doxy .....Sonny Rollins
Rhythm Ballade .....Michael Morreale
Blue Bossa .....Kenny Dorham

All arrangements by Michael Morreale. Pprogram subject to change.

DANCE STUDIO, 1P-220

CSI DANCE PROGRAM

2:15pm–3:00pm

The Training of a Dancer

Professor Charles Thomas, *Dance Coordinator*
Professor Niambi Keyes, *Dance Instructor*

JAZZ (Dan 262)
Centre/Floor Work

Improvisation (Dan 171)
Audience Participation

Contemporary Styles of Dance (Dan 101)
Afro-Haitian Dance (Dan 184)
Centre/Floor Work

Choreography (Dan 111)
Excerpt from "Aguanile" for Spring 2012 Dance Concert

CSI Dance Company
Works In Progress
Excerpts from "Gravity", "Not Alone", "Hype"

Dance Students: Autumn Strickland, Donnica Hamlet, Lauren Stevens, Brandon Modeste, Melida Medina, Shanica Huggins, Christopher Koehler, Samuel Paasewe, Mohammed Widdi, Evelina Reinhart, Samantha Wong, Christina Marcano, Marlena Barnett, Nneka Okator, Danny Martinez, Erica Golin, Tiffany Kaplan, Tevin Hercules, Abidemi Komlafe, Ashley Journeay, Zainab Mahmud-Husein, Emmanuel Frank, Naomi Diaz, Aleshia Williams, Darielle Mercado, Dawn Akerley, Stephanie Hughes, Della Lee, Edwin Santiago, Christopher Moore, Maxwell Adjei

CFA ATRIUM—THE GLASS CASE

CSI SCULPTURE EXHIBITION

1:30 - 4:00pm

Professor Marianne Weil, *Faculty Adviser*

Plaster sculpture by the following students

Student Artists:	
Lisa Fredericks	*Leg*
Risa Fujimori	*Plug*
Sandy Mousouroulis	*The Silence*
Stephanie Rodriguez,	*Untitled*
Nicole Ashley Medina	*Locked*
Kayla Virga	*La Donna*
Nicole Castaldo	*Tooth Fairy*
Ksenya Stepanyuk	*Pencil to Swan*
Christina Bromley	*Hard Body*
Rosalie Zadwadki	*Brightest Day, Darkest Night*
Natalia Alfonso	*Black and White*
Randi Moccia, 20012	*a Space Odyssey*
Robertsan Novo	*Man on the Moon*
Duck Gyun Shin	*Harmony*
Vianney Martinez	*Mollar*

CSI STUDENT ART GALLERY, 1P-118B

THE STUDENT SPRING GROUP EXHIBITION

1:30pm – 4:00pm

The Student Art Gallery of the Performing and Creative Arts Department will present an exhibition of work by art majors from all of the areas of study: drawing, painting, photography, printmaking, and sculpture.The exhibition is curated by Nichole Casaldo, Emily Peters, and Fransisco Osorio..

Dr. Siona Wilson, *Faculty Adviser*

Rebecca Wheeler
Paula Flidermauz
Nelida Valentin
Melissa Dudley
Tara Colón
Heo Hye Kyung
John Dalia
Katy Priale
Helena Odinzow
Christopher Shadley
Michello Paterno
Duck Shin
Dania Churovitch
Roberta Berman
Vianney Martinez
Gary Pizzolo
Barbara Brancaccio
Amy Xie
Natalia Nikiforova
Elena Hart
Samantha Garbarino
Yai Ting Jiang
Nick McNab
Alissa Mangiacapre
Eva Chiu
Christian Muniz
Mizue Tsubouchi
Elizabeth Peteya
Eva Chiu
Dana Johnson
Wan Io Kuong
Ben Tirado

"COLORFUL 3-D" DRAWINGS

Rebecca Wheeler
Akinyemi Fapohunda
Nessym Salib
Hayat Tahmaz
Erika Quaranta
Cristina Clavijo-Marquez
Brian Ortiz
Joseph Fragapane
Alex Cannavo
Christina Barbosa
Brian Beaton
Christina Bromely
Heu Hye Kyung
Tovra Lehrfield
Melissa Perez
Darlene Livingston
C.H.

SCULPTURE

Anna Kornko
Maryna Incherchera
John Picozzi
Melissa Dudley
Marie Kostick
Gabrielle T. Christopher
Eva Chiu
Samantha Garbarino
Annalisa Meade
Amy Xie
Elizabeth Che
Michael Crocitto
Brian Rodriguez

PHOTOGRAPHY

Paul Caminiti
Mark Lacari
Eileen Martinez
Mario Fernandez
Anna Zheleznyak
Mira Makhumutova

Research Paper Presentations

Center for the Arts

12:20pm - 4:00pm

CORE 100 Class

Williamson Theater, 12:20pm–1:10pm

PAPER 1

The American Perspective on the Korean War

Kori Elizabeth Tjornhom

Faculty Mentor: Dr. Richard Lufrano
Department of History

This project will discuss the complexities of the Korean War by analyzing the American population's perspectives of the war and how the United States government and media shaped those perspectives. The American domestic approval rating of the war was at a majority during the outbreak of the war in 1950, but by late 1951 and 1952 the majority of the American population was against U.S. involvement in the Korean War. This discussion will attempt to account for the change in American perspective within this one-and-a-half to two-year time span. By analyzing the impact of the draft as well as television series and movies based on the situation in Korea, this paper will shed light on the government and media's influence in shaping American's perceptions of the Korean War. These sources and influences will then be put into context of American foreign policy. By analyzing the governmental pressure and the government's push to justify its actions in Korea, this paper will show how these justifications were used to promote the U.S. foreign political agenda.

Two established scholars, William Appleman Williams and Michael H. Hunt, discuss the complexities of American foreign policy and provide an essential framework for understanding these complexities. Their works, The Tragedy of American Diplomacy by Williams and The Making of a Special Relationship by Hunt will be incorporated throughout my project as a framework for contextualizing the U.S. government's influence in shaping Americans' perceptions on the Korean War to fit their foreign policy agenda. Their work will also help determine if U.S. foreign policy represented its traditional values, or if it promoted economic self-interests that varied according to the administrations dictating the policies.

PAPER 2

The Resurrection of Voices

Kelly Stern & Patricia Smith-DeSilva

Faculty Mentor: Professor Patricia Smith-DeSilva
Department of English

I will assist Professor Patricia Smith in the organization of an anthology of poetry and photographs entitled "The Resurrection of Voices." The anthology will pair the work of prominent African-American poets with 19th-century cabinet cards, daguerrotypes, cartes de visite, ambrotypes and tintypes from Professor Smith's extensive collection–more than a thousand images dating back to the 1850s.

The coffee table book will feature the sobering photographs –which are free-use and can be reprinted without permission–and personal poems which craft a life and history for the people in the pictures. I will help Professor Smith identify and query potential publishers, and assist in crafting the actual anthology, sending out copies of the photos to contributors and managing the work as it comes in.

Our presentation, designed to illustrate the impact of the project, will consist a slide show of selected images and a reading of the poems that give them breath.

Social Changes and Controversies in the Contemporary World

Recital Hall, 1:30pm-2:25pm

PAPER 3

I Has A Dream! The 1996 Oakland Unified School District Ebonics Resolution: Myths and Realities

Sharifa C. Hampton

Faculty Mentor: Dr. Sarah Benesch
Department of English

News of the 1996 Oakland Unified School District's (OUSD) Ebonics Resolution swept across the nation in a violent maelstrom of images, questions, stereotypes, and news speak. The opinions that formed from the media hype, including those of African-Americans, ranged from disgust to amazement. Only when linguistics scholars stepped in did cooler heads prevail. The purpose of my paper is to survey the Ebonics controversy along the following lines: summarize the resolution, including its aims; give voice to popular opinions; define and give the historical context of related terms; expose the media manipulation; and offer pedagogical implications. The paper is based on peer-reviewed articles written by sociolinguistic scholars.

This research was of particular interest to me as I recognized my own ignorance of the subject matter: language and how it relates to me as an African-American. Immediately after the initial resolution was published stating that African-American children in California were going to be taught in their native language, "Ebonics," the media went into a frenzy and African-Americans recoiled in the face of acute pain, humiliation and shame, as we were the butt of a new national media joke. The scholarly voices of the sociolinguists who were called upon to give opinion were not published in the mainstream press and therefore could not quell the dissent and shame. It is only when I read the scholars' work in carrying out my research that I could question the shame I felt at the time.

My paper has led me to several conclusions: 1) the Oakland school board should be commended for drawing attention to issues related to the language, education and identity of its African-American students; 2) the validity of Ebonics, African-American Vernacular English etc. should be a widespread discussion in the African-American community; and most importantly, 3) there is no shame in the way I nor any other African-American speaks.

PAPER 4

The Veil - Conceptualizing Islamic Tradition in the 21st Century

Kasuni Nanayakkara

Faculty Mentor: Dr. Samira Haj
Department of History

On April 11, 2011, two Muslim women were detained by police in France for wearing the traditional Islamic dress (niqab), after a law was passed banning the garment from being worn in public. France is the world's first nation to enforce a ban on full veils (niqab or burka). The ban was put into effect on April 11, 2011, and the law affects as many as 2,000 women in France. One wonders, however, how this animosity towards the veil came to be. How can the veil symbolize purity, chastity, and modesty while at the same time ignite feelings of fear, terror, and hatred? Why does the veil represent fundamentalism, backwardness, and the submission and oppression of women in the Eastern world? In order to answer these questions, I examine the historical significance of the veil in Islamic society in the Middle East, analyze the Iranian "unveiling" period of the 1900s, and investigate the Egyptian Piety Movement. By studying the development of the veil, it has become apparent that the veil has been transformed from a garment worn only by upper-class women to a cloth worn by the most devout Muslim women. By examining the pre-Islamic origins of the veil, the effects of European colonization on the veil, and the Piety Movement in Egypt, one can see how the veil has become a paradoxical symbol that represents both piety and oppression in the 21st century.

PAPER 5

Social Media and Advertising

Sarah Greis

Faculty Mentor: Dr. Bilge Yesil
Department of Media Culture

Our society has a rich history of advertising from simple art and copy in newspapers to viral campaigns on the Internet. My project will focus on contemporary advertising (commercial and political) and its use of social media. I will examine why advertisers use social media and how online advertising affects print and TV advertising.

I will begin with an examination of the development of social media and Internet advertising. Using audio-visual material, I will analyze recent online advertising campaigns such as Old Spice, Chipotle, Chrysler, Dove, Starbucks and President Obama's online campaign. I will pay attention to how advertisers use social media platforms such as You Tube, Twitter and Facebook and what tools they use (likes and wall posts on Facebook, tweets, blogposts, ratings and rankings on You Tube).

In conclusion, I will argue that the new communication technologies have impacted advertising in such a way that advertisers are now turning away from traditional strategies where the consumer is positioned as a passive receiver of the sales pitch to new approaches where the consumer is positioned as an active participant who searches for and shares ads with online friends.

PANEL DISCUSSION

The Anti-Tocqueville: Aleksei Evstaf'ev and Antebellum America

Recital Hall, 2:30pm-4:00pm

Faculty Mentor: Dr. Susan Smith-Peter
Department of History

The Political Struggle behind the Development of Relations between Russia and America during the Period of 1812

Ashley Simmons

Aleksei Evstaf'ev was a Russian consul-general in Boston. Evtaf'ev received an exceptional reputation while serving in the Russian embassy in London as a writer and musician. Arriving in America in 1809, Evstaf'ev began his career by providing facts and interpretations of Russian history. According to Evstaf'ev, the outcome of the War of 1812 was a victory for the oppressed countries of Europe; however, not all agreed. While Russia was celebrated for defeating Napoleon, the events of the war created mixed feelings among the American people. There are numerous reasons for negative American attitudes towards Russia's victory: Russia's main ally in the war against France was England, an enemy of the United States, and misinformation about Russia and its people, which was widespread in Western literature, obstructed the American point of view. Russia was the least known of European countries to America, and the opinions of Federalists and Republicans concerning developments in Western civilization were shown in their attitudes towards Russia.

This paper will examine the debate about Russian-American relations pertaining to the Russian-French War of 1812, concentrating on Aleksei Evstaf'ev, a Russian diplomat, and Robert Goodloe Harper, the leader of the Federalists in Boston, and their opposition to anti-Russian author Robert Walsh. The paper will show how this debate reflected the political struggle between Russia and America, and how this controversy stemmed from a division of political party interests.

We Were Not Ready: Why the Works of Aleksei Evstaf'ev Have Been Forgotten in American History

Amanda Holbert

With a few notable exception, scholars have not written about the relationship between the United States and its Russian diplomats. Literature and accounts written by Russians in America have drifted into obscurity, including the works of diplomat Pavel Svin'in and the Russian Consul at Boston Aleksei Evstaf'ev. Although Evstaf'ev dedicated over forty years of service to the United States and lived there until his death in New York City in 1857, Evstaf'ev's work is particularly unknown in comparison to the works of Svin'in, who spent fewer than two years in America. The written work of Pavel Svin'in was published in a 2008 book called A Russian Paints America: The Travels of Pavel P. Svin'in, 1811-1813.

Svin'in and Evstaf'ev had many personal things in common despite their different opinions. Similarly to Svin'in in A Picturesque Voyage through North America and the great Alexis de Tocqueville in Democracy in America, Evstaf'ev wrote an account of what he witnessed in America titled The Great Republic Tested by the Touch of Truth. Unlike Svin'in, Evstaf'ev harshly criticized democracy; he praised the aristocracy and was in favor of class segregation. Svin'in and Tocqueville collectively saw potential in democracy, while Evstaf'ev was confident that democracy was sure to fall. Evstaf'ev's tone suggested he was instigating a fight that he would likely lose during this time. Evstaf'ev expressed a very unpopular opinion during the 1850s, when backlash against writers of unfavorable opinions was common. Americans were not ready to hear about anything that was against America.

Those Who Love and Hate Democracy

Maria Lago

The Hungarian Revolution was one of the most significant European revolutions in the mid nineteenth century. Lajos Kossuth led Hungarians to fight for independence from the Habsburg monarchy of the Austrian empire. He also sought support from American democratic principles during his fight for Hungarian independence. The Young Americans of the mid nineteenth century served as a tool for Kossuth's desire to spread influence of democratic values; however, Russian-American consul Aleksei Evstaf'ev chastised Kossuth's admiration of democratic values by opposing democratic Institutions. Evstaf'ev believed that a democracy such as the United States was bound to fail, deeming the United States Constitution and democratic values to be imperfect.

My research demonstrates the relation of Lajos Kossuth, a leading revolutionary and advocate of democracy, to Young America in advocating democracy for an independent Hungary, along with Evataf'ev's views against democracy. Evstaf'ev and Kossuth had opposing views on democracy. Kossuth desired an independent Hungary and democratic values, while Evstaf'ev opposed both Kossuth's fight for Hungarian independence and democratic values.

Russian Eyes on the American Judicial System

Naisha Solomon

Every government is obligated to ensure a well working, fully functional society. In America, focus is placed on the judicial system, where the maintenance of justice is essentially a preventative measure against anarchy. Early nineteenth-century Russian consul Aleksei Evstaf'ev and Alexis de Tocqueville had opposing views on whether this governmental branch was detrimental to a functional society. Evstaf'ev claimed that the jury system did not adequately serve the populace, while Tocqueville adamantly defended it, saying it taught the population how to rule and it facilitated democracy. Evstaf'ev claimed that democratic conditions inhibit the government's ability to deliver promises and kept the population deceived. Through the examination of class, juries and judges, we can better understand how Tocquevile and Evstaf'ev came to their respective conclusions. These three factors are pertinent to the judicial system because they coexist in such a way that each affects the other.

Research Poster Presentations

Center for the Arts

Atrium

1:30pm - 4:00pm

Poster Location by Department

Biology	Bottom Center
Business	Bottom Back
Chemistry	East Lounge
Computer Science	Bottom Front
Education	Bottom Front
Engineering Science & Physics	Bottom Back
English	Bottom Back
Geology	Bottom Back
Mathematics	Bottom Center
Media Culture	Bottom Center
Performing and Creative Arts	Bottom Back
Pol.Sci/Eco/Philosophy	Bottom Back
Psychology	West Lounge

DEPARTMENT OF BIOLOGY

CONFERENCE LOCATION: BOTTOM CENTER

POSTER #30

Willowbrook Forest's Carbon Sequestration. A Comparison to Carbon Emission Generated by CSI's Vehicle Traffic

Erica Zito

Faculty Mentor: Dr. Dick Veit
Department of Biology

Special recognition is given to urban forests and trees because they combat carbon reduction on two fronts: (1) they are direct carbon stores, as all trees are, and (2) they avoid carbon production as fossil fuel. (Nowak 1993). In this study, tree species and diameter distribution will be used to estimate the amount of carbon dioxide sequestered each year by Willowbrook Forested located next to the College of Staten Island in NewYork, New York. Taking into account the environmental impact of vehicle traffic on the College of Staten Island, an estimation of the amount of carbon dioxide generated and released into the atmosphere will also be calculated.These two estimations will be used to analyze Willowbrook Forest's role in offsetting the amount of carbon dioxide generated by vehicle traffic on the campus of College of Staten Island.

Nowak , David J."Atmospheric Carbon Reduction by Urban Trees ." Journal of Environmental Management . 37. (1993): 207-217.Web. 31 Jan. 2012.

POSTER #123

The Interaction of Normal Tau Protein with Abnormal Tau Protein

Lorraine Chawki

Faculty Mentor: Dr. Alejandra Alonso
Department Neuroscience

Tau protein is a highly soluble microtubule-associated protein (MAP) that can be found predominantly inside the neurons in humans. One of the tau protein's most important functions is modulating the stability of axonal microtubules. Once there is a defect in this intricate and complex system, neuro degeneration may occur- Alzheimer's disease being one development.

I have been working on the effects of the interaction of normal tau protein and abnormal tau protein.This is done by taking the gene with different forms of tau taken from a vector with green fluorescent protein, and ligating them with a red fluorescent tag.The purpose will be co-transfection of cells with one form of tau that will be expressed with GFP (green-fluorescent protein) and RFP (red fluorescent protein) and test the reaction (s).

I personally work using cell culture and cell purification. I use restriction enzymes (EcoRI and BglII), electrophoresis gel, cell ligation, GFP, RFP, and multitude of different vectors.

So far, I have created a cell culture from CHO cells and then purified them.After checking that my concentration levels were high enough to use my purified plasmids, I applied Restriction Enzmes (EcoRI and BglII) that cut my DNA at specific target cites and used electrophoresis gel to test the success of my cuts.These enzymatic cuts create sticky ends for the purpose of ligating new information to my DNA which allows me to introduce my different vectors to my DNA.When fluorescent tau was co-transfected with non-labeled pseudophosphorylated tau we could see interaction, and I am now using two different tags to see the effect.

POSTER #94

Reprograming Developmental Fates in Sea Urchin Embryos and Larvae

Tia Leung, Jacob Madella, Shireen Jayman, Mihai Hajdu & Alexia Downs

Faculty Mentor Dr. Ceasar Arenas-Mena
Department of Biology

Several studies have proven that the transcription factor SpGataE plays a major role in the gene regulatory network for endoderm specification in bilaterians. Strongylocentrotus purpuratus, better known as the purple sea urchin, is an echinoderm and belongs to the deuterostome lineage. SpGataE is an ortholog of the Gata 4/5/6 genes found in vertebrates and controls endoderm-specific gene expression.The experimental expression of SpGataE in regions of the sea urchin embryo that normally do not express endoderm-specific genes may alter the fate of cells, possibly converting ectoderm areas into endoderm regions. Transcriptional regulatory elements of the hatching enzyme will drive the expression of the Tet-On3G transactivator protein. The hatching enzyme is expressed in nearly all embryonic cells.The constructs will be introduced by microinjection and incorporated randomly in blastomeres. So, only some blastomeres will express Tet-On3G. When in the presence of Doxycycline, the Tet-On3G transcription factor will bind to Tre3G promoter regions and induce gene expression. SpGataE and cherry 1 will be under control of a Tre3G promoter and will be induced when doxycycline is present. The expression of SpGataE will lead to the expression of the endoderm differentiation gene Endo 16 and the reporter construct Endo16: GFP, which will synthesize the green fluorescent protein wherever SpGataE is expressed. The ultimate goal is to test multipotency functions of H2A.Z. Eventually, experiments to prove the role of H2A.Z in the differentiation and dedifferentiation of embryonic cells will be conducted.

POSTER #82

Effects of Scots Pine Needle Extractions on the Fungal Endophyte, Hormonema Dematioides

Lisa LaManna

Faculty Mentor: Dr. Gregory Cheplick
Department of Biology

Endophytes are typically fungi that live symbiotically within and between the cells of plants. Some endophytes only show a full life cycle when grown in culture. Particularly, these fungi may not reach the final stage of reproduction. This two part experiment aimed to determine if the host tree is producing something within its leaves that may confer the start and stall

of the fungi life cycle. Hormonema dematioides was extracted from Scots pine trees (Pinus sylvestris) found at the College of Staten Island. Four extractions were made from the needles and supplemented to agar at different volumes. The results show that a hot water, a 25% ethanol, a 25% methanol, and a 50% methanol extraction indeed convey nutritional effects that enabled

germination of spores on nutrient deficient media. These same extractions had an inhibitory effect on sporulation when using potato dextrose media, a complete medium. Both parts of the experiment were performed within a 7 day time frame of growth.A higher concentration of extraction usually displayed a stronger growth effect on germinating spores, and also a greater inhibitory effect on spore formation for a mature fungal colony.

POSTER #113

Effects of Nigella Sativa Oil on GABAA-receptor Mediated Neurobehaviors in Mice

Simon Ng

Faculty Mentor: Dr. Abdeslem El Idrissi
Department of Biology

Black cumin oil is the seed extract of Nigella sativa Linn that shows promising medical applications. The oil is believed to activate the benzodiazepine site of the GABAA receptor; thus, effectively being an agonist for GABAA. Our basis of study was to observe and characterize the effect of black cumin on locomotor activity, anxiety, learning, and memory in the mouse model. Black cumin was administered acutely via intraperitoneal injection into wild-type FVB mice (3 mg/kg) ~15 minutes prior to behavioral testing. Our preliminary data shows that black cumin treatment results in decreased locomotor activity and retention deficits in the passive avoidance aversive learning task and Morris water maze spatial navigation task.These results indicate deficits in learning and memory related to GABAergic required involvement in performances in these tasks suggesting GABAA

activation by black cumin.The aim of the proposed research was to examine taurine (GABAA agonist) alternatives as a means to studying GABAA expression in mice. Since Nigella sativa is an agonist of GABAA, we suggest that use of black cumin on mice may aid in studying the GABAergic system of Fmr1-KO mice.We hope to extend this research to the Fmr1-KO mouse model since it has increased seizure susceptibility and hyperarousal that parallels symptoms of fragile X syndrome in humans.We expect Nigella sativa oil to provide beneficial effects recovering learning deficits and resisting epilepsy in the fragile X mouse model.We are currently assessing the anti-epileptic effects of black cumin

POSTER #106

Gestational exposure to Water Disinfection By-products Increases the Number of Cortical Synapses in the Male Mouse Brain

Derek Pisana, Lauren Overeem & Jillian Braccolino

Faculty Mentor: Dr. Sara Rose Guariglia
Department of Biology

In recent years there has been evidence to suggest that environmental factors may be involved in the development of Autism Spectrum Disorders (ASD). For example, a report released in 2000 by the Agency for Toxic Substances and Disease Registry (ATSDR) revealed that two trihalomethane (THM) class disinfection byproducts, chloroform and bromoform, and the soil

contaminant perchloroethylene (PCE) were found in high concentrations in municipal drinking water of Brick Township, NJ during the years 1987–1995. ASDs in Brick were also found to be higher than national prevalence estimates. In previous work done by our group, we found that gestational exposure to THMs and PCE via maternal drinking water induced autistic-relevant behaviors and an increase in Protein Kinase A (PKA) activity in male, but not female, mice. PKA activity is important in synaptogenesis. Therefore, in these experiments we sought to determine if synaptic connectivity was changed in the cortex, hippocampus and in the cerebellum of mice that were exposed to THMs and PCE during gestation. We found a significant increase in the number of excitatory synapses in the cortex of male mice exposed to THMs and PCE at postnatal day 15. Abnormal synaptic connectivity is thought to be involved in the pathogenesis of ASD. Together, the data suggeststhat during development, a combination of THM and PCE induces changes in synaptic connectivity that may contribute to the development of the autistic-relevant behavioral phenotype found in this mouse model.

POSTER #105

Water-T-Maze: A Useful Assay for Determination of Repetitive Behaviors in Mice

Lauren Overeem

Faculty Mentor: Dr. Sara Rose Guariglia
Department of Biology

Repetitive behavior is a term used to describe a wide variety of invariant and inappropriate behaviors that occur in diverse conditions, including autism. Given the wide variety of repetitive behaviors, it is important to utilize rodent behavioral assays that are appropriate to specific forms of repetitive behavior. A variety of high-throughput assays to investigate lower order forms of repetitive behaviors are available for rodents. However fewer assays are available to investigate higher order forms, such as tendency for rigid adherence to routine. BTBR T+tf/J (BTBR) mice harbor behavioral deficits that share similarity to the core deficits found in autism, yet have not conclusively demonstrated deficits in reversal learning tasks (i.e. Morris water maze (MWM), T-maze) that are commonly used to examine the tendency for rigid adherence to routine. By combining elements of both the MWM and T-maze, we designed a novel water T-maze assay to determine if tendency for rigid adherence to routine would become perceptible in BTBR mice. We found that BTBR mice show a significant impairment in reversal learning as compared to B6? in our water-T-maze reversal learning assay. Our findings suggest that our water T-maze assay is effective for determining the presence of higher order forms of repetitive behavior that are not readily revealed by conventional methods.

POSTER #100

The Role of 5-HT1A-R in Hypothalamic Peptide Signaling System

Isma Butt

Faculty Mentor: Dr. Chang-Hui Shen
Department of Biology

Disturbances of the serotonin pathway have been linked to the pathogenesis and pathophysiology of eating disorders. However, direct evidence of this has yet to be demonstrated. Using mice as an animal model, the relationship between eating behavior, 5HT1AR function, and the regulation of hypothalamic peptides can be tested. We examined change of feeding behavior, body weight, and expression of hypothalamic peptides in both wild type and 5HT1AR knockout mice. We found that the body weight of 5HT1AR knockout is approximately 20% less than that of the wild type. Similarly, the food intake of the 5HT1AR knockout is about 50% less than that of the wild type. Even though the use of the 5HT1AR inhibitor, 8-OH-DPAT, reduced the food

intake in the wild type mice, their body weight remained consistent. Further analysis of hypothalamic peptide expression through qRT-PCR showed that both POMC and AgRP are expressed at relatively higher values in the wild type than the 5HT1AR knockout. However, POMC expression is decreased significantly in wild type when 8-OH-DPAT was delivered. This suggests that regulation of food intake is regulated by POMC through the 5HT1AR. Furthermore, the up-regulation of AgRP in wild type when compared to 5HT1AR knockout proposes that expression of AgRP may regulate body weight. These findings show the importance of 5HT1AR in regulating eating behavior and body weight through the expression of hypothalamic peptides.

POSTER #97

Effects of Temperature and Pesticide Use In Fall-Flying Moths

Ella Viola

Faculty Mentor: Dr. Lisa Manne
Department of Biology

Climate change and pesticide use are two ways that humans are contributing to the decline of local ecosystems. Some pesticides are targeted toward particular insects, but any pesticide use has effects on higher trophic levels as well. As an index of change to local systems, we monitored moth activity in Summer/Fall 2011. We compared numbers of individuals and species of moths in a non-sprayed, forested location (Tuckernuck Island, Nantucket), as well as a forested location that was sprayed with pesticides (Staten Island). Although there was a climate difference between the two study sites, it was not in the expected direction: a record-breaking cold snap and snowstorm abruptly ended all moth activity at the end of October in Staten Island. Our results prior to the end of October showed a diminished number of moths seen on Staten Island, compared to the unsprayed Nantucket site, even though Nantucket is more northerly than Staten Island, and should have had fewer moths later in the season (coincident with an earlier onset of winter), all other things being equal.

POSTER #91

Expression of Pseudophosphorylated Tau in Drosophila Melanogaster Embryos

Keerthiga Sivakumar & David Njuguna

Faculty Mentor: Dr. Alejandra Alonso
Department of Biology

Alzheimer's disease is the most common form of dementia and there is no cure for the disease at this time. Alzheimer's disease is not a normal part of aging and causes problems with memory, thinking and behavior. Alzheimer's is associated with the formation of neurofibrillary tangles in the cytoplasm of affected neurons. These tangles are composed of hyperphosphorylated tau, a microtubule associated protein that disrupts microtubule structure and prevents neuronal axonal transport. In this study, we will cross four variants of Drosophila melanogaster transgenic male flies that have a plasmid with UAS (Upstream Activation Sequence) with virgin inducer females flies that express GAL 4 (positive regulator of gene expression for the galactose-induced genes) under the control of transcriptional drivers expressed in neurons. The F1 generation of the Drosophila embryos will be collected and fixed per the protocol guidelines. Generation of the RNA probes for the In situ hybridization will be conducted whereby the gene of interest will be inserted into a plasmid and then used as template for PCR using forward and reverse primers. Both experimental (antisense) probes and negative control (sense) probes will be synthesized. Probe hybridization and mRNA detection will follow. Finally expression and localization will be conducted to investigate by imaging on a confocal microscope whether the tau varieties were expressed in these Drosophila melanogaster embryos.

POSTER #86

The Role of NHE1 in Maintaining Mammary Tissue Architecture.

Sophia Varriano

Faculty Mentor: Dr. Jimmie E. Fata
Department of Biology

In previous years, Dr. Fata has developed three-dimensional (3D) tissue cultures to accurately image the morphogenetic development of mammary gland branches by using pieces of isolated ducts from the mouse mammary gland. We have used this model system to study the role of Na+/H exchanger type 1 (NHE1) in the maintenance of mammary tissue architecture. We intend to inhibit NHE1 function with a drug of the amiloride family, specifically, (N-Methyl, N-isobutyl) amiloride (MIA). MIA is a drug that inhibits the function of NHE1, which itself is responsible for maintaining intracellular pH at about 7.0. Previously Dr. Fata's group has shown that NHE1 is expressed in this model system to the exclusion of other subtypes of this exchanger and that it functions as a critical regulator of branching morphogenesis. We have used MIA along with a growth factor (TGF) to investigate the role of NHE1 in maintaining tissue architecture. We monitored the effects of NHE1 inhibition by live imaging. Cell polarity was assayed by immunostaining for NHE1 itself.

POSTER #83

The Study of Hyperphosphoylated Tau in Neurons

Thomas McCauley

Faculty Mentor: Dr. Alejandra Alonso
Department of Biology

A collective group of neurodegenerative diseases, including Alzheimer's disease, are commonly referred to as tauopathies because of the pathological role played by the neuronal microtubule associated protein, tau. These diseases are histopathologically characterized by neurofibrillary tangles (NFTs) composed of hyperphosphorylated forms of tau. Normally this phosphoprotein plays a key role in the stabilization of the microtubule networks. When hyperphosphorylated tau no longer binds to microtubules, it begins to aggregate. Here our objective is to study the influence of tau phosphorylation at Thr 212, Thr 231, and Ser 262 (P-tau) on tau affect on cellular dynamics as well as the induction of caspase activation. Pseudophosphorylated tau was generated by site directed mutagenesis, switching the above mentioned amino acid residues with glutamic acid, to mimic the effect the phosphorylation would have on the protein. The expression of tau pseudophosphorylated at Thr212, Thr231, and Ser262 triggers caspase 3 activation in as many as 85% of the transfected cells This project will analyze the cellular dynamics using live cell imaging over a period of 48 hours. With this experiment, we will analyze the movement and growth of the cells and at which point during the experiment they begin to die. Additionally, we will look into caspase activation in real time to determine if surrounding, non-transfected cells begin to become pre-apoptotic. With these studies, we gain additional information concerning the prion-like nature of tau protein.

POSTER #73

N-Methyl-N-Isolbutyl Amiloride (MIA) Binding Saturation in the Human Breast Cancer Cell Line MCF-7

Mino Abdelmessih

Faculty Mentor: Dr. Jimmie E. Fata
Department of Biology

Intracellular pH (pHi) is a determining factor in many rudimentary biological processes, including egg fertilization and cell proliferation. Deregulated pHi is associated with loss of tissue architecture and pathologies such as cancer. The ubiquitously expressed sodium/hydrogen exchanger type 1 (NHE1) is a chief regulator of pHi. Previous work in Dr. Fata's lab has shown that regulation of pHi by NHE1 is critical to branching morphogenesis in ex vivo cultures of mouse mammary tissue. Additionally, this master regulator of pHi is overexpressed in breast cancer. In the past, we have specifically inhibited NHE1 function with 5-N-Methyl-N-Isobutyl Amiloride (MIA). We and others have found that inhibition of all cellular NHE1 with MIA leads to cell death, however, inhibition of a portion of these exchangers leads to morphological changes in both tissue and cell culture as well as abnormal signaling in response to growth factors. The elucidation of the thresholding of NHE1 inhibition from lethal to non-lethal is of paramount importance in discovering the role of NHE1 in a variety of cellular processes and as a potential therapeutic target in cancer.

POSTER #65

Transfection of Tau Protein Constructs in Breast Cancer Cell Line MCF-7

Peter Hannon

Faculty Mentor Information: Dr. Jimmie E. Fata
Department of Biology

In this lab, the protein Tau is being studied in the human breast cancer cell line MCF-7. The microtubule binding protein Tau, commonly associated with the central nervous system has recently been reported to induce resistance to chemotherapeutic drug Paclitaxel. To evaluate the significance of Tau in breast cancer we have over-expressed this protein in MCF-7 cells through stable transfection. Transfection is a commonly used technique to deliver nucleic acids into cells in order to express a foreign

gene and protein for study. Our transfection protocol uses the standard Lipofectamine™ 2000 to transport DNA into cells. A vector plasmid with the particular gene of interest is encapsulated within Lipofectamine, diluted in Opti-MEM media, to ensure successful delivery of the DNA into the cell. Through successful transfection of multiple constructs of Tau we have been able to identify novel cell phenotypes and their correlation with suppression of apoptosis. Our data provides evidence that Tau expression suppresses Tumor Necrosis Factor (TNF) induced apoptosis which can lead to future treatments.

POSTER #68

Senescent Markers in Primary Human Fibroblasts

Kaitlin Kelly

Faculty Mentor: Dr. Jimmie E. Fata
Department of Biology

Fibroblasts cells synthesize the extracellular matrix and are the most common cells found in connective tissue. When normal fibroblasts lose their ability to proliferate they are termed senescent. Senescence is an irreversible process in which cells have stopped proliferating but do not undergo apoptosis. These cells still remain metabolically active however; they appear to be arrested in the cell cycle. Senescence fibroblasts have a particular phenotype. Maturation of these cells increases the cytoplasm

content and cells appear flattened, enlarged and spindle shaped. Research studies have shown the senescent phenotype using induced stressors such as hydrogen peroxide or ethanol. Senescent cells have also been detected using Beta-Galactosidase activity as a biomarker. I have repeated similar studies using cultured primary human fibroblasts. Different concentrations of hydrogen peroxide were used to induce senescence in young fibroblasts and then stained with Beta-gal yielding a blue insoluble compound. My results have shown 250 M H2O2 to have the highest quantity of blue pigment. Another senescence induced study was done with 5% ethanol on younger fibroblast cells compared to older fibroblast cells. Results showed that fibroblasts have higher auto-fluorescence with older fibroblast cells compared to younger. Younger fibroblasts treated with ethanol had higher increase in fluorescence compared to untreated fibroblasts. Intracellular pH was also measured with different population doublings of fibroblasts. There was an increase in pHi in older cells compared to younger cells. All experiments have helped to better understand the process of aging. Further investigation will continue in recording the cell cycle of fibroblasts, measuring fluorescence, and treating with curcumin.

POSTER #49

GIS & Diversity Comparisons of Engineered vs Natural Habitat

Jarred Sutton

Faculty Mentor: Dr. Eugenia Naro-Maciel
Department of Biology

The Freshkills Landfill site provides a great opportunity for scientific research. A habitat that was once a marsh, transformed into a dump and is now being reengineered into a recreational park with nature in mind is a great starting point for research. The Freshkills site will undergo many stages of natural succession as the location is allowed to undergo natural ecological process. It will be vital to record the current state for future study and comparison. Not often are we given a chance to record time zero of a sample site.

My area of research will be to compare and contrast diversities among fauna between an engineered habitat (Freshkills) and another proposed long time untouched site, Long Pond Park on Staten Island. Additional sites may be added for comparison as they prove viable. As samples are obtained from each site at specifically marked geographic locations the species captured will

be tallied. Once the data collection is achieved we will move to calculating diversity indices to compare the different locations. With the calculations made, graphics and tables will be created to demonstrate work done and conclusions drawn from the research.

In addition we will be implementing the use of GIS (Geographic Information Systems) to accurately document the locations. The importance of GIS will be for both current and future research. By documenting the locations we can make specific rather than general assessments of the species present and provide a baseline for future comparisons. Adding a visual geographic

component also will allow us to compare and contrast geographic features to see if there are any likely environmental influences.

POSTER #41

mtDNA Analysis of Palmyra Atoll Green Turtles

Jenna Pantophlet

Faculty Mentor: Dr. Eugenia Naro-Maciel
Department of Biology

Green sea turtles are among the better-known endangered species on the planet. The species is classified as endangered (IUCN 2011) due to pervasive human influences like habitat loss, harvesting and pollution. Therefore, it is imperative to take measures to conserve the species as well as the ecosystems they inhabit. Effectively taking actions to conserve and protect the turtles is rather difficult due to the fact that sea turtles are highly migratory. However, population distribution can be established through DNA sequencing and analysis techniques. Female green turtles usually engage in a behavior known as natal homing, where they return to the beach or region where they were hatched to lay their own eggs. This behavior causes genetic differentiation in mitochondrial DNA between rookeries, allowing researchers to track natal origins of mixed stock feeding grounds. The turtles that were analyzed here were sampled at the Palmyra Atoll feeding ground in 2011. The Atoll is a group of diverse small islets and flats that rests a little more than a thousand miles south of Hawaii. We extracted either blood or tissue samples from each captured turtle, and analyzed these samples in the laboratory using DNA extraction, Polymerase Chain Reaction, cycle

sequencing, and an editing sequencer. Current gaps in nesting site information will make it difficult to decipher rookery of origin, however at this stage we can analyze differences and patterns in feeding ground composition.

POSTER #32

Turtles of Freshkills Park

Seth Wollney

Faculty Mentor: Dr. Eugenia Naro-Maciel
Department of Biology

Freshkills Park on Staten Island was until recently the largest landfill in the world and is now undergoing the remarkable process of being transformed into a park. All of the the garbage mounds are fully capped with plastic sheets covered by layers of soil. The transformation of the area from a garbage-filled wasteland into a thriving park will take approximately three decades and is planned to benefit humans and wildlife alike.

Surveys of Freshkills have documented the presence of several turtle species (NYCDPR 2009), however their population biology remains unknown. The taxa observed at Freshkills were: eastern painted (Chrysemys picta picta), common snapping (Chelydra serpentina serpentina), and Northern diamondback (Malaclemys terrapin terrapin) turtles (NYCDPR 2009). A red-eared slider

(Trachemys scripta elegans) was also photographed at the site (Wollney, personal communication). Our objectives are to research the population biology of turtles at Freshkills. The research includes but it not limited to painted turtles, red-eared sliders, snapping turtles, and diamondback terrapins, focusing on: 1) Distribution and abundance; 2) Ecological interactions and feeding ecology; 3) Health; 4) Genetic analysis; 5) Movements.

When the study is complete, we expect to have achieved our goals to advance Freshkills Park objectives by providing high quality research on turtles of the Freshkills reclaimed ecosystem, and to implement related education and outreach initiatives. We also expect to have met our specific objectives in researching the population biology of these turtles in comparison to other

regional groups. We will have characterized distribution and abundance, identified major dietary components, and considered the ecological roles of turtles at Freshkills. We will have investigated their health status and assessed threats. Further, the project will provide key insights into restoration ecology.

POSTER #4

The effect of Folic Acid on Gamma-aminobutyric acid type A (GABAA) receptor beta1 (gabrb1)

Kizzy Vasquez, Dr. Junaid, Dr. El Idrissi & Salomon Kuizon

Faculty Mentor: Dr. Abdeslem El Idrissi
Department of Biology

The purpose of these series of experiments is to test the effect of different dosage of folic acids on neuronal in-vitro cells. We performed western blot and qRT-PCR to see if there is a change in the protein expression, and quantified the messenger RNA expression is in accordance with dosage of folic acid. Our data shows an increase in messenger RNA and protein expression of GABAß1 receptor protein in neuronal treated in dosage dependent medium of folic acid.

This research demonstrates, Gaba A receptor subunit ß1 protein levels increase in the folic acid treated neuronal cells in comparison to control. Gaba A receptors subunit ß1 mRNA was up-regulated, and it seem to be folic acid dosage depending in the neuronal cells.The pathway on which folic acid affects the expression of the gene is no known, but it grants investigating. It is worth noting that in research with Gamma-aminobutyric acid type A (GABAA) receptor beta1 (gabrb1), implies that by treating gaba beta 1 with a gabrb1-specific inhibitor, salicylidene salicylhydrazide, the expression of the decreased the abnormal prion protein level.This leads the researchers to believe that there is an involvement with GABA ß1 in the process of this neurological degenerate condition, (Kimura T, 2010).Autism was previously link to possible protein misfolding, so I propose to take this route in to discovering a possible link in the pathogenesis of this disease.

POSTER #10

The Characterization of Pb2+ toxicity in the Rat Cardiovascular System: An Assessment of Pb2+ Induce

Evelyn Okeke

Faculty Mentor: Dr. Abdeslem El Idrissi
Department of Biology

Homeostasis, imperative to an organism survival, is a state of equilibrium that seeks to maintain a constant internal environment by monitoring and adjusting physiological processes inside the body. Various organ systems are involved in maintaining homeostasis. The one of particular interest in this study is the cardiovascular system which is responsible for the movement of the blood. Keeping the blood moving is absolutely crucial in homeostasis. There are two important aspects in keeping the blood moving, the blood pressure and cardiac output (heart rate), which are controlled and altered by neural, hormonal or renal control mechanisms. Hypertension, typically defined as 145mmHg or higher for systolic, is of particular concern because when persisting it can lead to cardiovascular disease, stroke and renal failure, and about one third of the population in the

United States of America are suffering from high blood pressure. While some studies have shown a positive relationship between blood pressure and lead, others have not shown this association. In this study, I investigate the relationship between blood pressure and chronic lead exposure in Long Evans rats in various age stages. I also want to determine how collagen and

elastin are affected by lead using histological staining methods, as well as other proteins such as gamma-aminobutyric acid (GABA) and glutamic acid decarboxylase (GAD) using immunohistochemistry. A scanning electron microscope will give visual information about structural changes in the cardiovasculature, as preliminary data I previously collected has shown.

Finally, I want to investigate the functional response of the cardiovasculature as a result of chronic lead exposure by electrophysiological analysis.

POSTER #14

Genetic Analysis of Mitochondrial DNA of Loggerhead Sea Turtles from the Dry Tortugas of Key West, FL

Deanna A. Frascona

Faculty Mentor: Dr. Eugenia Naro Maciel
Department of Biology

The loggerhead sea turtle (Caretta caretta) inhabits temperate and tropical areas in all of the world's oceans. Yet, the loggerhead is listed as a federally threatened species due to several types of pollution, natural predators, fisheries interactions, and habitat loss among other threats. With many populations declining, it is important to carry out research and conservation activities. For conservation research purposes, blood samples were taken from species nesting or feeding in the Dry Tortugas of Key West,

Florida. DNA was analyzed in a lab by a multi-step process known as DNA extraction consisting of: (1) opening the cell to release DNA, (2) separating DNA from proteins and debris and lastly, (3)isolating concentrated DNA. To analyze the DNA further, Polymerase Chain Reaction, (PCR) was used to amplify DNA fragments in vitro by combining the DNA strands, nucleotides, primers, DNA polymerase and other reagents in a thermocycler and subjecting the samples to repetitive temperature modifications, melting, annealing and extending. In later steps the PCR products were cleaned, cycle sequenced, and edited. Based on this study, the genetic structure of loggerhead mitochondrial DNA sequences will provide insight into gene flow and genetic diversity.

POSTER #92

Hyperphosphorylation Effect of Tau on Actin

Naeem Syed

Faculty Mentor: Dr. Alejandra Alonso
Department of Biology-Neuroscience Program

Tau is the protein that is often associated with Alzheimer's disease. The function of a healthy Tau protein is to stabilize micro tubules in the axons of Nerve cells, but when there is a defect in Tau it can often lead to Neuro degradation that develops into Alzheimer's disease. There are six different isoforms of Tau that are a result of alternative splicing of the exons, which are regulated by the introns. These isoforms have different binding sites for micro tubules, they vary between 3-4 binding domains.

When Tau is in an abnormal form it may disrupt the ability of Actin to maintain healthy micro tubules, and the cytoskeleton of the cell may be harmed. Actin also has a prominent role during mitosis forming the mitotic spindle. So this interaction may have a major role in Alzheimer's disease. What we intend to study is the effect of Tau on Actin when it is Hyperphosphorylated. In Alzheimer's disease it is often observed that all six isoforms of Tau are hyperphosphorylated. This can be due to a multiple of reasons such as; the substrate of Tau can lead to it being hyperphosphorylated. Kinases can also have a major effect on it as well. PKN plays a major role in phosphorylating Tau, it is a Seronine/Threonine Kinase and may often lead to hyperphosphorylation. Another reason for the hyperphosphorylation of the protein may be the inability of phosphatase to inactivate the protein.

We have done a co-transfection with abnormal fluorescent tau with the GFP tag and Fluorescent Actin with an RFP tag, and have images from a confocal microscope that we can present of the interaction of these proteins. We can see that PH Tau (abnormal Tau) can hinder the effects of Actin on the cells, where there is obvious problems with the formation of the cytoskeleton, and even instances where the cell is completely void of Cytoskeleton. And we will present further results at the meeting.

POSTER #119

Taurine Affects Release of Insulin and GABA in Hit-T15 β Cell Line Via Calcium Flux

Christina Cuttitta

Faculty Mentor: Dr. William L'Amoreaux
Department of Biology –Neuroscience Program

Taurine has been shown to be efficacious in altering plasma glucose levels, presumably through release of insulin. In vivo, a rise in plasma glucose concentrations > 2.8 mM is sufficient to stimulate the release of insulin from large dense-core vesicles. These vesicles also contain the neurotransmitter GABA, which is thought to regulate glucagon release and ultimately insulin release via feedback inhibition. Previously, we demonstrated that in the Hit-T15 cell line of pancreatic β cells 1 mM taurine significantly decreased cytoplasmic insulin and GABA levels as effectively as 3 mM glucose. Cells treated with 1 mM glucose did not have demonstrable decreases in either insulin or GABA. In this study, we again tested the efficacy of 1 mM taurine in promoting exocytosis of large dense-core vesicle content via calcium flux. Cells were treated either with the subthreshold 1 mM glucose, the stimulatory 3 mM glucose, or with 1 mM taurine. Calcium flux was determined by live cell imaging using Fluo-3. We tracked calcium flux over the first 10 minutes of treatment with either glucose or taurine. Our data indicate that taurine is capable of stimulating exocytosis by altering calcium flux in these cells.

DEPARTMENT OF BUSINESS

CONFERENCE LOCATION: BOTTOM BACK

POSTER #111

The EU's influence over the WTO

Kubra Shirazi

Faculty Mentor: Dr. Alan Zimmerman
Department of Business

The European Union (EU) is a big player in the growing international trade, which makes it an influential member of the World Trade Organization (WTO). In 1957, six European countries: France, Belgium, Italy, Luxembourg, the Netherlands, and the Federal Republic of Germany, signed the Treaty of Rome. This established the European Economic Community (EEC), eliminating tariffs on trade between these six countries. After the membership of many other neighboring countries into the EEC, the EU was formally established in 1993 under the Treaty of Maastricht. Today, the EU represents 27 European countries. The development of the EU allows it to attain economic leadership in the changing world market.

The EU has achieved bilateral trade agreements with international trade partners as a result of its membership in the WTO. It plays a key role in the negotiations and trade agreements that are fostered and administered in the WTO. All member states are represented as the European Commission amongst 153 other countries in the WTO. This paper will examine positive and negative influences of the EU over the WTO's actions, member states, and developing countries. Specifically this paper will examine these questions: In negotiating with developing nations what agreements did the EU reach to reduce entrance barriers? What benefits did the European Commission gain as a single market for the 27 European member states by supporting the WTO's trade policies?

POSTER #98

General Motors: The Great American Car Wreck

John Troino

Faculty Mentor: Professor Deborah Brickman
Department of Business

There are many enterprises, which have had a profound impact on American history. One of those enterprises that has defined America into the nation it is today is the automobile industry. The automobile industry is as American as apple pie, hot dogs, and baseball. Baseball is considered America's pastime, but in reality the pastime of America is business. One of the first things that comes to mind when thinking about well known American businesses is the automobile industry, and that industry, is highlighted by General Motors.

One cannot think about the Fortune 100 companies without thinking about General Motors. However, in the late 2000s America was being hit with a crippling recession that almost killed the American auto industry. Americans had a choice: bailout General Motors or let it succumb to its eventual demise. Faced with this daunting decision, America did what it believed was best for the country. An America without General Motors was unimaginable to the public. Therefore, on December 19, 2008, the U.S. Treasury announced it would bailout General Motors to prevent the company from bankruptcy. This paper discusses the burning question Americans have: Was the bailout of General Motors necessary? It includes an analysis of General Motors' financial position pre and post bailout. This paper also looks to explore what criteria should be used by the U.S. Treasury in determining whether a company qualifies for a bailout.

POSTER #110

Comparison/Contrast of Three Airlines - Continental, Jet Blue and Lufthansa as the Comparison/Contrast Pertains to Real-Time Business Intelligence (RTBI)

Katarzyna Pedzich

Faculty Mentor: Dr. Laura Nowark
Department of Business

"Real-time business intelligence (RTBI) is the process of delivering information about business operations as they occur. The speed of today's processing systems has moved classical data warehousing into the realm of real-time" . In today's competitive environment, decisions that are based on the most current data available improve customer satisfaction, increase sales, reduce cost, and maximize revenue.

Given the above definition of RTBI, airlines benefit from it. RTBI pertains to the following several areas of airline operations:

* Flight attendants, gate agents, and all "customer facing" employees know at all times who the high-value customers are, and they provide outstanding service to these customers.
* The operations staff at the hubs monitors on-time performance throughout the day and makes operational decisions about catering, personnel and gate traffic flow, this supports on-time performance.
* Pricing specialists track the real-time impact of price changes on reservations and make adjustments that optimize revenues.

Reported profits and a profitability ratio from RTBI are compared for the three airlines. The success of each company in terms of overall growth in sales revenue and net income is compared and contrasted.

POSTER # 101

Counterfeit Pharmaceuticals

Maheen Razi

Faculty Mentor: Dr. Alan Zimmerman
Department of Business

The emergence of counterfeit medicines is one of the biggest issues of the 21st century. With the latest advancements in treatment, generic versions of many medicines have also appeared, creating a hope for an extended life expectancy for many. Some results from generic and counterfeit medicines have been unexpected and have created a dangerous situation. This paper discusses the reasons for the inception and need for these drugs, the cause and effect relationship of these generic versions (the discrepancies and the positive aspects) along with their socio-economic impact on the society considering the variation in rules and regulations of different countries. As the world is more integrated today as a result of better communication and transportation, there is a need for a more thorough system of checks and balances regarding health products, their formulation, and distribution. Therefore, this paper aims to concentrate on the dimensions of flexibility and inelasticity of the present system, and will present some solutions to some of today's problems in this area, keeping the US and other country's health care systems in mind.

POSTER # 67

Development of Globalization And the Boons and Busts Associated With it

Amina Huseinbegovic-Jasarevic

Faculty Mentor: Dr. Alan Zimmerman
Department of Business

There are many definitions of globalization and each will be described in the paper. One of the simplest definitions is: "Globalization is essentially the integration of economies through increased trade and financial flows, free trade through lowered barriers" (Zimmerman). This paper will apply a definition to various periods in history to examine whether globalization is a phenomenon which has existed for many years. It may be that globalization has existed since early civilization. This paper will examine the earliest civilizations to determine whether this is true. The Romans engaged in globalization by using ships to trade to achieve successes for their country economically, politically, and culturally. In addition, before WWI and after WWII there were many innovations that helped people travel and communicate. These innovations promoted globalization. Furthermore, in this paper various levels of globalization will be discussed, from the beginnings of society through developments to the present time. This paper will also describe positives of globalization such as greater wealth, more jobs, and also to be explored are negatives of globalization including financial crisis, labor abuses and other elements of the continued growth of globalization.

POSTER #2

What is IFRS and How Does it Compare to US GAAP?

Kelly P. Zaia

Faculty Mentor: Professor Daniel Gagliardi
Department of Business

Generally Accepted Accounting Principles (GAAP) is the financial reporting standard used in the United States (US) today. The Financial Accounting Standards Board (FASB), with the assistance of the American Institute of Certified Public Accountants (AICPA), determines the rules of GAAP, subject to oversight by the Securities and Exchange Commission (SEC). The financial statements prepared by a business in the US are the Balance Sheet, Income Statement, Statement of Changes in Stockholder's Equity, and the Statement of Cash Flows. The basic objective of financial reporting is to provide information that is useful and accurate to potential investors, creditors, and business owners in order for them to make sound financial and long term decisions. The AICPA's recognition of the London based International Accounting Standards Board (IASB) has become the game changer to GAAP. IASB developed International Financial Reporting Standards (IFRS) and the SEC issued a statement in support of IFRS. IFRS is becoming the global standard for financial reporting, and is currently the accounting standard used by 120 nations, including the European Union. While the SEC has not made a decision about adoption or convergence to IFRS, it is estimated full IFRS will be adopted in 2015. This paper will include a brief history of GAAP and its key components, give an explanation of IFRS, compare GAAP to IFRS, outline the SEC's plan, and challenges the US faces if adoption or convergence does occur.

POSTER #6

Fraud and Its Effects on the Accounting Profession

Adejoke Adegoke

Faculty Mentor: Professor Patricia Galletta
Department of Business

McKesson & Robbins Inc., Enron, Arthur Andersen LLP, and Lehman Brothers Holdings Inc., are a few companies that have been involved in financial scandals. The McKesson & Robbins Inc. scandal that occurred in 1938 is considered one of the most important financial scandals of the 20th century. Twenty percent of McKesson & Robbins' assets were comprised of made up inventories and accounts receivable. This case was so influential that it led indirectly to the enactment of the Generally Accepted Auditing Standards (GAAS). Enron lied about its profits and was involved in many shady activities, such as hiding its debts in order to keep them from showing up in company accounts. Arthur Andersen LLP was an 89 year old accounting firm that was convicted for destroying important documents that were related to the Enron scandal. Lehman Brothers used an accounting trick in order to make its finances look strong, when in fact they were really shaky. Many of the fraudulent activities that were a part of these scandals ultimately affected the economy, destroyed many lives, and led to many changes in the field of accounting. This paper will focus on the rules and regulations that were created and the higher standards of accountability that were set in auditing after the aforementioned scandals occurred, in order to prevent future ones. My research findings will explain the specific effects of each one of the scandals, and the important role accountants must now take in order to prevent fraud and maintain the trust the public should have in the quality of their work.

POSTER #22

Understanding Organizational Cultures of Small Businesses: A Perspective of Women Entrepreneurs

Sandy Sims

Faculty Mentor: Dr. Alexei Matveev
Department of Business

Organizational culture is a unique combination of shared values, beliefs, and behaviors. Business owners often fail to identify the importance of an appropriate culture due to daily pressures and tasks. Charles Handy, a London Business School professor who views organizations as "vibrant microcosms of societies," uses ancient Greek Gods to describe the nature of business organizations today. The "Greek Gods" metaphors are Zeus, Apollo, Athena, and Dionysus which represent the Club, Role, Task and Existential business cultures (Handy, 2005). Charles Handy's "Greek Gods" metaphor or the Theory of Cultural Propriety holds certain value for women entrepreneurs who often struggle with recognizing a business culture and developing a leadership style. The 2011 Survey of the U.S. Census Bureau reports an increase in women-owned firms by 50% since 1997. Business cultures and leadership style are critical to achieve a competitive advantage for women business owners (Bevans, 2012; Kariv, 2012). I researched entrepreneurship data in the U.S. and on Staten Island, New York, regarding the business culture and leadership style. I found that to evolve from conforming to social norms to successful business owners women entrepreneurs must develop innate communication skills, establish a strong business mission, streamline family and business obligations, and practice integrity and success ethics. In respect to business cultures, a Legal Counsel favors the tight-knit Club Culture, a Director of Government Relations prefers the orderly Role Culture, a community activist relies on the Task Culture, and an optometrist enjoys the Existential Culture. While having a preferred culture, business women often employ a mix of the four cultures. In my presentation I will illustrate how to identify the appropriate business culture and report on quantitative and qualitative entrepreneurship analysis providing examples of successful women entrepreneurs.

POSTER #117

Offshore Outsourcing of Customer Satisfaction

Joshua Pabst

Faculty Mentor: Dr. Alan Zimmerman
Department of Business

This paper will outline offshore outsourcing as a feature of business, by identifying the most prominent countries that receive outsourced jobs and comparing that to those that are outsourced within the United States. Given that Outsourcing is such a broad topic, customer service related positions will be the primary focus. Also, an outline of common misconceptions, the cultural and linguistic barriers that exist, and the effects they have on both parties involved. From these comparisons the reader should be more informed of outsourcing as a business practice, and aware of its global impact on business in society today. Furthermore, the topic will discuss the impacts (positive and negative) on customer satisfaction for both consumers in the United States, and those abroad, and how the influx of new careers has helped the growth of many national economies.

POSTER #53

The Reemergence of the Foreign Corrupt Practices Act - Impact and Implications

Gennaro Liguori

Faculty Mentor: Dr. Alan Zimmerman
Department of Business

Making payments to secure business contracts, maintain current business, or facilitate expedient government approval has occurred throughout the world for many years. These payments are known as bribes, and in 1977 Congress enacted the Foreign Corrupt Practices Act (FCPA) to stop this type of illegal activity. In more recent years other countries adopted and enforced similar rules. There is a resurgence in enforcement of preventing bribery in both the United States and internationally. This paper will research the increased enforcement and effectiveness of the FCPA and other anti-bribery laws. In the past bribes were a way of business that was recorded in the accounting books of companies. Now, despite laws, some companies and individuals still feel it is necessary to pay bribes to be successful. Even if caught, these companies believe the cost of the bribe will outweigh the profit that results from getting the business they seek. This paper will examine the issues and trends associated with FCPA violations through study of particular specific cases, examination of quantitative data and trends, and interviews of those involved in FCPA compliance, investigation and prosecution. This paper will also focus on the penalties for FCPA violations. This will include the severity of the penalties as well as the level of enforcement on the part of the U.S. government.

DEPARTMENT OF CHEMISTRY

CONFERENCE LOCATION: EAST LOUNGE

POSTER #15

Guided inquiry analysis by the FT-NMR of Aspirin and other Pharmaceticals

Mohammed Izmikna, Kasandra Dorce, Mohammed Sherwani, Samira Izmikna

Faculty Mentor: Dr. Robert Craig
Department of Chemistry

Student-centered classrooms tend to be interactive, inquiry-driven, cooperative and collaborative. This is the major advantages of guided-inquiry experiments in organic chemistry. They are due to new technology and to major changes in the teaching of undergraduate chemistry. These are needed to bring and introduce difficult concepts. Such changes can and should lead to confidence in mastering material, instrumentation and subject matter of organic chemistry. The use of FT-NMR (fourier transform-Nuclear Magnetic Resonance spectroscopy) in organic chemistry is comparable and high advantageous to determine structure of organic molecules.

A guided-inquiry learning project would offer students the opportunity to learn for themselves in a controlled laboratory environment where the instructor can handle the outcome and help guide students who are experiencing difficulty. Students will work on a highly use technique, and gain confidence, in doing so."

POSTER #81

Cloning, Expression, and Mutagenesis of Ste2p 2TM and 5TM constructs

Alina Kogan

Faculty Mentor: Dr. Fred Naider
Department of Biochemistry

Ste2p is a G Protein Coupled Receptor (GPCR) that is found in the yeast Saccharomyces cerevisiae. GPCRs are involved in the control of many aspects of metabolism, pain perception, growth, blood pressure regulation, and viral pathogenesis. To facilitate understanding of the structure and function of GPCRs Dr. Naider's lab is trying to study parts of the Ste2p receptor inthe context of the entire receptor. My project involved cloning the first two transmembrane (TM) domains and the last five TM domains for ultimate reconstitution. Specifically, performed PCR reactions, agarose gel purifications, restriction enzyme digestions, and bacterial transformations were performed in order to clone the 5TM and 2TM constructs of Ste2p. The cloned constructs included fragments 2TM, 2TMtail, 5TM431, 5TM431tail, 5TM340, and 5TM340tail. After the desired constructs were cloned, expression tests were conducted for 5TM340 and 5TM340tail. TM340 and 5TM340tail were transformed into seven expression strains. The expression strains that were evaluated were: BL21-AI, BL21(DE3), BL21(DE3)pLysS, BL21Star(DE3)pLysS, T7 Express, Origami, and C43. These expression strains were then grown at different temperatures. These studies were unsuccessful and I switched to working with 5TM431tail, which had been previously successfully expressed. The 5TM431tail construct was cloned with a tail of charged residues. The charged residues were included in order to prevent the formation of homodimers during reconstitution. In order to remove the charged tail cyanogen bromide cleavage will be performed, and a methionine residue was included after the tail. This requires quick-change mutagenesis to mutate all internal methionine (Met) residues into isoleucine (Ile), valine (Val), leucine (Leu) or alanine (Ala) residues. I performed one mutation on 5TM431tail, which has seven internal (Met) residues. I was successful in mutating the methionine (Met) residue to an (Ile) residue.

POSTER #115

Project Title: Biocompatible Printed Polymeric Superhydrophobic Surfaces

Mark Barahman

Faculty Mentor: Dr. Alan Lyons
Department of Chemistry

Super-repellent surfaces have beautiful and intriguing properties. Strong liquid repellency is observed, where droplets tend to 'ball-up' on the surface, and quickly roll off given slight vibrations or tilting. These properties are quantified – the contact angle, the angle between a surface and a line tangent to a droplet, is very high (>1500), and the slip-angle, the angle of inclination required to initiate droplet slipping, is very low (<100). These materials have good potential for applications in fields requiring liquid-repellency for cleaning purposes, active or passive liquid control, and as surfaces with low reactivity towards liquids containing complex biomolecules. Such surfaces would facilitate analysis and handling of the given liquid or chemical reactions between a gas and a liquid during flow. Of special interest are hemo-compatible superhydrophobic surfaces for application in blood-oxygenators used in heart-lung machines.

We have fabricated robust, low-cost, and highly applicable superhydrophobic surfaces and demonstrated the ability to tune the slip-angle of the coatings according to need. We are in the process of evaluating the bio-compatibility of these materials, and exploring avenues of enhancing this property through the utilization of a hierarchical surface morphology, with a combination of silicone features serving as primary roughness, and chemically modified nano-particles serving as additional, superimposed "layers" of roughness. The surface of these nano-particles has been modified to examine the effect of particle chemistry on the adhesion of proteins from the liquid phase. A summary of methods used for fabrication will be presented along with microscopy of relevant samples and data demonstrating properties such as slip-angle and biocompatibility.

POSTER #18

Elimination of Cervical Cancer by the Spice Component Curcumin

Anita Mata

Faculty Mentor: Dr. Probal Banerjee
Department of Chemistry-Neuroscience Program

Human Papilloma Viruses (HPVs) are common DNA viruses that infect humans. Among these, the HPV 11, 16 and 18 are associated with cervical cancer. Pathologists classify cervical cancers by stage as CIN-1 (low grade), CIN-2, and CIN-3 (both high grade). The treatment strategy includes surgery, radiation, and chemotherapy. No single chemotherapy regimen has been shown to produce complete remission. The chemotherapy agents used in the treatments are Doxorubicin, Paclitaxel (taxol), Cisplatin, Ifosfamide, Topotecan, each is used alone or in combination with the others. The combined use of cisplatin/topotecan gives the highest response, which is only 29.1%. Therefore there is an urgent need for an alternative therapy for the treatment of cervical cancer. The spice component curcumin kills a wide variety of cancer cells in cell culture and is currently in the process of being used in clinical trials for several types of cancer. Curcumin inhibits NF-kB, which is a key regulatory transcription factor and plays a major role in cancer progression. It is regarded as a relatively safe drug with minimal side effects. Though a highly potent anticancer agent, curcumin's minimal solubility in water and the consequent lack of bioavailability in cancer tissues reduces its applicability in cancer treatment. The detailed signaling mechanism of HPV mediated tumorigenesis is not yet properly understood. In this study we will attempt to elucidate the signaling proteins that are targeted by curcumin in cervical cancer cell lines.

POSTER #87

Recombinant Expression and Purification of Tx7335 from Eastern Green Mamba

Kimberly Cruz

Faculty Mentor: Dr. Sebastien Poget
Department of Chemistry

Potassium (K+) channels are membrane proteins that, when activated, permit the highly specific movement of K+ ions through the plasma membrane of cells.

They play a major role in important biological processes like nerve transmissions and regulation of the heartbeat. Due to these roles, K+ channels are targets for a large number of animal peptide toxins, including the dendrotoxins.

A snake toxin, referred to as Tx7335, has been extracted from the Eastern Green Mamba and has been discovered to activate KcsA, a bacterial potassium channel. This toxin is a 63 amino acid residues peptide that is linked by four disulfide bonds. An artificial gene encoding for Tx7335 has been previously synthesized and sub-cloned into several expression vectors, including as a thioredoxin fusion protein in a pET-32 vector. In this system, soluble fusion protein can be obtained in the cytosol. However, it has been shown that this fusion protein cannot be purified by affinity chromatography.

Thus, this project aims to purify the fusion protein by a variety of methods. We first tried to add an N-terminal histidine tag by site directed mutagenesis for improved purification using a Ni2+ column. However, the site-directed mutagenesis has so far proven unsuccessful and an alternative approach is currently being used in which the hexahistidine – tagged toxin is being expressed as a DsbA fusion protein in various E.coli strains that are optimized for the refolding of disulfide-linked proteins.

POSTER #103

Synthesis of Ordered Mesoporous Organosilicas at Room Temperature

George Farid

Faculty Mentor: Dr. Michal Kruk
Department of Chemistry

Nanoporous organosilica materials have a wide range of potential uses, including adsorption, immobilization of biomolecules, and templated synthesis of nanoscale objects. Their usefulness stems from their porosity, high surface area, and accessible functional groups embedded in the framework. Well-defined porosity can be introduced in these materials using appropriate surfactants as templates. A number of factors can affect the physical properties of these materials, such as the types and amounts of the organosilica precursor, surfactant, micelle swelling agent (if used), addition of salt, as well as initial synthesis temperature. Changes to these parameters can lead to changes in the structure type, pore diameter, and surface area of the material. As for the properties, small angle X-ray scattering and transmission electron microscopy are used for structural analysis, and nitrogen adsorption is used for porosity and surface area analysis. The syntheses of some important organosilica materials had been successfully performed earlier at an initial temperature below room temperature (e.g., 15 °C). We succeeded in the development of room temperature synthesis procedures for similar materials, which results in a major simplification of the synthesis setup. Organosilicas with narrow pore size distributions and often with well-defined face-centered cubic or body-centered cubic structures of spherical mesopores were obtained. Disordered aggregates of hollow spheres were another type of the observed product.

POSTER #116

Effect of Pressure on the Stability of Water on a Superhydrophobic Membrane

Meagan Derbyshire

Co authors: Qian Feng Xu and Mark Barahman

Faculty Mentor: Dr. Alan Lyons
Department of Chemistry

Superhydrophobic surfaces, both naturally occurring and fabricated in the laboratory, are composed of small posts. The roughness of the surface and the hydrophobic material properties combine to support water droplets on top of the posts (Cassie state), instead of falling between the posts and wetting the entire surface (Wenzel state). When the superhydrophobic surface is placed at the base of a column, water can be supported on top of the posts up to a critical height (or pressure). However, only a limited height of water can be supported before the water pressure exceeds the surface tension and the Cassie state transitions to the Wenzel state. This transition occurs at relatively low pressures and limits the usefulness of superhydrophobic surfaces.

The goal of this experiment is to increase the water pressure that a superhydrophobic surface can support. Our approach is to fabricate a superhydrophobic surface supported on a porous mesh instead of a solid base. In this way we can control the air pressure below the membrane independently as the water height is increased. Measurements of the water pressure that can be supported on a porous superhydrophobic surface as a function of air pressure below the membrane will be reported.

In this study, control of the plastron air layer at the water-air interface) on a superhydrophobic surface was demonstrated by air deflating and inflating using a syringe pump. This research offers a promising, energy efficient method for maintaining a flat water-air interface at any arbitrarily high water pressure by inflating or deflating a small amount of the air to the base using either an automatic air reservoir or air-cushion. This research could have significance in important applications such as drag reduction, antifouling in shipping, and micro-reactors.

POSTER #118

Fabrication of Carbon Interface Materials

Brian Iskra

Faculty Mentor: Dr. Alan Lyons
Department of Chemistry

Carbon materials have much utility in materials engineering. Specifically, they may serve as battery materials, crucibles for chemical reactions, surfaces in biocompatible systems, and thermal interface materials.This wide design space is a result of the many useful properties that carbon exhibits, including electrical conductivity, thermal conductivity, chemical resistance, ability to withstand multiple thermal cycles, and the ability to modify surfaces. Carbon also has many allotropes, including graphite, diamond, and amorphous carbon.Amorphous carbon can be made from polymeric precursors through pyrolysis, a process in which the precursors are heated in a tube oven to high temperatures (>800C) in an inert atmosphere.This allows for polymer structures, which can be easily fabricated, to be converted to amorphous carbon, a refractory material.A method to create such structures in a replicable fashion is 3D printing. 3D printing allows for structural data in a computer to be sent to a printer, which then dispenses an ink at various points designated by the data. In this way, high aspect ratio structures can be formed by dispensing the appropriate polymer precursor (e.g. ink) in accordance to the data.These structures can then be used in various applications. In this study, we utilized a 3D printer in order to prepare straight and sloped post structures for pyrolysis, and tested these carbon materials to determine their suitability as a thermal interface material by measuring their electrical and mechanical properties.

POSTER #28

Asymmetric Reactions of Trifluoromethyl-Containing Ketones with Pyrroles Catalyzed by SPINOL-Based P

Amy He, Kimmy Yu, Chun-Hui Xing & Qiao-Sheng Hu

Faculty Mentor: Dr. Qiao-Sheng Hu
Department of Chemistry

Chiral trifluoromethyl-containing alcohols are structural units or building blocks for a number of chiral drugs. Development of efficient methods to access such trifluoromethyl-containing alcohols with high enantioselectivity is of significant interest for organic synthesis.

Chiral 1,1'-spirodiindane-7,7'-diol (SPINOL) and its derivatives have been demonstrated to be highly enantioselective chiral scaffolds for a number of useful bond-forming transformations. However, SPINOL-based phosphoric acids, which constitute a large family of chiral organocatalysts, remain underexplored. In this presentation, the use of SPINOL-based phosphoric acids as chiral catalysts for the asymmetric reaction of trifluoromethyl-containing ketones with pyrroles to form chiral trifluromethyl-containing alcohols will be presented.

Acknowledgments:
We thank the NIH and NSF for financial support.We also thank members of the Hu research group for their help and support.

POSTER #34

Purification Of The Recombinant Immunoreceptor Accessory Protein Dap10

Sarah James

Faculty Mentor: Dr. Sebastien Poget
Department of Chemistry

Natural killer cells are part of the innate immune system, important surveillance for recognizing infected and cancer cells through various receptors. They achieve this by binding to and being able to differentiate between ligands on normal and abnormal cells. Natural killer cells possess activating and inhibitory receptors. An example of an activating receptor complex is NKG2D-DAP10. NKG2D is the extracellular ligand-recognition part of the receptor, and DAP10 contains the intracellular phosphorylation motif that starts the response signaling cascade. The two subunits are assembled through oligomerization of their transmembrane domains. Here, the main focus is on the adaptor protein DAP10, a disulfide-linked homodimer. We want to recombinantly express and purify DAP10 for functional studies. Dap10 was expressed as a TrpΔ Leader fusion protein in E.Coli and obtained as inclusion bodies. We have purified both the intact fusion protein as well as the cyanogen bromide (CNBr)-cleaved DAP10 polypeptide in reduced form by HPLC chromatography, and confirmed their identity by mass spectrometry. In order to overcome the low yield of DAP10 obtained after CNBr cleavage, we are now working on a strategy to form the intersubunit disulfide bond before CNBr cleavage, followed by release of the disulfide-linked DAP10 by CNBr and purification by HPLC. The purified DAP10 will then be reconstituted into phospholipid bicelles for structural studies by CD and NMR spectroscopy.

POSTER #38

Synthesis of copolymer-templated SBA-15 silica with 2-D hexagonal structure using 1,3,5-triisopropylbenzene as micelle expander

Ilona Stoyko & Doriane Bouobda

Faculty Mentor: Dr. Michal Kruk
Department of Chemistry

Ordered silicas with large cylindrical pores (diameter ~10 nm) templated by block-copolymer surfactant micelles and arranged in two-dimensional (2-D) hexagonal (honeycomb) arrays (referred to as SBA-15 silicas) have received much attention as catalyst supports, hosts for nanoobjects and media for immobilization of biomolecules. In some applications of these materials, it would be beneficial to enlarge the pore diameter beyond 12 nm, which is a typical limiting pore size value for SBA-15. Recently, our research group demonstrated that this goal can be achieved by adding 1,3,5-triisopropylbenzene (TIPB; micelle expander) to the synthesis mixture, which results in the pore diameter from 12 to 26 nm, depending on the synthesis conditions. This synthesis procedure involves the simultaneous addition of the micelle expander and the silica precursor, tetraethyl orthosilicate (TEOS). It is not clear whether this is an optimal procedure. For instance, some benefits of addition of the micelle expander prior to addition of TEOS were seen, although under some conditions, poor quality products resulted. Moreover, from the point of view of understanding of the structure of the micelles that template the porosity of the material, it is beneficial to be able add the swelling agent first, so that the resulting solution can be investigated and the structure of micelles could be understood. In addition, it would be beneficial to improve the degree of structural ordering for SBA-15 with pore diameter in 16-26 nm range. The current project is intended to improve the synthesis of highly ordered ultra-large-pore SBA-15 and to gain better understanding of the influence of the synthesis conditions on the structure of the products.

POSTER #42

Asymmetric Allylboration of Aldehydes Catalyzed by SPINOL-Based Phosphoric Acids

Darya Sabarova, Monica Bassous, Chun-Hui Xing & Qiao-Sheng Hu

Faculty Mentor: Dr. Qiao-Sheng Hu
Department of Chemistry

The asymmetric allyboration of allylboronates with aldehydes constitutes one of the most attractive methods to access chiral homoallylic alcohols. Transition metal-catalyzed such reactions have been previously reported. However, reported catalyst systems suffer from relatively harsh reaction conditions and/or low enantioselectivities. We are interested in developing "green" catalysts, i.e., organocatalysts – the use of small organic compounds as chiral catalysts, for such reactions, especially with high enantioselectivities.

1,1'-Spirodiindane-7,7'-diol (SPINOL) and its derivatives have been demonstrated to be highly enantioselective chiral scaffolds for a number of useful bond-forming transformations. However, SPINOL-derived phosphoric acids, which constitute a large family of chiral organocatalysts, remain underexplored. In this presentation, the use of spirodiindanediol-based phosphoric acids as highly enantioselective chiral catalysts for asymmetric allylboration of aldehydes with pinacol allylboronates will be presented.

Acknowledgments

We thank the NIH and NSF for financial support. We also thank members of the Hu research group for their help and support.

POSTER #54

Synthesis, Properties, and Applications of Curcumin-Polymer Conjugates

Amram Averick

Faculty Mentor: Dr. Krishnaswami Raja
Department of Chemistry

The biomolecule Curcumin has great potential in the treatment of several conditions, including Alzheimer's disease, cancer, and metal poisoning. However, Curcumin's minimal water solubility, poor bioavailability, and rapid metabolism and elimination prevent this potential from being realized. In order to ameliorate these characteristics, curcumin,glucose-polymer conjugates have been synthesized. This project analyzed the properties, including solubility and metal-binding, of these conjugates.

POSTER #57

Synthesis of Curcumin Incorporated Copolymers via ATRP

Frantz Pierre Toussaint, Jr.

Faculty Mentor: Dr. Krishnaswami Raja
Department of Chemistry

The chemical synthesis of therapeutically relevant, well-defined high molecular weight polyphenols is very rare. We propose to employ the following strategy: synthesizing living polymers in which the side-chain pendant groups and the polymer chain end possess orthogonal reactivity, followed by the attachment of a number of water soluble, biocompatible moieties and appropriately designed curcumin derivatives to the reactive polymer side chains. In one embodiment glycidyl methacrylate will be polymerized via Atom Transfer Radical Polymerization (ATRP) using an azide incorporated initiator. The resulting polymer will be further reacted with varying ratios of mono-carboxylic acid derivatives of curcumin followed by commercially available Glucuronic acid in two sequential ring-opening esterification steps to produce libraries of polymers with varying loadings of curcumin. The glucose component of the polymers serves to improve the water solubility of the polymers. Polymers with five, ten and fifteen percent loading of curcumin will be synthesized via "Click Chemistry" to assess solubility, with five percent loadings anticipated to be the most soluble. The project will be first introduced in terms of scientific background. The reactions shown will highlight the various steps; and, finally a brief discussion of the results will be given (NMR analyisis). In conclusion, the project is expected to give potent curcumin derivative copolymers with considerable solubility.

POSTER #62

NMR structural analysis of the teretoxin Arg-58

Matthew Emsak

Faculty Mentor: Dr. Sebastien Poget
Department of Chemistry

The teretoxin Arg-58 is a highly toxic peptide that comes from the venom of a type of predatory marine snail called a terebrid snail or an auger snail, of the family Terebridae. This toxin is likely to be bioactive, but it has not yet been extensively studied. We are embarking on a study of Arg-58 to obtain insights into the potential function of this toxin. We are using NMR spectroscopy to investigate the three-dimensional structure of Arg-58, which consists of 22 amino acid residues. The structure may guide the search for the functional target receptor. We collected 2D NMR spectra of this peptide, specifically the "TOCSY" as well as the "NOESY" experiments. We processed the raw NMR data using the software NMR-pipe and then used the software "CCPN analysis" to analyze the spectra. Through "TOCSY," we identified spin systems of coupled protons and aligned these spin systems sequentially through the "NOESY" experiment. We then assigned the carbon chemical shifts to the peptide using a referenced database of the known chemical shifts of the amino acids that comprise this protein and attempted to map stretches of sequential assignments to their correct position in the sequence. After examining three separate samples of the data, we were unable to see any patterns indicative of defined three-dimensional structure and thus, we have determined that Arg-58 in the form we have analyzed is not structured.

POSTER #80

Targeted Curcumin in the Elimination of Brain Tumors

Joseph Inigo

Faculty Mentor: Dr. Probal Banerjee
Department of Chemistry

Turmeric, extracted from the root of the *curcuma longa*, has shown promise in its use as a treatment against various illnesses. The major component of turmeric is curcumin, a polyphenolic compound which has been shown to eliminate cancer cells, while protecting and causing no adverse effects to normal brain cells. Previous studies from our group have shown that curcumin infusion into mice after intracranial implantation of B16F10 melanoma cells blocks brain tumor formation, but is ineffective in eradicating established tumors, probably due to the rapid metabolism of curcumin in vivo and poor solubility in water. To overcome the issues, we have modified our approach by linking curcumin to a melanoma-specific antibody through a hydrolysable side chain, thus producing a water-soluble adduct. This raised its efficacy to eliminate B16F10 melanoma cells by 200-fold, as judged by IC50 values. Also, intracranial infusion of this adduct had the ability to eliminate established B16F10-evoked brain tumor and rescue mice to normalcy. We endeavored to employ the same treatment method with GL261 glioblastoma cells by linking the same curcumin to a glioblastoma-specific antibody. This treatment decimated these GL261 cells in vitro, and with a 143-fold less IC50 than curmunin alone. The infusion of this adduct caused a dramatic regression of established GL261-evoked brain tumor in vivo and prolonged survival of mice. Our experiments have shown that while solubilized curcumin has the ability to block brain tumor formation, linking curcumin to an antibody increases its efficacy to allow it to eliminate established tumors. Further in vitro experiments will be necessary to delineate the mechanism of curcumin-triggered death of GL261 cells and determine the efficacy of the adduct on GL261 cells, along with in vivo preclinical studies to establish this method as a viable alternative to currently available treatments, one that is effective, safe, and lacks significant side effects.

POSTER #9

Synthesis Of Curcumin Based Eco-Friendly Plasticizers

Abdullah Chughtai

Faculty Mentor: Dr. Krishnaswami Raja
Department of Chemistry

Plasticizers are widely used for their effectiveness in reducing the hardness, density, melt viscosity, glass transition temperature and volume resistivity of a polymer. They are employed in a wide range of industries such as the biomedical, construction, plastics, and more. Phthalate esters are the most widely used plasticizers for their suitable applications and availability, and account for 92% of the plasticizers produced worldwide. Its limitation lies in that phthalate esters have been reported to migrate out of the polymers, making them less flexible and less efficient. It is also associated with endocrine disruption, reproductive and developmental toxicity in humans, and with negative environmental impact on plants and animals. Curcumin is the active ingredient in the curry spice turmeric, and it is generally regarded as safe by the FDA. The molecule is rigid in structure with two phenolic groups that can be modified covalently. We hypothesized that by attaching rigid curcumin to two flexible long chains we would be able to generate new ecofriendly plastizers. As a result, we synthesized potential eco-friendly biodegradable plasticizers based on curcumin and tetrahydro curcumin, by reacting the molecules with octanoic acid and stearic acid respectively to produce curcumin and tetrahydrocurcumin di-octanoate and di-stearoate. These plasticizers were blended with PVC in various percentages: 35%, 45% and 55%, to test their effectiveness in inducing depression of the glass transition temperature in the polymer/plasticizer system via Differential Scanning Calorimetry. These will be compared to control samples: same polymer samples blended with 35-45-55% Dibutyl Phthalate. The Curcumin/THC plasticizers we produced are anticipated to better from both ecological and toxicological viewpoints.

POSTER #93

Development of Optically Active SPINOL-Based Organocatalysts for Asymmetric Catalysis

Fatima Azhar, Wei Li & Qiao-Sheng Hu

Faculty Mentor: Dr. Qiao-Sheng Hu
Department of Chemistry

Development of highly enantioselective catalysts is of pivotal importance to asymmetric catalysis, which constitutes one of the most attractive methods for the synthesis of optically active organic compounds. While numerous chiral catalysts including both metal-containing chiral catalysts and small organic compound-based chiral catalysts, i.e., organocatalysts, have been developed over the past decades, reported chiral catalysts often suffer from shortcomings including low catalytic activities, unsatisfactory enantioselectivities and/or limited substrate scopes. In our laboratory, we are interested in developing new organocatalysts with high enantioselectivities for asymmetric catalysis.

1,1'-Spirodiindane-7,7'-diol (SPINOL) contains a rigid, C2-symmetric spirocyclic framework. Because of the rigidity of the SPINOL framework, chiral catalysts with SPINOL as the chiral skeleton are expected to be more enantioselective than other chiral skeleton-based chiral catalysts. However, SPINOL-based organocatalysts, e.g., SPINOL-based Bronsted acids, remain largely unexplored. In this presentation, the preparation of SPINOL-based phosphoric acids, one type of SPINOL-based Bronsted acids, and their applications as highly enantioselective organocatalysts for the asymmetric Fried-Crafts reaction of indoles with imines and with alpha, beta unsaturated ketones will be presented.

Acknowledgments
We thank the NIH and NSF for financial support. We also thank members of the Hu research group for their help and support.

POSTER #48

Asymmetric Synthesis of Optically Active Dihydroquinazolinones Catalyzed by SPINOL-Based Phosphoric Acids

Monica Bassous, Rania Skaf, Chun-Hui Xing & Qiao-Sheng Hu

Faculty Mentor: Dr. Qiao-Sheng Hu
Department of Chemistry

Chiral 2,3-dihydroquinazolinones are common structural units of diverse commercial pharmaceuticals. Different methods and catalysts for the synthesis of this family of compounds have been reported. However, reported methods/catalysts often suffer from low reactivities and/or enantioselectivities. We are interested in developing "green" catalysts, i.e., organocatalysts – the use of small organic compounds as chiral catalysts, for such addition reactions, especially with high enantioselectivities.

1,1'-Spirodiindane-7,7'-diol (SPINOL) and its derivatives have been demonstrated to be highly enantioselective chiral scaffolds for a number of useful transformations. However, SPINOL-derived Bronsted acids, which constitute a large family of chiral organocatalysts, remain underexplored. In this presentation, the use of spirodiindanediol-based phosphoric acids as chiral catalysts for the asymmetric synthesis of 2,3-dihydroquinazolinones from aldehydes and 2-aminobenzamide will be presented.

Acknowledgments
We thank the NIH and NSF for financial support. We also thank members of the Hu research group for their help and support.

POSTER # 95

Construction and Functional Testing of Chimeric Sodium Channels

Juby Panicker

Faculty Mentor: Dr. Sebastien Poget
Department of Chemistry

Voltage-gated sodium ion channels (Nav) are vital to several physiological processes including transmission of nerve signals. Many animal toxins affect the voltage dependence of these channels by binding to their voltage sensing domains (VSDs). Nav is composed of one polypeptide with four homologous domains. Each domain consists of 6 alpha helices, S1 through S6. S3b and S4a helices constitute the voltage-sensing region and are referred to as a 'paddle' due to its shape. The purpose of this project is to construct a bacterial-human chimeric protein to structurally study the interactions of these toxins that target human channels. S3b and S4a paddle motifs for domains II and IV (DII paddle and DIV paddle, respectively) of Nav were constructed separately by assembly polymerase chain reaction (PCR) with overlapping oligonucleotides as template. Agarose gel electrophoresis was done for the two PCR products and bands between 100bp to 120bp were seen as expected, and the PCR products were purified using PCR Clean-Up kit. The construction of the bacterial part of the chimera was initiated with transformation of pUC57 carrying ApVSD (Aeropyrum pernix voltage sensing domain) into XL2-blue competent cells. Additional plasmid, to serve as template for the PCR amplification of the bacterial pieces, will be obtained from these cells through overnight culture and plasmid purification. The DII and DIV paddle motifs of Nav will be then be incorporated into the voltage-gated potassium channels of A. pernix (KvAp) using assembly PCR with the appropriate primers. pET28 will be used as the expression vector.

POSTER # 120

The Design and Characterization of a Novel Singlet Oxygen Generating Device

BiBi Ghafari

Co-authors: Dorota Bartusik, David Aebisher, Alan M. Lyons and Alex Greer

Faculty Mentor: Dr. Alan Lyons
Department of Chemistry

Small systems for generating single oxygen would be useful for medical applications as well as for the disinfection of drinking water. The photooxidation of organic compounds by singlet oxygen has been studied for many years [1] however the sensitizer was always placed in direct contact with the solution. The goal of this project was to design a new type of device that could generate singlet oxygen while isolating the sensitizer particles from the aqueous solution to avoid contamination of the water by the sensitizer.

To design this device, reactors were built using custom-modified SubMiniature version A (SMA) fiber optic connector housings. One side of the housing was covered by a porous membrane of different thickness and pore sizes that were adhered to the base of each device [1]. Sensitizer particles of silicon pthalocyanine glass (150m diameter) [1] were placed into the housing such that they were supported by the membrane, which also separated the particles were from direct exposure to water. Oxygen was introduced into the device through a small tube soldered through the wall of the connector housing. The particles were illuminated by connecting a laser (669 nm output) using an optical fiber attached to the SMA connector at the top of the device. Illuminating the particles in the presence of oxygen caused singlet oxygen to form. The singlet oxygen then traveled through the membrane by the flow of oxygen, and ultimately produced bubbles in the liquid phase. Immersed in solution, the singlet oxygen would react with probe compounds and so be detected. These reactions were studied as a function of membrane pore size (0.05, 0.22, and 0.44 m nominal values as reported by the manufacturer) as well as sensitizer concentration. The highest rates were observed with membranes having the smallest pore size. The small pores caused a larger number of smaller bubbles to form, thereby increasing the total oxygen-water interfacial area on which the reaction could occur.

Reference:
[1] Generating Singlet Oxygen Bubbles:A New Mechanism for Gas–Liquid Oxidations in Water Dorota Bartusik, David Aebisher, BiBi Ghafari, Alan M. Lyons, and Alexander Greer Langmuir 2012 28 (5), 3053-3060

DEPARTMENT OF COMPUTER SCIENCE

CONFERENCE LOCATION: BOTTOM FRONT

POSTER #109

Markov Process Modeling and Simulation- on an HPC System Using Parallel Computing, for Wireless Sensor Network Life Estimation with QoS Constraints

Farah Abbasi

Faculty Mentor: Dr. Zhanyang Zhang
Department of Computer Science

In the paper,"Markov Process Modeling and Simulation for Wireless Sensor Network Life Estimation with QoS Constraints", Zhanyang Zhange and Miriam R Tausner presented their research work on using a Markov process to model Wireless Sensor Network (WSN) application life expectancy.They are able to establish a closed form mathematical function to express a WSN application's life expectancy in terms of sensor population, sensor failure rate and Quality of Service (QoS) constraints. Furthermore, they validated the model by running various simulations on a simulation program (written in C++ using Microsoft Visual Studio 2005). However, the current simulation program is incapable of simulating large scale WSN applications (with a few hundred or thousands sensor nodes with power consumption and failures) on a regular PC. My current plan is to redesign the simulation program; making it capable of running on an HPC systems at the HPCC on the CSI campus.This simulation will use the same algorithms mentioned in the paper and it will be able to handle large scale WSN applications efficiently and at a faster pace.This functionality will be acquired by making use of parallel computing on the HPC system while using a single processor core to represent a single sensor.

POSTER #84

Integrated Neural Network for Feature Extraction and Image Classification

Byambadorj Dashdorj

Faculty Mentor: Dr. Natacha Gueorguieva
Department of Computer Science

This research introduces automatic face recognition system which consists of two parts: image preprocessing and face recognition using eigenspace-based approach. The latter corresponds to one of the most successful methodologies for the computational recognition of faces in digital images. The eigenspace-based approaches differ mostly in the kind of projection method used (standard, differential, or kernel eigenspace), in the projection algorithm employed, in the use of simple or differential images before/after projection, and in the similarity matching criterion or classification method employed. These approaches consider an off-line phase or training, where the face database is created and the projection matrix, the one that achieve the dimensional reduction, is obtained from all the database face images. In the off-line phase are also calculated the mean face and the reduced representation of each database image. These representations are the ones to be used in the recognition process. The proposed system uses gray-level model to find the facial features. We use two ways of acquiring a face image - from a Webcam and face images from databases (UMIST Face Database and Yale University - Face Image Database). The system collects approximately six to eight images of each individual, applies image preprocessing methods and adds the images to the database. The recognition process uses eigenspace-based approaches which include approximation of the face vectors with lower dimensional feature vectors. The main idea behind this procedure is that the face space (given by the feature vectors) has a lower dimension than the image space (given by the number of pixels in the image), and that the recognition of the faces can be performed in this reduced space. The right person image choice is based on the eigen values of each record in the database and the preset threshold.

POSTER #112

Processing Adverse Medical Events in Large Data Sets

Christopher Savo

Faculty Mentor: Dr. Deborah Sturm
Department of Computer Science

We implemented a parallel algorithm to find similar medical events for medical error reporting systems. With the advent of mandatory and voluntary error reporting and the formation of Patient Safety Organizations, scalable methods are needed to analyze the expanding database of near misses and adverse events. Finding similar events should assist in identifying patterns or clusters of errors and may help prevent or mitigate future occurrences. Our prototype runs on the CUNY High Performance Computing Center clusters. We are also testing the code on a portable 6 node Beowulf style computational cluster (LittleFe). The code is written in C++ using the Message Passing Interface (MPI).

*This work is supported in part by a PSC-CUNY research grant

POSTER # 108

Analyzing Procedural Learning in Children using Serious Games

Jonathan Parziale

Faculty Mentor: Dr. Deborah Sturm
Department of Computer Science

Children with specific language impairment (SLI) often have difficulty with procedural learning. We developed a serious game/app for a mobile platform to implement serial reaction time (SRT) tasks for typical and children with (SLI). The game involves following images of semi-random pattern sequences. The final game will also contain testing/analysis and training phases. Response times and incorrect sequences will be recorded. We hope to use this game to study serial reaction time learning in children with and without SLI.

This is an interdisciplinary effort in collaboration with Dr. Betram Ploog and Dr. Patricia Brooks of the Department of Psychology.

POSTER #96

Analyzing and Training Emotions in Children using Serious Games

Edward Peppe

Faculty Mentor: Dr. Deborah Sturm
Department of Computer Science

Emotional perception deficits are often noted in children with Autism Spectrum Disorder (ASD). We developed a serious game for a mobile platform to implement facial emotion analysis and training for children with (ASD). The game displays varying facial expressions and records individual recognition skills, reaction time and decision-making patterns. The log will include the amount of time taken by the player to make initial and subsequent choices, the success rate, and bias factors. The goal of the game is to both monitor a child's individual perception patterns and implement customized remediation procedures.

This is an interdisciplinary effort in collaboration with Dr. Betram Ploog and Dr. Patricia Brooks of the Department of Psychology.

POSTER #88

Quantitative Image Analysis of Immunofluorescence Data

Isaac Osores & Cynthia Murillo

Faculty Mentor: Dr. Deborah Sturm
Department of Computer Science

The purpose of this study is to help analyze the effect of site-specific tau phosphorylation on cellular microtubule networks. We examined cell images to study tau's interaction with microtubules in both wild type and P-tau transfected cells. A custom ImageJ plugin was developed to provide quantitative analysis of the immunofluorescence data. Using histograms of the pixel intensities of images (with user-defined thresholds), the code calculates the intensity areas per cell and creates an output image to visualize the considered areas (those outside the thresholds are displayed as well). In addition, we are developing a procedure to automatically generate appropriate image-based thresholds. The results should help to further understand the mechanism of cellular degeneration induced by hyperphosphorylated tau. This work was done in collaboration with Dr. Alejandra Alsono and Chris Corbo (Neuroscience/Biology).

POSTER #66

Designing a file system with secure deletion

Ahmed Hassan

Faculty Mentor: Dr. Xiaowen Zhang
Department of Computer Science

Most common file systems shipped with the operating systems do not support secure deletion. When a file is deleted, it just simply releases the allocated hard drive blocks taken by that file. It does not securely erase/overwrite the actual data from the hard drive. If a deleted file contains confidential information, it's very likely that the file can be recovered by some undelete programs. This is a big vulnerability from the security point of view.

A lot of research has been done on the similar topics. Ours is focused on a so called zero key management encryption file system, which eliminates the administration overhead. The file system decrypts/encrypts data when it opens/creates a file with cryptographic symmetric key algorithm. A master-key is stored on the extended attribute. When the file system is to read/write a file, the system gets the key from the extended attribute first and decrypts/encrypts the file on the fly. When a file is deleted, the key in the extended attribute is overwritten, and then the hard drive data blocks occupied by the file are released. It is infeasible for a undelete program to recover the deleted file, because the key is erased completely. Without the key to decrypt, the recovered data is illegible random bytes. With our file system, the aforementioned security vulnerability is prevented.

POSTER # 43

QR Code Assisted One-time Password Mutual Authentication Scheme

Esia Yosupov & Pradip Karki

Faculty Mentor: Dr. Xiaowen Zhang
Department of Computer Science

With the increasing security risks of using password for authentication, we propose a secure mutual authentication scheme with the assistant of the QR code (Quick Response code). QR code is a small two-dimensional barcode image that conveys much more information than the traditional barcode. QR code is getting popular now in the U.S. and can be read/decoded by many mobile phones. Our scheme involves two channels for communicating between a web server and a user. When a user logs into a website by a username from a PC, through Internet channel the web server sends the PC browser a QR code image that encodes a one-time random challenge.The user takes a picture of the QR code image with his/her mobile phone camera to decode the challenge. Once the server is authenticated, the user's phone generates a corresponding response which is sent back to the server via wireless channel.The server checks the user's response. If it is verified, the user is authenticated by the server. Finally the server allows the user access his/her account from that PC browser.The standard cryptographic primitives are used for strong security.The implementation of this secure scheme on the user side is done by using mobile application.

POSTER #40

Little fe

Michael Costantino, Daniel Kurzweil, Alerick Hyland, Timothy Smolka, Brian Wong, Jonathan Parziale & Chris Savo

Faculty Mentor: Dr. Michael Kress
Department of Information Technology

The goal of our project is to build a small high performance computer called Little fe.The system consists of six mother boards clustered through a local network allowing multi threaded software to run simultaneously across all nodes.The whole system will have twenty four CPU nodes and six Nvidea GPU processors.The operating system chosen to control the system will be a version of linux called BCCD (Bootable Cluster CD).The software that will be demonstrated on the machine will be written in C++ using an open MPI library to show the capabilities of multi threaded programs on a small clustered system.

POSTER #16

Using Frequent Pattern Mining To Identify Behaviors In A Naked Mole Rat Colony

Michael Cicero & Michael Vazquez

Faculty Mentor: Drs. Michael Kress & Susan Imberman
Department of Computer Science

Our research project looks at behavioral patterns in a colony of Naked-Mole Rats (NMRs) from Africa. NMRs were tagged with RFID chips. RFID readers, when triggered, sent information to a backend computer. A collection of these readings became our raw data. The goal was to analyze this information and to draw conclusions about the behavior of the colony of NMRs as a whole, as well individual NMR. To achieve this goal, we organized the data into a matrix using C++. The matrix indicated the last seen location of each NMR in the colony, effectively tracking movement. The next step in the analysis was done using MATLAB, R and a version of the Apriori algorithm which finds itemsets or groups of NMR. We were able to find NMR that frequently associated' with each other. To illustrate this we used GEPHI to create sociograms from the itemsets found by the Apriori algorithm. From these sociograms we were able to draw conclusions about patterns of NMR behavior.

POSTER #17

Autonomous Outdoor Ground Robot

Michael Costantino & Konstantine Goudz

Faculty Mentor: Dr. Susan Imberman
Department of Computer Science

The goal of our ongoing project is to create a small sized fully autonomous vehicle. The vehicle will be able to navigate between G.P.S. coordinates while maintaining a safe path and avoiding obstacles. The vehicle or robot contains a multitude of sensors and devices including G.P.S., cameras, lasers, and sonars. The sensors are read and processed through an on-board computer system. The decisions that the robot makes will be made by a complex artificial intelligent neural network. The robots neural network capabilities will be demonstrated through a follow the leader exercise, where the robot will follow the closest moving object within its sensors range at a reasonable distance and speed.

DEPARTMENT OF EDUCATION

CONFERENCE LOCATION: BOTTOM FRONT

POSTER # 121

Student teaching is a valuable experience

Jaime Reilly

Faculty Mentor: Dr. Judit Kerekes
Department of Education

Student teaching is a valuable experience that will mold you into a teacher. You begin to notice qualities about yourself that you never realized you had. You will be able to integrate your own style, knowledge and personality into the classroom. During my first experience student teaching in Pre-Kindergarten, I was able to get a look inside of a real classroom and apply my own knowledge of what I have learned from my college classes. At that time I thought I was doing the best I could. A few semesters later, I had to experience student teaching again. I was placed in second grade and I was completely unaware of how much I would change within seven weeks. I have never been exposed to anything other than Pre-Kindergarten. My own personal goal was to become a Kindergarten teacher. Now after my experience in a second grade classroom, I no longer want to teach Kindergarten. I want to be a second grade teacher. During the seven weeks in second grade, I have formed my own style of teaching the children. I am able to apply my own personality, creativity and sense of humor to help the children learn. I was capable of so much more and my cooperating teacher and my own experience helped me realize that.

POSTER # 122

Encourage Learning with Patients and Knowledge

Stacy Lefkowitz

Faculty Mentor: Dr. Judit Kerekes
Department of Education

The analysis of my student teaching points out that a guiding force paired with hands on experiences, group work, enthusiasm and remarkable assessment can make an impact on a child's educational development. When they are treated with a patient manor that is non-threatening they take risks and enjoy the learning experience and crave more. The purpose was to open the children's mind to think and use problem solving skills to do everyday things when measuring without a ruler. I noticed that the children are delighted to use manipulatives especially when it comes to math. With the help of manipulatives the children were able to visualize the length or height of an object. Furthermore, I was able to assess how much they grasped the concept and where to go from there, which is very essential to the growth and development of the students. I had to differentiate for the different learning levels, which was a challenge I gladly took on. The children were expected to perform at the appropriate levels so that I could assess their work. Due to these interesting activities I was able to conclude that it is achievable to help a child learn as long as the child feels safe, motivated and the activity is developmentally appropriate. A little bit of fun and a lot of stimulation equals success.

DEPARTMENT OF ENGINEERING SCIENCE AND PHYSICS

CONFERENCE LOCATION: BOTTOM BACK

POSTER #33

Probing the Physical Properties of Brown Dwarfs Using High-Resolution Near-Infrared Spectra

Daniel Feldman

Faculty Mentor Information: Dr. Emily Rice
Department of Engineering Science and Physics

Stars come in all different masses and temperatures—some are so cold that they cannot sustain hydrogen fusion in their cores. These "stars" are known as brown dwarfs, and because they lack fusion as a source of energy, they cool and fade over billions of years. Astronomers have had a difficult time determining their ages and physical properties, which are necessary to describe how they form and evolve. Potassium absorption lines in particular are affected by temperature and age, and these lines can be measured by dispersing light from brown dwarfs into spectra. My senior thesis is a study of high-resolution M, L and T Dwarf spectra in order to better constrain these physical properties. The high-resolution spectra were taken with the NIRSPEC instrument on the Keck II Telescope on Mauna Kea as part of the Brown Dwarf Spectroscopic Survey (BDSS). I quantified the strength, width, and depth of potassium absorption lines in the spectra by measuring the lines' equivalent widths, full width half maxima (FWHM), and line-to-continuum flux ratios, respectively. By characterizing these strengths of the potassium lines and looking for trends with spectral type and age, we will better understand how to identify the underlying physical properties of brown dwarfs, such as surface gravity and temperature.

DEPARTMENT OF ENGLISH

CONFERENCE LOCATION: BOTTOM BACK

POSTER #50

"Patriotism in the Novels of Two Dominican Dictatorships: Tulio Manuel Cestero's Blood and Mario Vargas Llosa's The Feast of the Goat"

Eimy Saldana

Faculty Mentor: Dr. Sarah Pollack
Department of World Languages and Literatures

The main purpose of this project is to analyze the representation of national heroes during the dictatorships of Ulises "Lilís" Heureaux (1882-1884) and Rafael L. Trujillo in the Dominican Republic (1930-1961) through literary lenses. Official history has labeled the performers of both dictators' downfalls as national heroes, while certain literary works, investigating the characters' micro-stories, question the strictly patriotic motives behind their actions.

Blood (1914), a novel by Tulio Manuel Cestero, is the first reference used in this investigation to portray Antonio Portocarrero as the traditional invisible hero who fights Ulises Heureaux's tyranny with patriotic ideals. Antonio represents the exceptional citizen who is alien to corruption and grows indignant to the injustice that reigning during that epoch. In contrast, the novel *The Feast of the Goat* (2000), by Nobel Prize laureate Mario Vargas Llosa, demystifies the heroic characters who overthrew the dictatorship of Trujillo.

In this study, I argue that Vargas Llosa breaks with traditional historical novels in his rewriting of the downfall of the Trujillo regime. Unlike Cestero's representation of the self-sacrificing Antonio Portocarrero in *Blood*, Vargas Llosa's protagonists act on behalf of their individual motives, and not with the intention of bringing a common good to their homeland. In fact, they used to collaborate in some measure with the regime and were not concerned with killing their victimizer until they personally became victims. I contend that Vargas Llosa's representation of this crucial chapter of the recent Dominican past obliges his readers to rethink the traditional narrative of the great episodes of national history and the actors who are popularly embraced as heroes.

POSTER #7

Stereotypical Roles in Shakespeare Performances

Justin Giles

Faculty Mentor: Dr. Katharine Goodland
Department of English

Professor Goodland theorizes that the roles played by African-American actors in Shakespeare's plays are often stereotypical: the monsters, the bastards, the villains—rarely the heroes or the lovers of the stories. Searching through her book, Shakespeare in Performance, I compiled data on which roles African-American actors played and, even more importantly, which notable ones they did not.

DEPARTMENT OF GEOLOGY

CONFERENCE LOCATION: BOTTOM BACK

POSTER #99

Using Airborne Science and Remote Sensing to Understand Water Usage in Almond and Pistachio Orchards

Daniel Kurzweil

Faculty Mentor: Dr. Jane Alexander
Department of Geology

The concept of this project stems from the idea of plant available water (PAW). The soil at Paramount Orchards, where much of the almond and pistachio supply for the United States is grown, is a sandy loam to a fine sandy loam. This does not leave a large amount of PAW in between irrigation periods, in fact it is only about 1 to 2 inches. Obviously there is plenty of PAW directly after watering, definitely close to the field capacity if not above it. As time progresses the PAW will decrease. Some is lost to ground water and some is taken up by the plants.

Looking at how PAW, Leaf Area Index (LAI), Equivalent Water Thickness (EWT), and Evapotranspiration (ET) all interact with each other in relation to time since last irrigation is the true point of this investigation. It should be that directly after watering, the plants will begin to take in the fresh water, but there will be a lag time in-between irrigation and the water showing up in the EWT. This will also have an effect on the ET. Both should be similar in the fact that they are expected to be lower for a period of time before and after irrigation.

This project relies heavily on information collected from airborne sensing equipment, Specifically MASTER, the MODIS ASTER simulator mounted in the NASA DC-8 flying laboratory. This sensor collects 50 bands of light ranging from .4 to 13 micrometers in wavelength.

DEPARTMENT OF MATHEMATICS

CONFERENCE LOCATION: BOTTOM CENTER

POSTER #114

Project Title: Parallel Computation of Dynamic Fluid Systems

Lucas Garber

Faculty Mentor: Dr. Andrew Poje
Department of Mathematics

The computation of dynamic fluid systems are typically time-intensive. Using parallel threading techniques these systems' real-world processing time can be reduced as a function of the number of available threads, with the goal of a 1/N speedup (where N is the number of threads). While a 1/N speed up is not practical due to the setup of the parallel environment, unavoidable serial processing and memory management of the computer system, it is possible to get close to the 1/N goal.

Using Fortran77 and OPENMP software packages two separate systems were made to run parallel. The programs, Half-space Quasi-Geostrophic Contour Surgery and Point Vortecies on a Sphere, were run in multiple initial condition configurations to determine the speed-up from adding multiple threads to the work group. While both programs had a marked improvement in run-time neither fully achieved the sought-after 1/N speedup.

DEPARTMENT OF MEDIA CULTURE

CONFERENCE LOCATION: BOTTOM CENTER

POSTER #75

The Chinese Classic Book Club

Syreita Ann Lewis

Faculty Mentor: Dr. Ying Zhu
Department of Media Culture

I have assisted Professor Ying Zhu in researching about China's youth culture and nationalism. To this end, I have done library research on books and articles written about the ancient principles of Confucianism and Confucian thought. I have explored the practice of Confucianism amongst the Shanghai students that Professor Zhu has chosen to call attention to in her documentary. Confucian thought has given these students a concrete understanding of their own identities. If these students have grown up in a nation that is constantly struggling to define their own culture and identity, they too will face difficulties discovering themselves to their fullest potential.

To better understand the research topic, I also have viewed and studied Professor Zhu's documentary, Google versus China, which discusses Internet censorship in China and the role of nationalism in Google's aborted China search. The research will discuss how a group of students, who are faced with questions of nationalism, culture, identity and western influence, can overcome obstacles that have existed in China for generations and learn to finally start to discover their individual identities. I will present my research findings on a poster. Videos clips from Professor Zhu's upcoming documentary will be presented.

DEPARTMENT OF PERFORMING AND CREATIVE ARTS

CONFERENCE LOCATION: BOTTOM BACK

POSTER #39

Chant Through the Ages: Analysis and Composition

Joseph Marcellino

Faculty Mentor: Dr. David Keberle
Department of Performing and Creative Arts - Music

Gregorian Chant of the ancient Christian Church has been published in numerous different collections over the centuries. Each publication contains certain deviations from the original.The first goal of the project was to find the earliest existing manuscripts of specific chants and then to compare melodic and rhythmic similarities and differences found in the editions. Finally, the presenter will add to this existing body of work by composing a series of original "Postlude" compositions for organ based on the same chant.

POSTER #51

"The Negro Speaks of Rivers": A Study of Cultural Identity Through Song

Ashley Gill

Faculty Mentor: Dr. Sylvia Kahan
Department of Performing and Creative Arts - Music

Langston Hughes (1902-1967) was one of the most prolific African-American

writers of the Harlem Renaissance. His influence impacted American history, not only in literature, but also in music.

In 1921, at the age of 19, Hughes published his first poem, entitled "The Negro Speaks of Rivers."The appearance of the poem coincided with the beginning of the Harlem Renaissance (1920-1930), when African-Americans sought to validate themselves through the arts. Such eloquence in Black writing was not yet widely recognized. One of Hughes' goals in writing

was to capture and portray the collective voice of his people, and in "The Negro Speaks of Rivers," he accomplishes this. It speaks of African-American heritage, identity, and relevance.These elements echo within the song settings of Hughes' poem by various composers, namely Margaret Bonds (1913-1972), who wrote her setting in 1936; Howard Swanson (1907-1978), who wrote his setting in 1942; and Richard Thompson (b. 1949), whose setting was released over 50 years later in 2006.

In the speaker's presentation of these song settings, a poetic analysis of "The Negro Speaks of Rivers" and a musical analysis of each composer's unique approach to setting this iconic poem will be included.These analyses will highlight the importance of the poem to African-American heritage and the importance of these composers' interpretations to American music and in history.

DEPARTMENT OF POLITICAL SCIENCE, ECONOMICS, AND PHILOSOPHY

CONFERENCE LOCATION: BOTTOM BACK

POSTER #76

Balancing National Security with Civil and Political Human Rights: An Analysis of Debate about the Treatment of Terror Suspects

Robert Gibbs

Faculty Mentor: Dr. Richard Flanagan
Department of Political Science

Following the September 11, 2001, terrorist attacks, the United States increased executive branch prerogatives in the management of the national security state. The security policies of the Bush administration (2001-2009), many of which have been extended in the Obama administration, initiated vigorous debate in regard to the proper balance between national security needs and civil rights. This project examines the debate between proponents of a strong national security state and those who fear that basic civil and human rights are in jeopardy from the extension of state power. The analysis reviews political, polemical and policy arguments of elites, as well as public opinion regarding certain controversial policies, including the use of extraordinary rendition and alleged torturous interrogation practices. The integration of the aforementioned policies may, in fact, have become institutionalized into the fabric of American politics.

POSTER #89

Effects of The Great Recession Across Demographic Groups

Tilanga Fernandez

Faculty Mentor: Dr. Alexandru Voicu
Department of Economics, Philosophy, Political Science

Labor market conditions have deteriorated dramatically since the beginning of the Great Recession in late 2007, making it the severest labor market downturn since the Great Depression. The unemployment rate more than doubled from 4.8% in 2007 to 10% in 2009 and still remains at 8.3% in March, 2012. While the conventional unemployment rate overlooks the huge growth in underemployment and the substantial increase in discouraged workers who are no longer in the workforce. Adjusting for these factors, the effect shows to be much larger. The burdens of a recession do not spread evenly across demographic groups. While the public and media noticed that men accounted for more than three quarters of net job losses, which made the Great Recession come to be known as the "Great Man-cession," There are several other demographic groups that have been especially hard hit by the recession, including African-American males and females, young females and families maintained by single women. The goal of this project is to study the effect of the economic crisis on individual labor market outcomes (employment, unemployment, and wages). The study will focus on the differences in labor market outcomes across individual and socio-economic characteristics (e.g., gender, race/ethnicity, age, education, rural-urban residence) and on the differential effect of the recession on the labor market outcomes of individuals with different socio-economic characteristics. Regional differences and the effect of industry composition will also be considered. Data from the Current Population Survey will be used. Data analysis will be performed using STATA.

DEPARTMENT OF PSYCHOLOGY

CONFERENCE LOCATION: WEST LOUNGE

POSTER #23

Effects of Stress on Eating Habits at the College of Staten Island

Nikki Fenton, Nicole Macri & Alana Glasse

Faculty Mentor: Dr. Irina Sekerina
Department of Psychology

Negative emotions have often been connected to fluctuations in eating patterns. Experts have attempted to confirm the correlation between negative affect and emotional eating.

The present research aims to examine the relationship between stress and eating behavior, including food intake and food choice, among university students at the College of Staten Island. A group of 30 psychology students were randomly selected and were asked to complete two questionnaires; a "Feelings" questionnaire, which we developed to determine the level of hungry present, and the Perceived Stress Scale (PSS) questionnaire, in order to determine their level of perceived stress. Participants were then administered a 13-minute Cattell Culture Fair IQ test as a means of stimulating stress. After completing these tasks, participants were served their own bowls of "healthy" (vegetables) and "unhealthy" (miniature chocolate) snacks and left alone to help themselves. We predict that participants who scored higher on the PSS questionnaire would not only eat more overall, but would also eat more "unhealthy" snacks. The findings of the current research could be potentially beneficial in helping students to cope with stress in a more positive manner and therefore help prevent unhealthy eating behaviors in university students.

POSTER #37

What do Pre-Teen Gender Variant Boys Think about Gender?

Cristen Melfi

Faculty Mentor: Dr. Darryl Hill
Department of Psychology

Gender variant children are often misunderstood, and there is a lack of research examining and understanding them. This study sought to obtain a greater understanding of how gender variant children feel about gender and what their lives are like. Interviews with gender variant children showed them to be just as gender non-conforming as clinical samples of children with gender identity disorder, but the interviews really conveyed little information about their lives. Questionnaires administered to the children showed that, compared to "ordinary kids," gender variant kids are aware of gender traditional gender stereotypes but felt that gender roles should be more flexible. Moreover, participants in this study felt more pressure to conform to gender. More research, with better instruments, is needed to look deeper into how gender variant children live.

POSTER #1

An Animal Model of Culture Shock

Noorelhoda Mahmoud

Faculty Mentor: Dr. Nan Sussman
Department of Psychology

Moving to a new culture is described in psychological literature as a stressful experience with several transition stages; the most stressful known as culture shock. Culture shock is a fascinating psychological phenomenon that affects millions of sojourners. Its symptoms include depression, changes in eating and sleep patterns, difficulty in social relationships, irritability and withdrawal. Previous studies have evaluated transition-related stress primarily by self-reports. Not one has used physiological measures. Until recently, cortisol, the stress hormone, could only be measured in blood. Now it can be measured in saliva, feces and urine. Our research is the first to physiologically assess stress.This first study of the relationship between cultural transitions and stress is with an animal species known as the African naked mole rat. Besides humans, it is the only mammal to produce cortisol in response to stress. They live in colonies, each with distinct behavior patterns. I have been observing two colonies at CSI: Leah and Terrific.The Leah keeps its cage dirty, is more active and sociable, and has higher cortisol levels.Terrific is clean, less active and sociable, and has lower cortisol levels. Fecal samples have been obtained from each rat and assessed for cortisol.We selected an "average" animal from Terrific based on its cortisol levels, daily activity within the colony, and degree of sociability, and moved it to the Leah colony.We hypothesized this specific transition will lead to the highest levels of culture shock based on the environmental and behavioral differences between both colonies, which will induce the most stress. Cortisol levels of each animal were measured before moving the "sojourner." Fecal samples are still being taken to assess for changes in cortisol levels between and within the colonies.We will continue to compare activity and sociability levels after the sojourn for both the home and host colonies, and the sojourner.

POSTER #102

Prejudice Towards Patients with HIV/AIDS Among Doctors or Nurses in the United States

Yessica I. Zegarra

Faculty Mentor: Dr. Lauren Rogers-Sirin
Department of Psychology

There is a common opinion in the majority of the American population that doctors or nurses, who have dedicated their life to this field, would have a tolerant attitude towards all patients, regardless of sexual orientation, race, or ethnicity. Unfortunately, this is not the case; especially with the patients who have contracted HIV or AIDS (Siminoff, L.A., 1998). It has been noted that doctors and nurses, especially those that are undereducated or religious, have a low tolerance for patients that have contracted HIV or AIDS (Preston, D, 2000). Negative attitudes towards people that have contracted this ailment effect the person's health and life (Tyer-Viola, L.A., 2007).

Doctors and Nurses, well-educated or not, may fall prey to common

misconceptions about the illness, or their own prejudice. Often, women with HIV or AIDS are assumed to be homosexual, a drug abusers, or promiscuous (Preston, D., 2000).These misconceptions can lead to "blaming the victim" for their illness, and lead doctors or nurses to treat HIV positive women with substandard care (Tyer-Viola, L.A., 2007).The purpose of this study is to explore HIV positive women's experiences of stigma when seeking medical services.

This is a qualitative analysis using interview data. 15 HIV positive women participated in the study.The women were recruited at a community center offering free services to HIV positive individuals in the NY city area.Women volunteered to be interviewed and were not compensated. Semi-structured interviews were conducted in English or Spanish, depending on interviewee's preference. Our results show that HIV positive women do experience stigma when interacting with medical professionals and this negatively impacts both the quality of their care, and their attitudes towards seeking medical attention.

POSTER # 104

Students' Perception of Technology at the Queens College (QC) and CSI

Elena Rabinovich

Faculty Mentor: Dr. Irina Sekerina
Department of Psychology

Does technology empower learning? It is dynamic (self-generated, self-published e-stuff), more engaging and convenient, has a "Cool!" factor and can be addictive. To assess what CUNY students think about technology in an academic setting, a 60-item online survey was administered to 1,700 Queens (2010) and 1,100 CSI (2011) students. The categories included questions that ask respondents about (1) their access to the Internet, (2) ownership of computers and other techno-gadgetry, (3) use of Web 2.0 technologies and social networking habits, and (4) interest in taking courses with online components. The comparisons show that:

(1) 82% QC and 84% CSI students own a laptop that is less than 5 years old;

(2) 48% QC and 47% CSI students own a smartphone with Internet, a third are iPhones;

(3) 93% QC and 90% CSI students have DSL, FIOS, or cable Internet connection at home;

(4) 80% of QC (36% 1-7 hrs/w) and 87% CSI students use Facebook (46% 1-7 hrs/w);

(5) Word processing, presentation software, and spreadsheets are the most popular programs; graphics, databases, are bibliography are used significantly less; and statistics, audio, and video programs are used rarely;

(6) Students on both campuses are skeptical about technology-based academic courses: they prefer moderate amount of technology in classes, are split between liking and not liking to learn with technology, and are not ready to embrace online and hybrid courses.

POSTER # 107

How Stigma Affects HIV Positive Women's Experiences in Psychotherapy and Other Mental Health Services

Alexandr Usov

Faculty Mentor: Dr. Lauren Rogers-Sirin
Department of Psychology

In dealing with the mental health problems for people living with HIV, PLHIV, is crucial to a comprehensive approach to their care and support. Anticipated rates of depression among PLHIV individuals vary widely and range between 20 percent and 48 percent among PLHIV in high-income countries (Berg et al. 2007). Regardless to the high dominance of mental health disorders related to HIV, signs are that mental health settings in PLHIV are under-diagnosed and undertreated (WHO 2001). The International Center for Research for Women (2012) stresses that people with negative attitude to HIV individuals, believe that virus is very transmittable and they can easily get infected. When that happens, others start to view HIV-positive individuals as a danger. PLHIV individuals are further stigmatized by others' guesses about their moral honesty, based on conviction that they became infected with HIV because they selected to take part in risky behaviors. Mental health workers may succumb to common fallacy about the illness, or their own prejudice. The purpose of this research is to investigate HIV positive women's experiences of stigma when seeking mental health services. This is a qualitative analysis using interview data. 15 HIV positive women participated in the study. The women were recruited at a community center offering free services to HIV positive individuals in the NY city area. Women volunteered to be interviewed and were not compensated. Semi-structured interviews were conducted in English or Spanish, depending on interviewee's preference. Our results show that HIV positive women do experience stigma when dealing with mental health professionals and this negatively impacts both the quality of their care, and their attitudes towards seeking mental health help.

POSTER # 11

The Effect of On-Going Holocaust Suffering on Anti-Semitism and Anti-Israeli Attitudes

Ann Mackey

Faculty Mentor: Dr. Florette Cohen
Department of Psychology

Whether hostility to Israel does or does not reflect a new form of anti-Semitism has been a highly controversial topic in current political and cultural discourse. Some claim there is no link between anti-Semitism and hostility to Israel; some claim that anti-Semitism is repackaged as hostility toward Israel, and some claim that hostility toward Israel produces anti-Semitism. A recent theoretical model of anti-Semitism (Cohen et al, 2009) proposes that anti-Semitism often manifests as hostility towards Israel. Studies showed that conditions which led to greater levels of anti-Semitism also led to lowered support for Israel. Additionally recent research on secondary anti-Semitism showed that reminders of Jewish suffering as a result of Nazi persecution evoke feelings of guilt and, consequently, defensive anti-Semitism among German participants (Imhoff & Banse, 2010). The present study employed a modified version of Imhoff & Banse's ongoing holocaust suffering manipulation to demonstrate that Holocaust reminders not only raise levels of anti-Semitic sentiment among American participants but also lower support for Israel. Results and implications will be discussed.

POSTER # 12

Exploring the Benefits and Liabilities of RxP

Michael Dacunto

Faculty Mentor: Dr. Daniel Kaplin
Department of Psychology

This research study takes a critical look into the situation of prescription privileges for psychologists, otherwise known as RxP. The research team will report conflicting arguments RxP as a means of assessing the potential problems and major benefits prescriptive authority may yield. Proponents of RxP suggest that prescriptive authority would increase patient satisfaction, is cost effective, and serves the needs of rural areas, which have a shortage of psychiatrists. RxP is also thought to be a logical extension of the psychology as a profession. The DoD program and current states, which have passed RxP legislation, such as Louisiana and New Mexico serve as examples of successful post-doctoral training and treatment programs for it. Opponents to RxP introduce the issues of patient safety, limited training, loss of professional identity, and point out the RxP might be unnecessary if psychologists develop collaborative relationships with psychiatrists. Psychologists are not on the issue of RxP. This study will report a more detailed explanation of these arguments in an attempt to reconcile the differences that emerge.

POSTER # 13

HIV/AIDS: The Impact of Stigma on Social Supports

Nicholas Gonzalez

Faculty Mentor: Dr. Frances Melendez
Department of Psychology

According to the Center for Disease Control (CDC), data indicates that in the United States, Blacks and Latinos continue to be disproportionately affected by HIV/AIDS, making up 52% of newly diagnosed HIV and 48% of AIDS cases (CDC, 2008). There are approximately 1.2 million people living with HIV/AIDS in the U.S., with more than 290,000 women (CDC 2011; Kaiser Family Foundation 2011). Although people are living longer with this illness than they did in the past, HIV was still the third leading cause of death among Black women ages 24-44 (Kaiser Family Foundation, 2011). The above statistics prompted our interest in developing this study "Women as the face of AIDS." This project examines the experiences of women of color infected and affected by HIV/AIDS, in particular Black and Latino women. The goal of the study is to understand, through narratives obtained through semi-structured interviews, the lived experiences of HIV positive women. The sample consists of fifteen women who were recruited from a community based organization located in Harlem. Interviews were conducted in English or Spanish, depending on the participants' preferences. The focus of this research proposal is how the experiences of stigma affect the social and family lives of our sample. Our results indicated that for some women, family and/or friends were a refuge and source of safety, where the women could be honest about their diagnosis and receive support and care. Others, however, felt the need to hide their diagnosis in order to avoid judgment from loved ones.

POSTER #19

Effect of Environment Familiarity on Memory Recall

Danielle Imbesi, Elaina Lei, Aleksandra Makowska & Kunzah Syed

Faculty Mentor: Dr. Dan McCloskey
Department of Psychology

The environment has a profound impact on peoples' mental functioning and affects both their mental and physical well being. One component of the brain's functions is recall memory, or the retrieval of information from the past after its encoding. The following experiment tested the relationship between an environment's familiarity and the recall memory of participants in those environments. The experiment was carried out by distributing a short survey to two groups of college participants after exposure to the same stimulus, a colorful poster; a between-subjects design was employed. We hypothesized that people would recall details about a new stimulus in a familiar environment better than in an unfamiliar environment because the unfamiliar environment would present an overwhelming amount of novel stimuli, impairing the brain's ability to remember. However, the results suggest that recall memory is significantly better in an unfamiliar environment than in a familiar one.

POSTER # 20

Stress, Mood and Quitting: Comparing LGBT and Heterosexual Smokers

Danielle Bohmer

Faculty Mentor: Dr. Daniel Kaplin
Department of Psychology

Studies show that LGBT smoking rates exceed the general population and that LGBT smokers may be less successful at quitting. Combining data from two smoking cessation trials (N=808), secondary data analyses compared perceived stress levels, mood disturbances and quit rates in LGBT versus heterosexual smokers. Both trials included counseling and administration of Bupropion SR and NRT. Measures included the Perceived Stress Scale, the Profile of Mood States and the Fagerstrom Test of Nicotine Dependence. We hypothesized that the LGBT sample would have higher stress scores and mood disturbances at baseline along with lower quit rates. However, we found no significant differences between LGBTs and heterosexuals for these variables at the <.05 level. Our results may be explained by the sample's location, age and the tendency for smokers to report higher levels of mood disturbances regardless of their orientation.

POSTER #21

The Development of Posture in Infancy

Christina Gioeli

Faculty Mentor: Dr. Sarah E. Berger
Department of Psychology

Infants manipulate their surrounding environment by using two important motor skills: sitting and reaching. From ages four to five months, infants begin developing postural control, primarily through supported sitting, and begin reaching for objects. Through repetition and practice, infants refine these skills and between seven and eight months, they progress to independent sitting, becoming experienced sitters and "reachers." Although infants' reaching skills improve as they develop, perseveration is a common occurrence. Perseveration occurs when infants manually search for an object at an original hiding location, despite seeing the object moved. This study seeks to understand how the development of sitting affects the way infants use their bodies to manipulate their environment and why perseveration is a key part of learning.

Six 5- to 8-month-old pre-crawling infants have participated thus far. Infants' sitting skill was coded as supported, minimally supported, or independent. The Individual Growth and Development Indicators (IGDI), a tool for coding infants' play with toys, evaluates problem solving. A reaching task measured the effect of infants' postural control on decision-making. Preliminary results show a positive relationship between sitting experience and reaching ability. Moreover, infants perseverated when hiding locations changed. Thus, infants must inhibit repeated behaviors and control their posture to search new locations. Ultimately, independent sitting allows infants to balance and lift both arms up to reach, while simultaneously solving a problem. Understanding the role of sitting skill in an object-retrieval task demonstrates the importance of the combination of motor and cognitive skills for successful learning and development.

POSTER #26

Immigrant Experiences in Psychotherapy: A Mixed Methods Study

Christie Refano

Faculty Mentor: Dr. Lauren Rogers-Sirin
Department of Psychology

This study examined immigrant students' attitudes toward, and experiences in, psychotherapy, using a mixed methods analysis consisting of both survey and interview data. The goal was to examine the importance of clients' perceptions of therapists' cultural competence in satisfaction with therapy, and what immigrant students considered to be culturally competent, or culturally incompetent. The sample consisted of 86 immigrant students who have had therapy experience (20 first generation and 66 second generation, 26 males and 60 females, 2 Asian, 10 bi-racial or mixed race, 14 African or African-American, 28 Latino/Latina, and 32 White or (Euro-American). The participants completed surveys, including the Cross-Cultural Counseling Competence Inventory (Fischer & Farina, 1995), the Satisfaction with Therapy and Therapist Scale – Revised (LaFromboise, Coleman & Hernandez, 1991), and the Brief Symptoms Inventory -18 (Derogatus, 2000). Nine students were interviewed about their therapy experiences. A strong correlation was found between satisfaction with therapy and clients' perceptions of their therapist's cross cultural competence ($r = .67$, $p < .001$). Attitudes towards psychotherapy significantly correlated with both therapists' cultural competence ($r = .29$, $p < .005$) and satisfaction with therapy ($r = .41$ $p < .001$). Interviews provide examples of immigrants perceptions of cultural competence or incompetence.

POSTER #27

The Effects of Intermittent Reinforcement on Serial Discrimination Learning in Pigeons

Yajaira Gil & Kimberly Olsen

Faculty Mentor: Dr. Bertram O. Ploog
Department of Psychology

Four pigeons were trained under two preliminary conditions with a serial discrimination reversal design involving a simultaneous red-green visual discrimination. The intertrial interval was always 40 s, and the color-reinforcement correlation was always reversed after two 80-trial sessions. One peck to the designated S+ stimulus resulted in an unsignaled reinforcement delay of 6 s followed by a reinforcer with either 50% or 100% probability. Pecks to the designated S- stimulus also led to the 6-s delay but then directly to the ITI (with no reinforcement). Consequences for pecks to the S+ that were not followed by reinforcement (50% condition) were identical to those for S- pecks. Two birds received a reinforcer with 50% probability in Condition 1 and with 100% probability in Condition 2. For the remaining two birds, this order of reinforcement probability was reversed. Our preliminary results show that no learning took place under either condition. This was expected given that the ITI and delay parameters were chosen such that discrimination learning would be severely impaired. In follow-up conditions, the reinforcement delay will be signaled, which has been shown to overcome the impairment in discrimination learning. The question is whether learning, as indicated by the proportion of pecks to S+, will occur at a faster rate under the 100% condition. In addition, the effect of partial reinforcement (50% condition) will be assessed in terms of the learning-to-learn effect, that is, overall improvement of learning reflected by increasingly fast reversal learning within a condition and across conditions.

POSTER #29

The Processing of Case Markers by Heritage Spanish-English Bilinguals

Juan Cardona

Faculty Mentor: Dr. Irina Sekerina
Department of Psychology

Our study addresses the online processing of heritage Spanish-English bilinguals with particular emphasis on language transfer effects from English. Transfer effects occur when knowledge of the dominant language (English) is applied to the weaker heritage language (Spanish) that occurs as a result of the inherent differences between the two grammatical systems. Spanish grammar allows more flexibility in word placement than English because it employs a variety of grammatical features not found in English such as cases and clitics. Montrul (2008) shows that clitics and differential object case marking (DOM) present difficulty to heritage Spanish bilinguals. We tested 10 such speakers in an experimental study that consisted of a background language history questionnaire, an assessment of proficiency in Spanish, and an eye-tracking experiment. In the experimental part, the participants listened to 24 short stories and looked at corresponding pictures of three people and a location and then were asked to answer a comprehension question based on the story. We measured the participants' accuracy in answering the question, their reaction time, and eye movements to the four pictures. We predict that while comprehension will be good, the eye movements will nevertheless reveal a delay in identifying the picture target because the heritage Spanish speakers will have difficulty in processing case markers online.

POSTER #35

Aging and the Sexual Self: How Age Affects a Woman's Sexual Self Schema

Christine Gerbino

Faculty Mentor: Dr. Darryl Hill
Department of Psychology

As women get older, they face an array of biopsychosocial changes that have the potential to impede their sexual expression. In this study, I assessed how a women's sexual self-schema may change in response to aging. Women of all ages were given self-addressed packets containing questionnaires that assessed their sexual self-schema. Results from the questionnaires indicated that non-significant trends in the sexual self-schema of older and younger women were seen. However, age correlated with several responses on the Sexual History Form indicating that older women experience a higher likelihood to have problems regarding sexual activity in specific areas. I concluded that further research with a larger and more diverse sample is needed in order to determine if the sexual self-schemas held by older women are significantly different than those of younger women.

POSTER #45

The Effects of Visual and Audio Distractions on Performance

Mirette Misak

Faculty Mentor: Dr. Florette Cohen
Department of Psychology

In the current research study, we are interested in participants' emotional intelligence (EQ) and performance on a 50 piece puzzle when a distractor is present. In previous research, cognitive ability has been shown to be the strongest predictor of academic performance followed by the Big Five personality factors; the x-factor when predicting higher level performance is emotional intelligence. Previous correlational research has shown that EQ has a dynamic ability to predict higher levels of success in academics as well as at work. In contrast to previous research we measured EQ using the 33-item emotional intelligence scale that will enable us to gather participants' abilities in the three domains of EQ presented by Salovey and Mayer (1990) with different distracters present.The three domains of EQ which were tested for are Appraisal and Expression of Emotion, Regulation of Emotion, and Utilizing Emotion.The timed 50-piece puzzle will determine the participant's ability to perform when a distracter is present.We will be using a 4 group design: Group 1=Control, Group 2= visual distraction, Group 3= Audio distraction and Group 4= audio & visual distractors combined.We hypothesize that participants who score higher on the 33 item emotional intelligence test will have higher levels of sum performance regardless of whether a distraction present.

POSTER #46

Personality Types Inclined to Participate in Thrill Seeking Activities

Melissa Solomon

Faculty Mentor: Dr. Florette Cohen
Department of Psychology

Research shows that people are not equally attracted to risk taking.There are several studies which theorize that individuals differ in their attraction to risk- taking.To test this theory, we used a random sample of students from the College of Staten Island who signed up for the study through the computer program Sona Systems. Each participant completed three anonymous surveys. Based on previous research done on this topic, we predicted that the extrovert personality type is more likely to be inclined to a lifestyle which includes more frequent risk and thrill seeking behaviors and the introvert personality type will be more likely to avoid these behaviors.The results of this study supported the hypothesis that the introvert personality types are less likely to participate in the thrill seeking activities and can be considered anti- thrill seekers. It can also be concluded that the extrovert and the neutral (neither extrovert nor introvert) personalities participate in thrill seeking activities.

POSTER #47

Students' Attitudes Toward Cost of College Textbooks at the CSI Bookstore

Giana Abbruzzese, Almis Ali, Ana Alvizurez, Jessica Zito

Faculty Mentor: Dr. Irina Sekerina
Department of Psychology

Past research demonstrated that either the increase or decrease of college textbooks cost can dramatically affect the attitudes of college students toward buying them. The present study examines how the cost of college textbooks at the CSI bookstore affects CSI students' buying behavior. We used a 20-question survey that recorded CSI students' perspective on this issue. Our survey was divided into 3 categories: student's year of college, the source and cost of each textbook and the use of each textbook during the semester. We predict that freshmen would buy more textbooks compared to those students who had been in college for longer than one semester. Students' strategies in coping with the increasing textbook cost are buying them from the Internet (Amazon, eBay, etc.), from students who sell their textbooks, renting, and finally, not buying them at all. It is possible that if the cost of textbooks keeps increasing, the CSI bookstore may go out of business in the future.

POSTER #5

Acculturative Stress and Mental Health: The Moderating Role of Social Support

Anthony Spano

Faculty Mentor: Dr. Lauren Rogers-Sirin
Department of Psychology

This is a study on effect that acculturative stress has on immigrant students' mental health, and the moderating role of social support. A sample of 395 first-and second-generation immigrants completed an on-line survey. Results demonstrated that acculturative stress significantly contributed to mental health symptoms, including depression, anxiety and somatic complaints. As acculturative stress increases, mental health symptoms increase. The effects of generational status and sex were examined with a series of t-tests. Females report higher levels of mental health symptoms than males. No other significant differences between sexes was observed. First generation immigrants report higher levels of acculturative stress than second generation. No other significant differences between generations were observed. Generational status moderated the influence of acculturative stress on mental health symptoms so that first generation had higher levels of mental health symptoms in conditions of low acculturative stress, but in conditions of high acculturative stress, second generation immigrants had higher levels of mental health symptoms. Sex did not moderate the relationship between acculturative stress and mental health symptoms. A third moderation analysis demonstrated that social support protected against the negative influence of acculturative stress. When there were high levels of social support, acculturative stress had a significantly reduced effect on mental health. When there were low levels of social support, acculturative stress remained a strong, negative influence. Implications for practitioners are discussed.

POSTER #59

Transgender: Popping the Bubble on Societal Gender Norms

Laura Hare

Faculty Mentor: Dr. Darryl Hill
Department of Psychology

Society portrays many gender standards for people to abide by and transsexuals do not fit in these expectations. This leaves transgender individuals at high risk for discrimination. This study measured the levels of transsexual tolerance in a sample of college students. The Genderism and Transphobia scale and International Attitudes towards Transsexual scale were used to measure the participants' feelings towards transgender individuals. Participants read one of four stories involving almost identical people: trans Tina, Tina, trans Tom or Tom. The participants who were less tolerant of transgender individuals were more likely to be prejudiced toward transsexuals. Also many participants confused gender identity with sexual orientation, assuming that trans individuals were most likely homosexual. Participants who said they had known a person who was transgender were more accepting of transsexuals. The results of this study proved that more research needs to be done in this area to bring better awareness about the transgender community and to educate society to view all gender roles with an open mind.

POSTER #60

College Students' Attitudes Towards the Benefits of Physical Education (PED190) as a Core

Andrea Adum, Claudia Olender & Daniella Plaksiy

Faculty Mentor: Dr. Irina Sekerina
Department of Psychology

College students often do not feel that learning about health and the benefits of physical activity in college classes on physical education is important, but these classes have proven to have great advantages for those who complete them. We investigated the attitudes of 60 CSI students towards a physical education course (PED190) as a requirement. The participants were administered a survey in which they were asked to rate the importance of physical education in their lives and more specifically, as a required course at CSI. The participants were either students who have not taken the course (N=30) or the ones who have (N=30). The survey consisted of 20 questions asking the students to rate their answers on a scale of 1 to 5 (1 being the lowest and 5 being the highest). We predict that the students who have not taken the course will be skeptical about the benefits of an academic physical education course, mainly because they do not find it relevant to their academic and personal development as other classes. The students who have taken the course are expected to have a better opinion about the necessity of PED190, and will exhibit more knowledge about benefits of physical education and its contribution to their overall physical, emotional, and spiritual health.

POSTER #61

Identifying Relationships of Neurons through Multi-electrode Array Data of Epileptic and Non-epileptic Rats

Sylvana Salama

Faculty Mentor: Dr. Dan McCloskey
Department of Psychology – Program of Neuroscience

The hippocampus is an area of the mammalian brain that is highly prone to synchronization of neurons in a manner that can lead to epileptic seizures. In humans with temporal lobe epilepsy, and in animal models of this disorder, the hippocampus reorganizes over a period of years (weeks in animals) and begins generating seizures. While previous studies have shown some changes between the connections of neurons in some isolated areas of the hippocampus, we do not fully understand how the hippocampus as a whole reorganizes, particularly in relation to connections between areas. To answer this question, we have developed a new approach to study neuronal connectivity using multielectrode array recordings from "epileptic" and control rats in an animal model of chronic temporal lobe epilepsy. Neuronal firing patterns were analyzed using a network science approach so that the roles of individual neurons, in relation to groups of neurons, could be understood. Preliminary data from this analysis suggests that epileptic hippocampi produce chains of neuronal firing that involve more neurons than control hippocampi. This indicates that there is an increase of the connectivity of the neurons in epileptic brains. Furthermore, there is evidence of abnormal connections between neuron groups that do not exist in the non-epileptic brain. Together, these findings suggest that increased connectivity between neurons both in the traditional way, and in new ways, may lead to the development of seizure activity.

POSTER #63

The Use of Vocalizations During a Motor Task

Samantha Agnese

Faculty Mentor: Dr. Sarah Berger
Department of Psychology

Infants reach critical motor and language milestones around 12 months. Cortical asymmetry dictates that the left side of the brain controls both speech processing and movement on the right side of the body. If motor and language functions develop in tangent during the first two years, we would expect a relationship between vocalization and side lateralization that supports a contralateral hypothesis.

Nine 13-month-old (female=6; M=12.97 months) walking infants (M=1.36 months experience) participated. At this age, infants typically experience major changes in motor and language skills. We examined whether motor-language trade-offs are related to lateralization by coding hand and foot preference and the duration of vocalizations during a goal-directed locomotor task.

We calculated side preference relative to amount of vocalization exhibited during the task. Preliminary data showed no significant relationship between vocalization duration and hand or foot side preference. However, this may be due to the small sample size thus far, as results indicated that no infants displayed a right-foot preference and the proportion of the task spent vocalizing was three times as much for "left-footers" (ppn=.27) than infants without a foot preference (ppn=.08). For handedness, more infants had a left-side preference (n=6) than right (n=2) or no preference (n=1). Left-handers vocalized more during the task (ppn=.19) than right-handers (ppn=.04) or infants without a preference (ppn=.01). This pattern suggests that increased activity in the left hemisphere during language acquisition may lead to a preferred left-sided motor activity preventing cognitive overload, which provides insight into how infants efficiently accommodate new cognitive skills.

POSTER #64

The Effects of Taurine Supplementation on Reversal Learning in Adult and Aged Pigeons

Samantha Scicchigno

Faculty Mentor: Dr. Edward Meehan
Department of Psychology

Nine adult and aged pigeons treated for six months with taurine, a neuro-protective GABAA agonist, in their drinking water were compared to nine age-matched controls. Two schedules, one designed to generate a high rate of response (a Fixed Ratio, FR 30) and the other a low rate of response (Differential Reinforcement of Low rate, DRL 6s) were paired with two unique stimuli. After three sessions of training, the stimuli were reversed for three sessions and therefore signaled the opposite schedules. The stimuli were then returned to the original contingencies for a final three sessions of recovery. This procedure was performed twice with two unrelated sets of stimuli. The null hypothesis was confirmed; taurine treatment did not have an effect on performance, although there was a trend for the control group to perform better than the taurine-treated group during reversal. We expected birds treated with taurine to show more success during reversal and recovery, which required inhibition of previous learning, because of the role of taurine in enhancing the longevity of GABA based neurons, the primary inhibitory units of the central nervous system. This was the first assessment in a 24-month experimental design on the effect of taurine treatment on learning and memory in pigeons of different ages.

POSTER #70

Processing of an Unfamiliar Language in Children with Autism Spectrum Disorders

Melice Golding & Aleksandra Makowska

Faculty Mentor: Drs. Bertram Ploog & Patricia Brooks
Department of Psychology

Children with autism spectrum disorders (ASD) show deficits in social and communicative skills. Using a discrimination-choice procedure embedded in a video game, we examined whether these deficits might be due to unusual patterns of attention. Children listened to pre-recorded spoken sentences varying with respect to content and prosody (intonation or emotional tone of voice). During training, children learned to select one of two sentences differing in both content and prosody (e.g., statement "Bob parked a van." vs. question "Tim shut a door?"). Ploog, Banerjee, and Brooks (2009) reported that children with ASD were accurate in perceiving the content and prosody of spoken English sentences, but, unlike children with typical development (TD), failed to prioritize content when presented with test foils comprising recombinations of the content and prosodic features of the training sentences (e.g., question "Bob parked a van?" vs. statement "Tim shut a door."). The present study was conducted to test whether similar differences in attention would be observed between groups when sentences were used that were meaningless to them (i.e., German). The participants, aged 5 to 17 years old, were 13 children with ASD and 13 with TD. Preliminary results show increased attention to content over prosody in the TD group — i.e., replicating the same group difference observed with English sentences.

POSTER #72

The Effect of Locomotor Experience and Sleep on Motor Learning

Sumudu Waas

Faculty Mentor: Dr. Sarah Berger
Department of Psychology

Sleep plays an essential role in infants' growth, cognitive development and motor development. Growing evidence indicates that sleep facilitates learning and memory formation and processing, thus aiding in the enhancement of problem-solving skills.The aim of this study was to examine the role of two factors, locomotor experience and sleep, on infants' problem-solving abilities.

Experiment 1 examined how infants' locomotor experience affected how they learned to solve a novel locomotor problem of navigating a tunnel to reach a goal.We compared infants in transition from crawling to walking (n=5; mean age=12.64 months) to new walkers (n=7; mean age=13.5 months). Using the same tunnel task, Experiment 2 examined the effect of sleep between training and test sessions for new walkers. In both tasks, we measured how infants solved the problem, how long it took them to solve it, and whether they needed a demonstration.

New walkers took longer to complete the task, needed more demonstrations, and had more difficulty fitting their bodies into the tunnel than infants in transition. Moreover, infants took more time, needed more demonstrations, and had more difficulty fitting their bodies into the tunnel in the pre-nap condition compared to the post-nap condition, suggesting that sleep facilitated learning.

Thus, locomotor experience and sleep both influence and enhance cognitive development. Studies such as these are crucial for identifying the factors that contribute toward the development of problem-solving skills in infancy and the dynamic relationship between them.

POSTER #74

Investigating the Link Between Social Behavior and Epilepsy in the Naked Mole Rat

Xavier Geoffroy

Faculty Mentor: Dr. Dan McCloskey
Department of Psychology

Social behavior requires the coordination of multiple brain systems in ways that we are only beginning to understand. One way to study what brain areas are involved in social behavior is to determine what other behaviors correlate to social ability.Autism provides a well-studied example of a deficit in social behavior, which has other related behavioral changes. It is defined by three features: lack of social reciprocity, disrupted verbal and non-verbal behaviors, and inflexible and repetitive behaviors.There is also a high prevalence of comorbidity of epilepsy that accompanies autism; especially when the diagnosis is based on EEG.We investigated the possibility that deficits in social behavior relate to stereotypical behavior and epileptic features in a highly social rodent species: the naked mole-rat (Heterocephalus glaber, NMR). The behavior of a colony of NMRs was observed using video recordings. Some animals were observed to not participate in interactions with other members of the colony. Others exhibit stereotypical behaviors, including charging back and forth repeatedly, repeatedly walking into walls of housing enclosure, and isolation to a particular corner of housing enclosure. Other animals engaged in aggressive behavior towards other colony members. Next, neural activity from NMR hippocampal slices was recorded to determine the extent of epilepsy-like activity.These analyses were compared to the level of social behavior for each animal in the colony to determine if social behavior is a useful predictor of stereotypical or aggressive behavior or epileptic brain activity.

POSTER #78

Insufficient Safer Sex Promotion on the CSI Campus

Michael Garcia, Angela Civitano & Neil Franco

Faculty Mentor: Dr. Irina A. Sekerina
Department of Psychology

Insufficient Safer Sex Promotion on the CSI Campus Previous research suggests that although safe sex is promoted throughout residential college campuses, it is not the case at commuter campuses, such as the College of Staten Island, or CSI. The present study investigates how it is being promoted throughout the CSI campus, and how accessible this information was to students. The study consists of two parts. First, 45 CSI students were administered a questionnaire that examined whether they know where to retrieve the information on safer sex on campus, how much they students know about safe sex in general, and what CSI is doing to help promote such information on campus. Then we plan to perform a concealed observation at the CSI Health Center and will attempt to seek safe sex information there. We predict that despite the fact that the Health Center exists on the campus, it is limited in its effectiveness in promoting safer sex because CSI students simply do not know enough about the resources that available to them on the campus itself. Thus, the situation with safer sex promotion at CSI will not be any better than it was found for commuter-style campuses. After the study is complete, we will be able to make recommendations based on the students' perspective of what needs to be done to change this situation for the better.

POSTER #79

Measurements of Social Stress in the Naked Mole Rat

Ilona Rabinovichlona, Noorelhoda Mahmoud, Nan Sussman & Dan Mccloskey

Faculty Mentor: Dr. Dan McCloskey
Department of Psychology

The purpose of this project was to measure physiological indicators of stress in the naked mole rat. Naked mole rats provide a useful animal model to study the stress response to social stressors because 1) they are the most social of all rodent species, and 2) unlike most other rodents, they secrete the same stress hormone as humans (cortisol). A number of social factors may have a relationship to stress levels in social rodents including colony size, habitat organization and maintenance, social isolation and exposure to animals from other colonies. We measured all of these factors quantitatively by conducting an enzyme-linked immunosorbent assay (ELISA) for cortisol in blood, brain, fecal and urine samples. Our preliminary results suggest that fecal samples provide a an accurate way to asses naked mole rat cortisol levels in a non-invasive manner and that social isolation, colony size, and the quality of habitat maintenance significantly alter cortisol levels. Subsequent analyses will compare this measure to measures of behavior patterns within colonies.

POSTER #8

Children's Narrative Ability and their Socio-Cognitive Understanding of Jealousy: Effects of Age & Maternal discourse during Middle Childhood

Norma Matos-Jackson, Nicole Kwoka, Naomi. J. Aldrich & Patricia J. Brooks

Faculty Mentor: Dr. Patricia Brooks and Naomi J. Aldrich
Department of Psychology

Storytelling serves as an important cultural tool for expressing socio-cognitive understanding. Research thus far has primarily focused on children's talk about personal experiences involving basic emotions (i.e., happiness, sadness) with a complete lack of evaluation of children's understanding of complex emotions. From infancy, children experience jealousy as a complex, negative emotion that symbolizes interpersonal rivalry. What remains to be understood, however, is how children come to understand this complex emotion. The current study examines children's jealousy understanding as it relates to their narrative ability and the role of maternal discourse. Children (5- to 11-year-olds) and their mothers generated fictional narratives about jealousy, and were given a language ability test (PPVT). A test of emotion comprehension (TEC) and intellectual abilities (TONI) served as additional assessments. Narratives were coded for coherence, emotion expression, and thematic understanding of jealousy. Age-related differences in children's emotion comprehension, language and intellectual abilities, coherence, emotion expression, and jealousy understanding were found. Mothers exhibited a greater understanding of jealousy and constructed more involved narratives than their children. Significant interrelationships were found between children's coherence, TEC, PPVT, and TONI scores, and maternal PPVT and coherence. Furthermore, children's jealousy understanding was predicted by both their own coherence and that of their mothers. The results have led to an increased understanding of how children learn to talk about their lives, their relationships, and the emotions they experience. Moreover, the findings will aide in the development of ways to assist children who have difficulties relating to others, especially to their peers and siblings.

POSTER #85

Behaviorally-Relevant Changes in Brain Development Following Prenatal Hypothyroidism in Long Evans Rats

Christina Vicidomin

Faculty Mentor: Dr. Dan McCloskey
Department of Psychology

The thyroid hormones thyroxine (T4) and triiodothyronine (T3) are important factors in regulating metabolism, growth and development and cellular level functions such as cell proliferation, neuronal development, and synapse formation. In humans, prenatal insufficiencies in thyroid hormone (TH) have been correlated with irreversible neurological and psychiatric symptoms in offspring. This includes alterations in fetal brain development, which is a strong predictor of reduced IQ scores and deficits in memory and cognition. In previous experimental models of developmental hypothyroidism in rats, data has revealed a bilateral cellular heterotopia located in the white matter of the corpus callosum. The size of this cortical malformation was found to be related to maternal TH levels (Goodman & Gilbert, 2007). In a previous study we have found that the offspring of developmentally hypothyroid rats showed a dose dependent increase in cortical volume on post-natal day (PND) 23 which resolved on PND 86 when the rats were euthyroid (Briffa-Mirabella et al., 2012). The current study looks deeper into the composition and behavioral consequences of this cortical enlargement by studying PND 23 rats after inducing maternal TH insufficiency (using doses of 0, 3, 10 ppm of propylthiouracil). Five animals per group were considered by using immunohistochemical techniques and then collecting stereological microscope images to quantify the number of cortical neurons, astrocytes, and oligodendrocytes. This is important because increases in neuron counts can account for hyperexcitability, and decreases in myelination can cause cognition disruptions such as speech and memory impairment. Behavioral tests were also performed on the pups to determine levels of memory, spatial, and cognitive ability. If an increase in neuronal density is found in this study, these results may help to explain the underlying problem in human developmental hypothyroidism.

POSTER #25

Mental Health of Children Participating in a HIV Prevention Program

Vanessa Garay

Faculty Mentor: Dr. Comfort B. Asanbe
Department of Psychology

The study examined the mental health impact of parental HIV infection on a sample of inner-city children who participated in an HIV prevention program. Thirty-one children between the ages of 11-18 were recruited for the study from a community-based program in central Harlem, New York. Participants completed the Child Behavior Checklists Youth Self-Report (CBCL-YSR) form to assess internalizing (depression, anxiety, somatic complaints) and externalizing (aggression, hyperactivity, oppositional defiant) behaviors and a 20-item audio computer-assisted self-interview (ACASI) to assess risky behaviors. The data from ACASI are presented elsewhere as part of the larger study. This study hypothesized that (1) female participants would show higher scores on internalizing behaviors than their male counterparts and (2) older children would present with higher externalizing behaviors than younger children. Preliminary data suggest a significant age difference in conduct behavior problems, but no gender differences in internalizing behaviors. The findings have implications for youth mental health.

POSTER #36

Dollars and Sense: Beliefs and values regarding the distribution of wealth and income

Margarita Artemov

Faculty Mentor: Dr. John Lawrence
Department of Psychology

This study investigated college students' perceptions of the distribution of wealth, income, and other resources in the United States. Student participants were surveyed regarding the accuracy of their perceptions of the distribution of resources, their preferences regarding how equally resources should be distributed, and the discrepancy between the two. METHODS: Two-hundred-and-fifty college students completed an online questionnaire. The survey included questions regarding demographic information, perceptions of how resources such as income, wealth and other resources are distributed in the United States, as well as their preferences for how these resources are allocated. RESULTS: On the average, participants greatly underestimated the level of inequality in the distribution of resources in the United States. With regard to their preferences, 70% of respondents preferred a more equal distribution of resources than the current distribution in the United States. In addition, majority of participants preferred government funded universal programs for childcare, healthcare, higher education, and retirement. CONCLUSIONS: Previous research indicated that social inequality is associated with poor mental health, physical health, and social outcomes. As a nation, it will be difficult to address those issues unless people's perceptions of inequality become more accurate.

POSTER #44

Percussive Music and its Effects on Anxiety and Depression

Marcy Carr

Faculty Mentor: Dr. Florette Cohen
Department of Psychology

The purpose of this study was to investigate the relationship between music of a more percussive nature and negative symptoms of anxiety and depression. Specifically, we asked if music of a more percussive nature would be effective in improving negative symptoms of anxiety and depression. Though previous research reveals a positive correlation between music therapy and alleviation of symptoms of anxiety and depression, there is a lack of empirical research needed to establish a causal relationship between the two. In this study, 14 men and 32 women were asked to follow a six week program of combined music listening and survey taking. These surveys measured feelings of anxiety and depression. Survey analysis was ongoing throughout the entire six week period with total data analysis done at the end of the study. Results suggest that music of a more percussive nature did indeed have a positive effect on anxiety and depression. The information gleaned from this study can be used by therapists to design more disorder specific individual music therapy programs for patients.

POSTER #77

The Effect of Motivation on the Choice of Majors by CSI Student Athletes

Stavroula Kafkis, Jessica A. Pillitteri & Nadir Sukalic

Faculty Mentor: Dr. Irina A. Sekerina
Department of Psychology

It is commonly believed that students' choice of a major is based on motivation. For student athletes, it means an additional burden of balancing a heavy academic workload with intensive participation in a specific sport. Accordingly, there is a belief that student athletes at CSI are more confident in their athletic skills, rather than their academic skills. If this is the case, we would expect an association between the fact that a status of an athlete and the choice of a major. In particular, we predict that students on the basketball team will choose majors are widely perceived as easy at CSI compared to the choices of students on the cheerleading team. We are conducting a survey We are conducting a survey of approximately 15 questions to 30 students asking a series of questions such as the amount of hours they put into their school work, what major they are enrolled in, and opinion questions that will give us a solid understanding of why students choose to participate in a sport while attending college. We will also propose a way to motivate student athletes to challenge themselves by choosing a major that is more competitive.

POSTER #24

The Theory of Ephemeral Gains: The Affect of Monetary Gains and Loss on Clinical Anger

Katrina Hannan

Faculty Mentor: Dr. Florette Cohen
Department of Psychology

Manus Midlarsky (2011) created the Theory of Ephemeral Gains to explain the origins of mass violence and political extremism. The Theory of Ephemeral Gains posits that when people experience gains followed by loss, they become angry and are more likely to engage in and support violence. The present study tested the ephemeral gains theory by using a gains and loss manipulation. We hypothesized that ephemeral gains affect people's level of clinical anger and support for military interventions abroad. Results show no significant main effects for anger or propensity towards violence. However, we found a significant interaction affect between groups and financial background on the Clinical Anger Scale. Those from a low economic status are the angriest and are most willing to use nuclear weapons abroad.

POSTER #3

Children's Socio-Cognitive Understanding of Jealousy

Angelica Grant, Nicole Kwoka, Naomi J. Aldrich & Patricia J. Brooks

Mentor: Ms. Naomi J. Aldrich
Department of Psychology

Children experience jealousy as a negative emotion symbolizing interpersonal rivalry from as young as 6-months of age. What remains to be understood, however, is how children come to understand this complex emotion. Children's socio-cognitive understanding is established through emotional understanding and perspective-taking ability, both of which develop further during middle childhood. While narratives have been used to assess children's socio-cognitive understanding, the primary focus has been on children's talk about personal experiences involving basic emotions (i.e., happiness, fear), with the majority of research being limited to preschoolers. Furthermore, perspective taking and the evaluation of complex emotions has largely been ignored in narrative research. The current study examines children's talk about their jealousy experiences as it relates to their emotion understanding and perspective-taking ability during middle childhood. Children (5- to 11-year-olds) generated personal narratives about their jealousy experiences and were given tests of emotion comprehension (TEC), perspective-taking, language (PPVT) and intellectual (TONI) abilities. Narratives were coded for jealousy type and emotion expression. Age-related differences in children's emotion expression, jealousy type, and perspective-taking, language, and intellectual abilities were found. In addition, gender differences in jealousy type were shown. Significant interrelationships were found between children's jealousy type, emotion expression, TEC, PPVT, and TONI scores, and perspective-taking ability. The findings provide an increased understanding of how children talk about their relationships and their emotional experiences. Furthermore, the results will help in the development of ways to better support children who have difficulties in their relationships with others, in particular with their siblings, caregivers, and peers.

Undergraduate Conference on Research, Scholarship, and Performance— Faculty Mentors

FACULTY MENTOR	DEPARTMENT	POSTER
Naomi J. Aldrich	Psychology	3,8
Jane Alexander	Geology	99
Alejandra Alonso	Biology	83,81,92,123
Ceasar Arenas-Mena	Biology	94
Comfort B. Asanbe	Psychology	25
Probal Banerjee	Neuroscience	18, 80
Sarah Benesch	English	Paper 3
Sarah Berger	Psychology	21, 63, 72,
Deborah Brickman	Business	98
Patricia Brooks	Psychology	8, 70
Gregory P. Cheplick	Biology	82
Florette Cohen	Psychology	11, 24, 44, 45, 46
Robert Craig	Chemistry	15
Abdeslem El Idrissi	Biology	4, 10, 113
Jimmie E. Fata	Biology	65, 68, 73, 86
Richard Flanagan	Political Science	76
Daniel Gagliardi	Business	2
Patricia Galletta	Business	6
Katherine Goodland	English	7
Sara Rose Guariglia	Biology	105, 106
Natacha Gueorguieva	Computer Science	84
Samira Haj	History	Paper 4
Darryl Hill	Psychology	35, 37, 59
Qiao-Sheng Hu	Chemistry	28, 42, 48, 93
Susan Imberman	Computer Science	16, 17
Daniel Kaplin	Psychology	12, 20
David Keberle	PCA	39
Judit Kerekes	Education	121, 122
Sylvia Khan	Music	51
Michael Kress	Computer Science	40
Michal Kruk	Chemistry	38, 103
William L'Amoreaux	Neuroscience	119
John Lawrence	Psychology	36
Richard Lufrano	History	Paper 1
Alan Lyons	Chemistry	115, 116, 118, 120
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Alexei Matveev	Business	22
Dan McCloskey	Psychology	19, 61, 74, 79, 85
Edward Meehan	Psychology	64
Frances Melendez	Psychology	13
Fred Naider	Biochemistry	81
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Laura Nowak	Business	110

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Bertram O. Ploog	Psychology	27, 70
Sebastien Poget	Chemistry	34, 62, 87, 95
Andrew Poje	Mathematics	114
Sarah Pollack	World Langs & Lits	50
Krishnaswami Raja	Chemistry	9, 54, 57
Emily Rice	Engineering Sci and Physics	33
Lauren Rogers-Sirin	Psychology	5, 26, 102, 107
Irina Sekerina	Psychology	23, 29, 47, 60, 77, 78, 104
Chang-Hui Shen	Biology	100
Patricia Smith-DeSilva	English	Paper 2
Susan Smith-Peters	History	Panel Discussion

Undergraduate Conference on Research, Scholarship, and Performance— Student Scholars

POSTER # / STUDENT		FACULTY	DEPARTMENT
1	Noorelhoda Mohmoud	Nan Susman	Psychology
2	Kelly Zaia	Daniel Gagliardi	Business
3	Angelica Grant	Naomi J. Aldrich	Psychology
3	Nicole Kwoka	Naomi J. Aldrich	Psychology
4	Kizzy Vasquez	Abdeslem El Idrissi	Biology
5	Anthony Spano	Lauren Rogers-Sirin	Psychology
6	Adejoke Adejoke	Patricia Galletta	Business
7	Justin Giles	Katherine Goodland	English
8	Norma Matos-Jackson	Naomi Aldrich	Psychology
8	Nicole Kwoka	Patricia Brooks	Psychology
9	Abdullah Chughtai	Krishnaswami Raja	Chemistry
10	Evelyn Okeke	Abdeslem El Idrissi	Biology
11	Ann Mackey	Florette Cohen	Psychology
12	Michael Dacunto	Daniel Kaplin	Psychology
13	Nicholas Gonzalez	Frances Melendez	Psychology
14	Deanna A. Frascona	Eugenia Naro Maciel	Biology
15	Mohammed Izmikna	Robert Craig	Chemistry
15	Kasandra Dorce	Robert Craig	Chemistry
15	Mohammed Sherwani	Robert Craig	Chemistry
15	Samira Izmikna	Robert Craig	Chemistry
16	Michael Cicero	Susan Imberman	Computer Science
16	Michael Vasquez	Susan Imberman	Computer Science
17	Michael Costantino	Susan Imberman	Computer Science
17	Konsantine Goudz	Susan Imberman	Computer Science
18	Anita Mata	Probal Banerjee	Neuroscience
19	Danielle Imbesi	Dan McCloskey	Psychology
19	Elaina Lei	Dan McCloskey	Psychology
19	Aleksandra Makowska	Dan McCloskey	Psychology
19	Kunzah Syed	Dan McCloskey	Psychology
20	Danielle Bohmer	Daniel Kaplin	Psychology
21	Christina Gioeli	Sarah Berger	Psychology
22	Sandy Sims	Alexei Matveev	Business
23	Nikki Fenton	Irina Sekerina	Psychology
23	Nicole Macri	Irina Sekerina	Psychology
23	Alana Glasse	Irina Sekerina	Psychology
24	Katrina Hannan	Florette Cohen	Psychology
25	Vanessa Garay	Comfort B. Asanbe	Psychology
26	Christie Refano	Lauren Rogers-Sirin	Psychology

Undergraduate Conference on Research, Scholarship, and Performance— Student Scholars (cont.)

POSTER # / STUDENT	FACULTY	DEPARTMENT
27 Yajaira Gil	Bertram O. Ploog	Psychology
27 Kimberly Olsen	Bertram O. Ploog	Psychology
28 Amy He	Qiao-Sheng Hu	Chemistry
28 Kimmy Yu	Qiao-Sheng Hu	Chemistry
28 Chun-Hui Xing	Qiao-Sheng Hu	Chemistry
29 Juan Cardona Cardona	Irina Sekerina	Psychology
30 Erica Zito	Dick Veit	Biology
32 Seth Wollney	Eugenia Naro Maciel	Biology
33 Daniel Feldman	Emily Rice	Engineering Sci and Physics
34 Sarah James	Sebastien Poget	Chemistry
34 Amanda McDonald	Sebastien Poget	Chemistry
35 Christine Gerbino	Darryl Hill	Psychology
36 Margarita Artemov	John Lawrence	Psychology
37 Cristen Melfi	Darryl Hill	Psychology
38 Ilona Stoyko	Michal Kruk	Chemistry
38 Doriane Bouobda	Michal Kruk	Chemistry
39 Joseph Marcellino	David Keberle	PCA
40 Michael Costantino	Michael Kress	Computer Science
40 Daniel Kurzweil	Michael Kress	Computer Science
40 Alerick Hyland	Michael Kress	Computer Science
40 Timothy Smolka	Michael Kress	Computer Science
40 Brian Wong	Michael Kress	Computer Science
40 Jonathan Parziale	Michael Kress	Computer Science
40 Chris Savo	Michael Kress	Computer Science
41 Jenna Pantophlet	Eugenia Naro Maciel	Biology
42 Darya Sabarova	Qiao-Sheng Hu	Chemistry
42 Monica Bassous	Qiao-Sheng Hu	Chemistry
42 Chun-Hui Xing	Qiao-Sheng Hu	Chemistry
43 Esia Yosupov	Xiaowen Zhang	Computer Science
43 Pradip Karki	Xiaowen Zhang	Computer Science
44 Marcy Carr	Florette Cohen	Psychology
45 Mirette Misak	Florette Cohen	Psychology
46 Melissa Solomon	Florette Cohen	Psychology
47 Giana Abbruzzese	Irina Sekerina	Psychology
47 Almis Ali	Irina Sekerina	Psychology
47 Jessica Zito	Irina Sekerina	Psychology
48 Rania Skaf	Qiao-Sheng Hu	Chemistry
48 Monica Bassous	Qiao-Sheng Hu	Chemistry
48 Chun-Hui Xing	Qiao-Sheng Hu	Chemistry
49 Jarred Sutton	Eugenia Naro Maciel	Biology

Undergraduate Conference on Research, Scholarship, and Performance— Student Scholars (cont.)

POSTER # / STUDENT		FACULTY	DEPARTMENT
50	Eimy Saldaña	Sarah Pollack	World Langs & Lits
51	Ashley Gill	Sylvia Khan	Music
53	Gennaro Liguori	Alan Zimmerman	Business
54	Amram Averick	Krishnaswami Raja	Chemistry
57	Frantz Pierre Toussaint, Jr.	Krishnaswami Raja	Chemistry
59	Laura Hare	Darryl Hill	Psychology
60	Andrea Adum	Irina Sekerina	Psychology
60	Claudia Olender	Irina Sekerina	Psychology
60	Daniella Plaksiy	Irina Sekerina	Psychology
61	Sylvana Salama	Dan McCloskey	Psychology
62	Matthew Emsak	Sebastien Poget	Chemistry
63	Samantha Agnese	Sarah Berger	Psychology
64	Samantha Scicchigno	Edward Meehan	Psychology
65	Peter Hannon	Jimmie Fata	Biology
66	Ahmed Hassan	Xiaowen Zhang	Computer Science
67	Amina Huseinbegovic -Jasarevic	Alan Zimmerman	Business
68	Kaitlin Kelly	Jimmie E. Fata	Biology
70	Melice Golding	Bertram Ploog/Patricia Brooks	Psychology
70	Aleksandra Makowska	Bertram Ploog/Patricia Brooks	Psychology
72	Sumudu Waas	Sarah Berger	Psychology
73	Mino Abdelmessih	Jimmie E. Fata	Biology
74	Xavier Geoffroy	Dan McCloskey	Psychology
75	Syreita Lewis	Ying Zhu	Media Culture
76	Robert Gibbs	Richard Flanagan	Political Science
77	Stavroula Kafkis	Irina Sekerina	Psychology
77	Jessica Pillitteri	Irina Sekerina	Psychology
77	Nadir Sukalic	Irina Sekerina	Psychology
78	Michael Garcia	Irina Sekerina	Psychology
78	Angela Civitano	Irina Sekerina	Psychology
78	Neil Franco	Irina Sekerina	Psychology
79	Iona Rabinovich	Dan McCloskey	Psychology
79	Noorelhoda Mahmoud	Dan McCloskey	Psychology
80	Joseph Inigo	Probal Berger	Chemistry
81	Alina Kogan	Fred Naider	Biochemistry
82	Lisa LaManna	Gregory P. Cheplick	Biology
83	Thomas McCauley	Alejandra Alonso	Biology
84	Byambadorj Dashdorj	Natacha Gueorguieva	Computer Science
85	Christina Vicidomini	Dan McCloskey	Psychology
86	Sophia Varriano	Jimmie E. Fata	Biology
87	Kimberly Cruz	Sebastien Poget	Chemistry

Undergraduate Conference on Research, Scholarship, and Performance— Student Scholars (cont.)

POSTER # / STUDENT	FACULTY	DEPARTMENT
88 Isaac Osores	Deborah Sturm	Computer Science
88 Cynthia Murrillo	Deborah Sturm	Computer Science
89 Tilanga Fernandez	Alexandru Voicu	Political Science/Economics and Philosophy
91 Keerthiga Sivakumar	Alejandra Alonso	Biology
91 David Njuguna	Alejandra Alonso	Biology
92 Naeem Syed	Alejandra Alonso	Neuroscience
93 Fatima Azhar	Qiao-Sheng Hu	Chemistry
93 Wei Li	Qiao-Sheng Hu	Chemistry
94 Tia Leung	Ceasar Arenas-Mena	Biology
94 Jacob Madella	Ceasar Arenas-Mena	Biology
94 Shireen Jayman	Ceasar Arenas-Mena	Biology
94 Mihai Hajdu	Ceasar Arenas-Mena	Biology
94 Alexia Downs	Ceasar Arenas-Mena	Biology
95 Juby Panicker	Sebastien Poget	Chemistry
96 Edward Peppe	Deborah Sturm	Computer Science
97 Ella Viola	Lisa Manne	Biology
98 John Troino	Deborah Brickman	Business
99 Daniel Kurzweil	Jane Alexander	Geology
100 Isma Butt	Chang-Hui Shen	Biology
101 Maheen Razi	Alan Zimmerman	Business
102 Yessica I Zegarra	Lauren Rogers-Sirin	Psychology
103 George Farid	Michal Kruk	Chemistry
104 Elena Rabinovich	Irina Sekerina	Psychology
105 Lauren Overseem	Sara Rose Guariglia	Biology
106 Derek Pisana	Sara Rose Guariglia	Biology
106 Lauren Overseem	Sara Rose Guariglia	Biology
106 Jullian Braccolino	Sara Rose Guariglia	Biology
107 Alexandr Usov	Lauren Rogers-Sirin	Psychology
108 Jonathan Parziale	Deborah Sturm	Computer Science
109 Farah Abbasi	Zhanyang Zhang	Computer Science
110 Katarzyna Pedzich	Laura Nowak	Business
111 Kubra Shirazi	Alan Zimmerman	Business
112 Christopher Savo	Deborah Sturm	Computer Science
113 Simon Ng	Abdeslem El Idrissi	Biology
114 Lucas Garber	Andrew Poje	Mathematics
115 Mark Barahman	Alan Lyons	Chemistry
116 Meagan Derbyshire	Alan Lyons	Chemistry
117 Joshua Pabst	Alan Zimmerman	Business
118 Brian Iskra	Alan Lyons	Chemistry

Undergraduate Conference on Research, Scholarship, and Performance— Student Scholars (cont.)

POSTER # / STUDENT		FACULTY	DEPARTMENT
119	Christina Cuttitta	William L'Amoreaux	Neuroscience
120	BiBi Ghafari	Alan Lyons	Chemistry
121	Jaime Reilly	Judit Kerekes	Education
122	Stacy Lefkowitz	Judit Kerekes	Education
123	Lorraine Chawki	Alejandra Alonso	Neuroscience

Research Paper Presentations— Student Scholars

PAPER # / STUDENT		FACULTY	DEPARTMENT
1	Kori Elizabeth Tjornhom	Richard Lufrano	History
2	Kelly Stern	Patricia Smith-DeSilva	English
3	Sharifa C. Hampton	Sarah Benesch	English
4	Kasuni Nanayakkara	Samira Haj	History
5	Sarah Greis	Bilge Yesil	Media Culture

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Ashley Simmons
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Naisha Solomon

Committee Members	Department
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The committee gratefully acknowledges the contributions of the many individuals who helped make this conference possible.


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