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21st Annual Governors State University Student Research Conference Proceedings

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Proceedings of the Conference

21st Annual GSU Student Research Conference

Governors State University
Tuesday, April 28, 2015
Engbretson Hall
9 a.m. - 4 p.m.

Dr. Shelly Kumar
Division of Science
College of Arts and Sciences
PARTICIPANTS

Students of
Governors State University

College of Arts and Sciences
College of Business and Public Administration
College of Education
College of Health and Human Services
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Dear Student Researcher:

Welcome to the Annual Governors State University Research Conference. We are proud of the excellence, expertise, and variety of your research presentations. Thank you for sharing your work with the GSU academic community. A university education goes beyond the mastery of information to the creation of new knowledge.

Congratulations to you and to your professors and advisers for participating in the joy of discovery. We are proud to count you as members of the GSU community.

Thank you for participating in this research conference and for what we hope will be a life-long commitment to new ideas.

Sincerely,

Elaine P. Maimon, Ph.D.
President
A MESSAGE FROM THE CONFERENCE
STEERING COMMITTEE

The steering committee is pleased to announce the 21st Annual GSU Student Research Conference to be held on April 28, 2015. For the past twenty years this conference has become a tradition in excellence, and we are confident that today again we will witness another session of quality presentations by our students. This conference will be presented in its original format and with its original objectives:

1. To provide students an opportunity to present their research work before an audience of their peers, and to use the comments they receive to improve presentations made at professional conferences.

2. To provide a forum to highlight research accomplishments at GSU, and honor students presenting their research work.

3. To generate enthusiasm among the student body in general, and encourage them to pursue research and other scholarly activities.

4. To enhance communications in the area of research among the four colleges at GSU. The interactions may also lead to collaborative work among students and faculty of different colleges.

5. To enhance the image of GSU in the area of teaching, as research is considered an integral part of teaching at the university level. In the long run a larger number of students attracted to research would enroll at GSU to pursue higher education.

The committee hopes that you will enjoy the conference, that you share in the excitement of doing research, and that you will look forward to participating in future student and professional conferences.
KEYNOTE SPEAKER BIOGRAPHY

The Student Research Conference Steering Committee is proud to announce that the keynote speaker for the lunch will be:

Dr. Peter Gena, Ph. D.

Professor
Department of Art and Technology
The School of the Art Institute of Chicago, Chicago, IL

Peter Gena, Composer/Professor, holds a Ph.D. in music composition from SUNY at Buffalo where he studied with Morton Feldman and Lejaren Hiller. His work of various media has been presented worldwide. Selected performances include presentations at Museo de Arte Contemporáneo Fenosa/Gasnatural, (Coruña, Spain); Forum Altenberg, (Bern); Hearth: l'art au cœur du territoire (Nantes); Le centre culturel Saint-Exupéry (Reims); Aspekte Musik, Salzburg; Art Students League (NYC); The International Computer Music Conference, Hong Kong; L.A.C.E.; Akademie der Kunst, Berlin; Asian Institute for Liturgy and Music (Quezon City, The Philippines); the Museum of Image and Sound (São Paulo); the Ferienkurse für Neue Musik (Darmstadt); the Merkin Concert Hall and Lincoln Center (NYC); and several New Music America Festivals.

Gena's publications include, A John Cage Reader (70th Birthday Festschrift, C.F. Peters, NYC); John Cage and the New York School: A Hyperlecture/Conversation (Warsaw Contemporary Art Museum, 1994) and a contribution to The Waltz Project (C.F. Peters, and Nonesuch Records), choreographed by Peter Martins (New York City Ballet). His writings on his work include Apropos Sonification: A Broad View of Data as Music and Sound. (AI & Society, Springer-Verlag); and A Physiological Approach to DNA Music, (with Charles Strom, M.D., Ph.D.), in The Proceedings of CADE 2001 (Glasgow School of Art Press). Selected music is published by Editions V (Dortmund, Germany), and C.F. Peters.

During his thirty-five years in Chicago, Gena directed and performed in major events, including New Music America '82 (Chicago), and the 1978 International Computer Music Conference (Northwestern U.). He was the Artistic Director of the New European Music Overseas Festival (1995-96), and also served as a contributing editor to Formations, a journal of new fiction and arts criticism. He was the recipient of grants and awards from, among others, the NEA, Meet the Composer, Arts Midwest, the Illinois Arts Council, the Ferienkurse für Neue Musik (Darmstadt).

Since 1983, Gena has been a Professor at the School of the Art Institute of Chicago, where he teaches courses that encompass music, art and technology.
Previously, he was an Assistant Professor of Theory-Composition at Northwestern University (1976-1983), where he co-directed the Computer Music Studio. From 1974 to 1976, he was a Lecturer and Director of the Electronic Music Studio at CSU Fresno. Similarly, he ran the Electronic Music Studio at Brock University in St. Catharines, Ontario (1971-74). In his forty-three years in academia, he has given numerous residencies and lectures including at: Indiana University (Bloomington), Internationale Ferienkurse für Neue Musik (Darmstadt), Universidade de São Paulo (Brazil), Estudio da Glória (Rio de Janeiro), SUNY at Buffalo, University of San Juan (Puerto Rico), Columbia University (NYC), l'École Nationale Supérieure d'Art (Villa Arson, Nice), l'École Supérieure d'Art d'Aix-en-Provence, l'École Regionale des Beaux-Arts de Nantes, l'École Nationale Supérieure de Création Industrielle (Paris), and l'École Nationale Supérieure d'Art Bourges.

Dr. Peter Gena is decorated by the French government at the rank of Chevalier dans l'Ordre des Palmes Académiques.
DATA SONIFICATION: A COMPOSER PREREQUISITE

Peter Gena

Department of Art and Technology
The School of the Art Institute of Chicago, Chicago, IL

ABSTRACT

Unlike the representational visual arts, music is inherently abstract, i.e. the limning of recognizable images has no musical equivalent. While data visualization today has gained currency among artists, composers have "sonified" data for centuries. The profound association of numbers as data with acoustics, music and sonic art from Pythagoras to current work is beyond reproach. Sonification investigates ways to realize symbolic data (representing results or measurements) as well as "raw" data (signals, impulses, images, etc.) into compositions. In the creative arts the digital age has broadened and enhanced the conceptual landscape not simply through its servitude to the creative process, but as its partner. Historical musical examples have primed the way for my own compositions, some of which engage probabilities, brain waves, pattern transformation, and DNA sequences.
21st Annual GSU Student Research Conference
April 28, 2015

PROGRAM SUMMARY

Engbretson Hall:

8:30 A.M. – 9:00 A.M.  Conference Registration & Continental Breakfast
9:00 A.M. – 9:10 A.M.  Welcome and Introduction
9:10 A.M. – 10:30 A.M.  Podium Presentations
10:30 A.M. – 10:40 A.M.  Refreshment Break
10:40 A.M. – 12:20 P.M.  Podium Presentations

Center for Performing Arts Stage:

12:20 P.M. – 12:25 P.M.  Greetings: Provost
12:25 P.M. – 1:00 P.M.  Lunch
1:00 P.M. – 1:50 P.M.  Keynote Address
1:50 P.M. – 2:30 P.M.  Poster Presentations
2:30 P.M. – 2:40 P.M.  Certificates Presentation to Student Participants
2:40 P.M. – 2:45 P.M.  Concluding Remarks
CONFERENCE PROGRAM

Conference Registration & Continental Breakfast

8:30 A.M.  Engbretson Hall

Program Commencement  Sherman Recital Hall

9:00 A.M.  Welcome and Introduction:
Dr. Shelly Kumar
College of Arts and Sciences

Podium Presentations  Sherman Recital Hall

Session I Moderator:
Professor Cynthia Carr
College of Health and Human Services

9:10 A.M.  INCORPORATING MULTICULTURALISM IN THE CLASSROOM,
Felicia F. Towers and Katy Hisrich*, Early Childhood Education,

9:30 A.M.  ANTI GENDER BIAS CURRICULUM IN EARLY CHILDHOOD,
Marissa Backlin and Katy Hisrich*, Early Childhood Education
College of Education, p. 15.

9:50 A.M.  ANALYZING HOST ABUNDANCE AND CRYPTOSPORIDIUM
SPP. DENSITY IN GREATER CHICAGO AREA, Snehal Chavda
and John Yunger*, Biology, College of Arts and Sciences, p. 16.

10:10 A.M.  MULTICULTURAL COMPETENCE AMONG ILLINOIS SCHOOL
PSYCHOLOGISTS, Kelly Thomas, Candice Robbins, Tenille

10:30 A.M.  Refreshment Break
Session II Moderator:

Dr. Francis Kostarelos
College of Arts and Sciences


11:00 A.M. GENDER AND SEX ISSUES IN E-CIGARETTE ADVERTISEMENTS: A SEMIOTIC ANALYSIS THROUGH A HEGEMONIC MASCULINE LENS, Ahmad Hajhassan and Daniel Cortese*, Anthropology & Sociology College of Arts and Sciences, p. 19.

11:20 A.M. SENSE MAKING: UNDERSTANDING HOW YOU UNDERSTAND THE WORLD, Christopher Brennan and Amanda Athon*, Interdisciplinary Studies, College of Arts and Sciences, p. 20.

11:40 P.M. QUANTITATIVE ANALYSIS OF ACETAMINPHEN BY Q-NMR (QUALITATIVE NUCLER MAGNETIC RESONANCE TECHNIQUE) AND COMPARISON OF TOPSPIN AND MESTRENOVA SOFTWARE, Michael Villanueva, Joseph Zuklic, and Shailendra Kumar*, Chemistry, College of Arts and Sciences, p. 21.

12:00 P.M. EXPLORATIVE SELF PORTRAIT, Ashieka Daniels and Jeff Stevenson*, Mixed Media, College of Arts and Sciences, p. 22.

Conference Lunch

Center of Performing Arts Stage

12:20 P.M.

Greetings
Dr. Debra Bordelon, Provost

Lunch

1:00 P.M.

Keynote Speaker

Dr. Peter Gena, Ph. D.
Department of Art and Technology
The School of the Art Institute of Chicago, Chicago, IL

Speaking on:

DATA SONIFICATION: A COMPOSER PREREQUISITE
Poster Presentations
1:50 P.M. E-Lounge
Moderator:
Dr. Mohanty Praggyan
College of Business and Public Administration


2. EFFECTS OF LAND USE CHANGES ON BUTTERFLY DIVERSITY OF EARLY SPRING IN NORTHEASTERN ILLINOIS, Rachel Avelis and Xiaoyong Chen*, Biology, College of Arts and Sciences p. 25.


4. SYNTHESIS AND EVALUATION OF A FOLATE TARGETED TOPOISOMERASE INHIBITOR, Enrique Camacho, Salvador Alcantar and Walter Henne*, Chemistry, College of Arts and Sciences, p. 27.

5. GLUCOSE METERS IN THE CLASSROOM: BLOODLESS SUGAR TESTING, Heather Sutton, Muna El-Natour, Corey Perry, and Dr. Karen D'Arcy *, Chemistry, College of Arts and Sciences, p. 28.

2:30 P.M.

Certificates Presentation

2:40 P.M.
Concluding Remarks
Dr. Shelly Kumar
ABSTRACTS OF PODIUM PRESENTATIONS

April 28, 2015

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The authors with underlined names are the presenting authors. The authors with asterisks are the faculty sponsors.

Governors State University
University Park, Illinois
INCOPORATING MULTICULTURALISM IN THE CLASSROOM

Felicia F. Towers and Katy Hisrich*

Early Childhood Education
College of Education

ABSTRACT

Today our society is a melting pot of cultures and there are growing controversies over racial tensions. Are teachers doing their part to promote an environment that supports an awareness for all cultures? Diversity is something that needs to be taught to students at a young age. If we can work to teach students about different cultures early in life, than we could hopefully prevent cases of prejudice and bullying later in their lives. It is important that we learn to incorporate multiculturalism into our classrooms, so that all students can feel welcome. In becoming an effective instructor, teachers need to consider things like cultural values and how they will affect the students' academic career. For instance, in some cultures it is okay for one person to do the majority of the work and the work of their peers who are struggling. To the untrained eye it may appear that these students are cheating, but to the teacher who understands the cultural differences, they will be able to take this situation and use it as a learning experiences for their students. There are many supports available for teachers who need to find ways to make their classroom an experience for all cultures. A successful teacher will work to incorporate more culture than Black history month, and Cinco de Mayo. At the end of the day, our goal should be to use differences as learning experiences and to also teach children to celebrate them. When we teach our children about multiculturalism, we prepare them for the differences that they will encounter on their walk through life.
Gender bias is very common in the classroom. It is both implicit and explicit. This presentation, based on NAECY’s anti bias curriculum, is geared toward eliminating both implicit and explicit bias towards both boys and girls in Early Childhood. Gender bias is as simple as only complimenting girls on their attire and allowing children to say that certain dramatic play costumes are for certain genders. Teachers must also shy away from books that uphold traditional gender roles, such as stay at home mothers and male doctors. Besides navigating gender bias in the classroom, teachers must tread with caution with parents, as there are parents that have trouble seeing the problem with their gender bias. While compromise is ideal, teachers must know where the bottom line is. Teaching children to see the world without a gender bias is part of the ultimate goal to true understanding and acceptance.
ANALYZING HOST ABUNDANCE AND CRYPTOSPORIDIUM SPP. DENSITY
IN GREATER CHICAGO AREA

Snehal Chavda and John Yunger*
Biology
Division of Chemistry and Biological Sciences, CAS

ABSTRACT

Among the many zoonotic diseases, cryptosporidiosis is often of high importance because of its prevalence in industrialized countries. Reported cryptosporidiosis cases per 100,000 population ranged from 4.3 in 2009 and 6.4 in 2010 for the Midwest USA. Traditionally, aquatic mammalian hosts such as beaver are recognized as primary vectors for Cryptosporidium; however, recent studies have suggested that terrestrial small mammals may be important Cryptosporidium hosts. Environmental changes, natural or through human intervention, alter ecological interactions and host-parasite dynamics. Habitat fragmentation alters wildlife host-parasite relations with a tendency towards higher infestation rates in fragmented areas. We predict that host-parasite abundance will fit either a logistic or exponential deceleration model. Four different landscape types were identified from the Greater Chicago region: urban, suburban, agriculture, and rural. Within each landscape type, two oak woods were sampled. Four standardize transects were set in the eight woods to estimate small mammal abundance. A total of 198 individuals were captured during the fall of 2014, with the highest small mammal abundance in the urban region, followed by rural, agricultural, and suburban landscapes. Peromyscus leucopus (white-footed mouse) accounted for 97% of the captures. The high urban density is likely due to provision of food resources by humans and a reduction in predation intensity in urban areas. Fecal material collected from P. leucopus will be analyzed for the presence of oocysts and densities calculated using TaqMan real-time PCR assay. Positive samples will be sent to Centers for Disease Control and Prevention for the genomic analysis of the parasite to determine the prevalent existing strains and possible evolution of emerging strains.
MULTICULTURAL COMPETENCE AMONG ILLINOIS SCHOOL PSYCHOLOGISTS

Kelly Thomas, Candice Robbins, Tenille Wallace, and Mazna Patka*

Psychology
Division of Psychology, COE

ABSTRACT

School psychologists are trained to provide a variety of services such as assessment, diagnosing, prevention, and program development and evaluation. Just as the tasks of school psychologists are varied, so are the populations they serve. Delivering effective services to diverse populations of children and families is one of the hardest and most important tasks of school psychologists. Failing to understand the difficulties of a child or family in a culturally sensitive manner causes harm to the child and family. While school psychologists must be able to effectively work with diverse populations, multicultural competence has not been empirically assessed among school psychologists.

As research assistants, we have engage in various research processes. We found and examined current literature on multicultural competence among school psychologists, identified existing measures of multicultural competence, and generated a list of all school psychologists in Illinois. Our study is currently under IRB review, and we anticipate data collection beginning in May of 2015. Our presentation will describe the work we have completed, future steps (e.g., data collection, analysis, and dissemination), and our professional development as student researchers.
WOMEN'S LEADERSHIP SYMPOSIUM: A MIXED METHODS ASSESSMENT OF PSYCHOLOGICAL EMPOWERMENT

Candice Robbins and Mazna Patka*

Psychology
Division of Psychology, COE

ABSTRACT

Psychological empowerment (PE) focuses on empowerment at the individual level and refers to individuals' capacity to have control and make choices regarding their personal life (Israel, Checkoway, Schulz, & Zimmerman, 1994), which includes self-efficacy, participatory behavior, and motivation to exert control over personal, educational and career goals (Zimmerman, 1990). However, PE is contextual, therefore programs that aim to increase levels of PE vary depending on the context. Since processes vary between contexts, it is important to measure the effect of processes to determine if a given process is effective.

Utilizing an integrated methods research design, I assessed if the PE of Women's Leadership Symposium (WLS) attendees experienced elevated levels of PE after participating in the WLS. Approximately three months after the WLS, I interviewed 5 attendees to learn more about their experience with the WLS and PE. Once I analyzed the data identified common themes that emerged from participant interviews. The distinct contribution and implications of my findings will also be discussed.
GENDER AND SEX ISSUES IN E-CIGARETTE ADVERTISEMENTS: A SEMIOTIC ANALYSIS THROUGH A HEGEMONIC MASCULINE LENS

Ahmad Hajhassan and Daniel Cortese*

Anthropology & Sociology
Division of Liberal Arts & Sciences, CAS

ABSTRACT

This paper used a semiotic analysis to analyze gender & sexuality in E-cigarette advertisements. Hegemonic masculinity became apparent to understand how E-cigarette advertisements sell products. I also used symbolic interaction to create meaning out of the symbols provided through e-cigarette advertisements. Male-dominance is portrayed within the advertisements, as the lens of hegemonic masculinity coincides and is parallel throughout most of the ads. Females are sexually objectified and anatomically used through objects to sell and appeal consumers in E-cigarette advertisements. Eroticization of both male and female subjects became another vital component upon semiotically analyzing E-cigarette advertisements. Findings portray E-cigarette advertising uses hegemonic masculinity, objectification, and eroticization affecti.
SENSE MAKING: UNDERSTANDING HOW YOU UNDERSTAND THE WORLD

Christopher Brennan and Amanda Athon*

Interdisciplinary Studies
Division of Humanities and Social Science, CAS

ABSTRACT

"Sense Making: Understanding How You Understand the World" is an oral presentation that describes the interdisciplinary intersection of psychology, philosophy, and physics as it relates to our ability to make sense of our world using John Boyd’s Observe, Orient, Decide, Act Loop (OODA Loop) model of decision making. The presentation introduces the audience to the model and outlines key elements from the above disciplines to explain how our Orientation both shapes, and is shaped by genetic heritage, cultural traditions, previous experience and our access to new information to enable us to analyze and synthesize information to make decisions.

This model is one I have instructed firefighters in using, and have written about extensively for the last decade. My current research brings the model into focus as a tool for understanding and refining decision making for people from all walks of life.
QUANTITATIVE ANALYSIS OF ACETAMINPHEN BY Q-NMR (QUALITATIVE NUCLEAR MAGNETIC RESONANCE TECHNIQUE) AND COMPARISON OF TOPSPIN AND MESTRENOVA SOFTWARE

Michael Villanueva, Joseph Zuklic, and Shailendra Kumar*

Chemistry
Division of Chemistry and Biological Sciences, CAS

ABSTRACT

The pharmaceutical industry mainly uses chromatographic techniques such as High Performance Liquid Chromatography (HPLC) and Gas Chromatography (GC), to determine the quantity of the active ingredient and other material in the drugs. A large effort goes into developing methods using chromatography techniques. The method development and running HPLC and GC are time consuming. Methods need to be updated as the chromatographic columns and the instruments wear out. On the other hand, Nuclear Magnetic Resonance (NMR) technique is mainly used for qualitative analysis to determine the identity of compounds. However, Proton-NMR technique does provide quantitative information of compounds. In order to develop a method for quantitative analysis by NMR (q-NMR), an internal standard of known concentration is utilized. A method was developed successfully to quantify acetaminophen in our laboratory by q-NMR using TopSpin software. Calibration curves of the areas of NMR signals and the concentrations were drawn which showed linear relationships from 1mM – 100 mM concentrations. The robustness of the method was shown by analyzing samples in quintuplet with very low percent standard deviation.

In this project, the method developed earlier is repeated to show the robustness of the method by taking NMR in septuplicate and integrating the three peaks of interest in septuplicate. Solutions of acetaminophen with concentration range of 10 mM – 100 mM were prepared in a solvent system in which ethanol as internal standard was dissolved in deuterated dimethylsulfoxide (DMSO-d6). NMR of these solutions were taken in septuplicate. Averages of peak areas of NMR spectra were determined in septuplicate by Mestrenova software, and were plotted against the concentrations of the solutions. The Mestrenova software with its automation feature for integration of peaks allowed a large number of integration automatically. The results are very similar to the ones obtained by the first operator. The plots with linear with excellent regression and even lower percent standard deviations obtained by the first operator, indicating that this NMR method is a robust alternative method for quantification of acetaminophen and Mestrenova software is a viable option for the TopSpin software.
EXPLORATIVE SELF PORTRAIT

Ashieka Daniels and Jeff Stevenson*

Mixed Media
Division of Fine Arts, CAS

ABSTRACT

I will be presenting a body of work that exhibits my evolution as an art student. I chose to title my presentation "Explorative Self Portrait" because these works represent my thoughts and idea of beauty. I am very passionate about being true to who I am as an artist and find it refreshing to explore new mediums. I find joy in the ability to learn techniques with one medium such as printmaking that can crossover to ceramics. My presentation includes history on myself, my return to academia, and my most current works from the past two years. As an artist I explore various tools, materials and mediums in a quest to find my authentic identity. Ever since I was a little girl I loved to work with my hands and use my imagination to create. I carry that same innocence, joy and love into my artwork in what I consider "play time". I have created many of my pieces through a process of exploration, trial and error. I have found that even my mistakes teach me more than I would have learned by not attempting an idea. I enjoy the journey that I take with my artwork from concept to completion. My process is quite the experience and I go through a range of emotions before the piece is complete. At times I start with a concept and at other times I release myself from any preconceived ideas and intuitively go for it! I truly have a relationship with each of my pieces; they are like small extensions of myself. During the process of creating sometimes I love what coming through my artwork and at other times I don't. I have learned that this love hate relationship is part of my process. Not only until my eye is pleased and my heart says "yes" is my artwork complete. When people view my artwork it is my desire that it engages them. Every color and every brush stroke has a meaning. My hope is for the observer to become one with the observed. My artwork should awaken something within the spectator that causes them to pause and reflect. Inspirations for these pieces are influenced by my life experiences. The idea for this theme came through a challenge to express myself in a new and unique way. "Explorative Self Portrait" is a combination of texture, shape, form, and line. As I move across different mediums I discover new ways to express myself. Just as a diamond has many facets the same holds true for us as human beings. One color couldn't describe me, one stroke couldn't reveal all of who I am.
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Governors State University
University Park, Illinois
AN INQUIRY-BASED PROJECT IN THERMODYNAMICS: ENTHALPY OF
VAPORIZATION OF AQUEOUS SODIUM CHLORIDE SOLUTIONS

Daniel Dandurand, and Joong-Won Shin*

Chemistry
Division of Chemistry and Biological Sciences, CAS

ABSTRACT

This inquiry-based project is developed based on the conventional boiling-point method for determining the enthalpy of vaporization of a pure liquid. Presented is a combined experimental and mathematical approach for determining the enthalpy of vaporization of aqueous sodium chloride solutions. A broad range of concentrations are explored, and experimental data is interpreted with a mathematical model, quantifying the effect of ionic interactions in water using a simple apparatus that is widely available.
EFFECTS OF LAND USE CHANGES ON BUTTERFLY DIVERSITY OF EARLY SPRING IN NORTHEASTERN ILLINOIS

Rachel Avelis and Xiaoyong Chen*

Biology
Division of Chemistry and Biological Sciences, CAS

ABSTRACT

Anthropic modification of the Earth's surface directly affects wildlife habitat. Conversion of land from natural cover types to other uses influenced by humans typically results in habitat loss, degradation and fragmentation, all of which can have differing effects on biodiversity. Butterflies are essential pollinators for many plant species and should serve as good indicators of the ecological changes caused by human alterations to land use and land cover. Illinois was once covered by tall grass prairie. Today, much of the landscape has been fragmented by urban sprawl and agricultural development. Although some field surveys have been and still are performed to determine butterfly species and abundance in Illinois, those works were done during the summer and autumn; few or none were found to be carried out in early spring. Because of the data gap during this specific seasonal period, it is hard to tell if the butterfly counts conducted by local and state butterfly monitoring groups comprise a complete survey. In order to paint a bigger picture, this study aims to quantify butterfly richness and diversity in several land use types in northeastern Illinois in springtime. Four land use types were selected in each of the following areas: northeastern Will County (University Park, Monee and Park Forest), central Champaign County (Urbana), and central Kankakee County (Bradley and Bourbonnais). The four land use types surveyed for butterflies were agricultural land, forest land, grassland and residential land. A modification of the Pollard walk method was used to collect data. In addition, data was only collected under conditions more favorable to seeing adult butterflies in flight. The weather and habitat conditions were recorded at each visit to the study sites. The data obtained in this study may contribute to the existing body of butterfly population data and may be used in conjunction with additional data to inform conservation managers.
ABSTRACT

The Taste of a Place is a multimedia installation comparing visual and aural memories of my hometown in Spain to my new home, Chicago. The installation is designed as a sensory experience consisting of video, audio, photography, and smell. The project is currently in development in Spring 2015, MCOM 4700 Independent Study. My main thesis is that home does not exist as a place, home is a culmination of our memories and I explore the idea that we can feel at home hundreds miles away from their hometowns. When I started to think about this project I looked at myself as an example trying to analyze what sensory elements make me feel I am at home. After conducting research and interviews with others living in the Diaspora, I realized that memories were the key, memories such as: a smell, place or sound that has the capacity to bring you home. This poster presentation consists of a sample of research, including photographic elements that compose the installation.

The concept of home and how people have interpreted the idea of ‘home’ have a long history in scholarship and forms the research foundation of this installation. The books The Smell Report by Kate Fox, explores the concept of national personification through our sense of smell. The oral histories captured in Begin My Life All Over: The Hmong and the American Immigrant Experience by Lillian Faderman Professor and Ghia Xiong guide my construction of media representation of memory, longing, and discovery. To support my knowledge of developing the technological aspects of the installation, I referenced the work of Mickalene Thomas “Something You Can feel,” Yayoi Kusama’s “The Souls of Millions of Light Years Away,” Bruce Nauman (Exposition Art Institute of Chicago) and A.K. Dolven (Exposition Art Institute of Chicago).

With this project, The Taste of a Place, I offer an audience the opportunity to discover what Chicago and even Spain could mean to them using only their own senses as their eyes. This is the whole meaning of my project: personal experience of a place through the senses.
SYNTHESIS AND EVALUATION OF A FOLATE TARGETED TOPOISOMERASE INHIBITOR

Enrique Camacho, Salvador Alcantar and Walter Henne*

Chemistry
Division of Chemistry and Biological Sciences, CAS

ABSTRACT

A folate receptor targeted, topoisomerase II inhibitor was synthesized using a hydrophilic peptide spacer linked to folate via a releasable disulfide carbonate linker. The SMDC (small molecule drug conjugate) was purified and analytically confirmed via high performance liquid chromatography and high performance liquid chromatography-electrospray ionization mass spectrometry. This study represents the first report of a folate guided topoisomerase II inhibitor delivered as a small molecule drug conjugate. Future studies, including cytotoxicity and radioactive binding assays, will be undertaken in collaboration with our industry and university partners.
GLUCOSE METERS IN THE CLASSROOM: BLOODLESS SUGAR TESTING

Heather Sutton, Muna El-Natour, Corey Perry, and Dr. Karen D'Arcy *

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ABSTRACT

The blood glucose monitor has the potential to be an excellent learning tool for both high school and undergraduate chemistry students in that it is both relevant and relatable. The problem however lies in the methodology for testing as it poses a health hazard to utilize these instruments in their usual manner in a classroom setting. Tear samples have been recommended as an alternative to blood samples however acquisition of tears poses its own challenges. Experiments performed with multiple branded test meters along with known concentrations of glucose solutions and serial dilutions of sports drinks has demonstrated a lack of correlation in repeated measurements and between test meters. Therefore development of a suitable experiment to facilitate learning is ongoing.
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