

Symposium on University Research and Creative Expression (SOURCE) 2016

New York Institute of Technology

Dear NYIT Faculty, Staff, Students, and Friends:

Welcome to the Thirteenth Annual SOURCE of NYIT!

Creative expression and research with faculty members have become integral parts of a student's educational experience at New York Institute of Technology. The SOURCE is intended to provide a unique opportunity for students to present their research and creative scholarly work in collaboration with their faculty members and mentors. The SOURCE also generates a common ground for interdepartmental, interschool, and interdisciplinary communication.

I am very pleased to inform you that 44 abstracts were accepted for presentation and more than 123 undergraduate and graduate students of NYIT, representing almost all campuses, schools and colleges, have authored or co-authored these abstracts. The depth and breadth of the projects are strong indications of the quality of our teaching and learning at NYIT. I would like to take this opportunity to congratulate all the students for their academic excellence at NYIT.

Many individuals in the NYIT community have worked on the event diligently to make it a success. I would like to extend a very special thank you to all the students, faculty, administrators and volunteers who assisted with the preparation, management, and operation of SOURCE.

Sincerely,

Dr. Roger Yu, Chair
SOURCE Committee

***Symposium on University Research and Creative Expression (SOURCE) 2016
Program***

10 - 10:20 a.m.	REGISTRATION and BREAKFAST 16 W. 61st St., 11 th floor
10:30 - 11:30 a.m.	EXHIBITION HALL 16 W. 61st St., 11 th floor
11:30 - 11:45 a.m.	LUNCH 16 W. 61st St., 11 th floor
11:45 a.m. - 12:45 p.m.	PANEL DISCUSSION <i>“The Interface Between Arts and Sciences”</i> Keynote: Ahna Skop, Associate Professor of Genetics & Life Sciences Communication, University of Wisconsin-Madison, <i>“Too Creative for Science?”</i> Respondents: Kevin LaGrandeur, Professor, English, NYIT; Terry Nauheim, Associate Professor & Chair, Fine Arts, NYIT; Ana Petrovic, Panel Moderator, Assistant Professor, Life Sciences, NYIT; Mathew Ford, Assistant Professor, Architecture & Design, NYIT 16 W. 61st St., 11 th floor auditorium
1 - 3 p.m.	BREAKOUT SESSIONS 16 W. 61st St., multiple room locations
3:30 - 4 p.m.	REMARKS, CERTIFICATE PRESENTATION, GROUP PHOTO NYIT President Edward Guiliano 16 W. 61st St., 11 th floor auditorium

Breakout Sessions 1 - 2 p.m.	7th Floor Room 723 Moderator: Blair Hoplight	8th Floor Room 822 Moderator: Kevin LaGrandeur	10th Floor Room 1026 Moderator: Terry Nauheim
1 p.m.	“ChemBioDraw 14 Graphic Art Software: Construction of 2D Images of Right-Handed B-DNA Microarray Prototypes”	“Better Higher Level Education in the United States”	“The Chinese Consumers’ Perception Affecting Behavior Intention to Use Mobile Education Applications”
	Nabila Siddiqui, Jess Chacko	Tiffany Montoya, Ana Robakidze, Xiaoyue Che	En Li
1:15 p.m.	“Major Factors that affect Stress Levels”	“Darknets: Crime and Warfare in the Cyber Space”	“Rolling at NYIT”
	Ashley Butera, Michael Chimenti, Ryan Brunet, Disha Devdas, Dixon Marble	Rafael Martinez	Yiqun (Richard) Li
1:30 p.m.	“Student Sleep and Impulsive Behavior”	“Tetra Hand”	“Analysis on WordPress”
	James Kelly, Jonathan Costa, Josephine Santagata, Alfredo Vasquez, Jiaye Yao	Steven Patrikis	Suhail Rafiuddin
1:45 p.m.	“Perception of Tattoos in the Workplace”	“College Debt: Analyzing Investment in Education in the United States of America”	“Texting While Walking”
	Kelli Walter, Michael O’Hora, Alexander Seltzer, Patrick Bonacum, Robert Fiato	Ana Robakidze	Tiy-Chereigna Neufville, Ai-Lin Tung, Rebecca Helene Liwer, Joji Kusunoki, Sophie Durand

Breakout Sessions 2 - 3 p.m.	7th Floor Room 723 Moderator: Blair Hoplight	8th Floor Room 822 Moderator: Kevin LaGrandeur	10th Floor Room 1026 Moderator: Terry Nauheim
2 p.m.	“The Role of Name Discrimination in Job Procurement”	“Creating a Safe and Secured USB Manager”	Starbucks's Coffee Commercial, “Bringing Friends Together” and Metro Cafe's Coffee Commercial, “Metro Café Wakes You Up”
	Jeanine Masih, Jenna Campanella, Jessica Arguera, Alonzo Paulino, Palak Golwala	Zecheng Wang, Yangu Zhou, Shi Yuxuan, Ren Xudong, Qiao Zhu	Pakkaporn Chatthaworn, Tomader Alrehaili, Delphine Maillot, Yasmeen Hejazi
2:15 p.m.	“Traditional vs. Online Dating”	“Targeted Advertising and Demand Side Platform: Who is Peeping into Our Privacy?”	“The Zero-Sum Game: A Feminist Perspective”
	Kesi Goree, Angelica Rakowicz, Amit Patel, Muqadas Babar, Rainelly Abreu	Peidi Xu, Peng Huang, Biao Huang	Maylan Studart
2:30 p.m.	“Identification of Cancer Associated Missense Mutations that relate to Colorectal Cancer in Caspase-7 & Lung Cancer in Caspase-6 and their Potential Impacts on Cancer Progression and Treatment”	“Guarding Chinese Internet Wallet”	VR Film Project "Tree of Life"
	Marwan Hamed, Sharif Zaher	Liliang Chen, Siyuan Tang	Yifeng Miao, Duo Wang, Linjie Xia
2:45 p.m.	“Effects of Video Games and Aggressive Behavior”	“Improving Daily Life with Big Data: Make the Taxi System More Efficient”	“Parametric Design: An Architectural Forthcoming”
	Thomas Znack, Theodore Hamlin, Katie Hudson, Timothy Milligan	Yuchen Pang, Zhicheng Jin, Qiang Luo, Di Hu	Nicholas Soniprasad

Exhibition Hall
16 W. 61st St., 11th floor

<p style="text-align: center;">“Influence of Breast and Cervical Cancer Screening Guidelines on Physicians Based on Race and Socioeconomic Status”</p>	<p style="text-align: center;">Pooja Bhargava</p>
<p style="text-align: center;">“Development of the Right-Handed Double-Stranded B-DNA Molecule Model using the MakerBot Replicator 2X Experimental 3D Printer”</p>	<p style="text-align: center;">Rida Javaid, Imran Ahmed, Fozia Syed, Moumita Khondaker</p>
<p style="text-align: center;">“Source Code Analysis of FM Radio App”</p>	<p style="text-align: center;">Lijia Dong, Qiao Ding</p>
<p style="text-align: center;">“A Dream within A Dream”</p>	<p style="text-align: center;">Duo Wang, Yifeng Miao</p>
<p style="text-align: center;">“Commercialization of Next Generation DNA Microarrays: Double-Stranded B-DNA Prototypes”</p>	<p style="text-align: center;">Sophia Ahmad, Stephanie Sawyer</p>
<p style="text-align: center;">“M+A MedPatch-Life Saving”</p>	<p style="text-align: center;">Emily Sun, Biqian Sun, Charles Chan, Morgan Friedlander, Leon Doleon</p>
<p style="text-align: center;">“Neurovascular Calcification in a New Mouse Model”</p>	<p style="text-align: center;">Mohammad Bilal Khan, Elias Kampton, Yevgeniy Mayr</p>
<p style="text-align: center;">“Genotyping the X Chromosome to Identify Paternal Sisters in Wild Blue Monkeys”</p>	<p style="text-align: center;">Stephen Pu, Nathan Ren, Marya Mozumdar, Diane Moya</p>
<p style="text-align: center;">“Overview and Management of Giant Malignant Phyllodes Breast Tumor”</p>	<p style="text-align: center;">Amanda Carter, Matthew Cardinale</p>
<p style="text-align: center;">“Chiral Switching of a Molecular Tweezer upon Complexation with Achiral Diamines”</p>	<p style="text-align: center;">Diego Orazi, Swetha Alluri, Theano Dimitrakis, Emmayhony Mohammad, Marcelo Vargas, Ahmed Aladarous, Donald Chen, Nadir McCoy</p>
<p style="text-align: center;">“The Role of Dance for Osteopathic Medical Students”</p>	<p style="text-align: center;">Kalle Yee, Carolyn Kwa, Sara Valentino</p>
<p style="text-align: center;">“Resolution & Chiroptical Identification of Chiral Crystals: the Case-Study of NaClO₃”</p>	<p style="text-align: center;">Mohammed AlGarni, Malina Mohtadi, Favour Akinjiyan</p>
<p style="text-align: center;">“Cell-Specific Gene Therapy for the Treatment of Glaucoma”</p>	<p style="text-align: center;">Erum Ahmed</p>

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“Character Modeling and 3D Printing”	Stephen Solano
“Modeling of Suspended Magnetic Particle Motion via Ferromagnetic Domain Structure Manipulation for Bio-Medical Applications”	Muhammad Ahsan
“Promoting Primary Care Progress through Student Engagement and Clinical Innovation Workshops”	Carolyn Kwa, Rebecca Grohman, Jonathan Katz, William Wong, Benjamin Lieberman, Susannah Gemberling, Shannon Moriarty
“The Envisioned Application of Classroom High-Tech 2.0”	Asad Richardson
“Tetracyclines Disturb Mitochondrial Function across Eukaryotic Models: A Call for Caution in Biomedical Research”	Matthew Skalski
“Alexander Hamilton Library”	Harish Armogan
“Chemoprevention of Colorectal Cancer Using Natural and Modified NSAID’s”	Ajit Aryal

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10:30 - 11:30 a.m.

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- “Development of the Right-Handed Double-Stranded B-DNA Molecule Model using the MakerBot Replicator 2X Experimental 3D Printer”
By: Rida Javaid, Imran Ahmed, Fozia Syed, Moumita Khondaker
- “Source Code Analysis of FM Radio App”
By: Lijia Dong, Qiao Ding
- “A Dream within A Dream”
By: Duo Wang, Yifeng Miao
- “Commercialization of Next Generation DNA Microarrays: Double-Stranded B-DNA Prototypes”
By: Sophia Ahmad, Stephanie Sawyer
- “M+A MedPatch-Life Saving”
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Influence of Breast and Cervical Cancer Screening Guidelines on Physicians Based on Race and Socioeconomic Status

Student Name: Pooja Bhargava
Faculty Mentor: Sharon Koehler
Department: Clinical Sciences, Medicine, College of Osteopathic
Medicine

A survey created by the National Cancer Institute for physicians was used to assess the awareness of breast cancer screening in the Black/Latino population and high/low socioeconomic status. The objective was to evaluate the association between breast cancer screening guidelines in Black/Latino populations and in high/low income areas.

The research protocol was approved by NYCOM/NYIT IRB. The survey created was sent out electronically through Survey Monkey to members of primary care specialties including ACOFP, NYCOMEC, NYSOMS, and alumni database of NYIT-COM in which data was collected from June-December 2013. A total of 129 entries were included to assess breast cancer screening guideline recommendations. All statistical analyses were done using IBM SPSS Statistics 22.

79.5% (n=66) of physicians in high-income areas and 55.6% (n=25) of physicians in low-income areas found the BSE effective (p=0.00). In Black/Latino populations, 64.1% (n=25) of physicians in high-average areas and 81.1% (n=73) of physicians in low-average areas found USPSTF guidelines influential (p=0.04). 51.3% (n=20) of physicians in high-average areas and 70.0% (n=63) physicians in low-average areas found ACP guidelines influential (p=0.04). 88.0% (n=73) of physicians in high-income areas and 69.6% (n=32) of physicians in low-income areas found the ACOG guidelines influential (p=0.01). 13% (n=3) of physicians in Black/Latino populations above and 0% (n=0) of physicians below the national average (p=0.02) recommended mammography for healthy 80 year-olds, with 0% (n=0) of physicians in high-income areas and 11.1% (n=3) of physicians in low-income areas (p=0.04) recommending the same.

BSE was effective in reducing breast cancer mortality in the average-risk woman in both income areas. Guidelines by USPSTF were more influential in Black/Latino populations below the national average, where as ACP guidelines were less influential in populations above. Guidelines from ACOG were more influential in high-income areas. Fewer physicians recommended the mammography screening in asymptomatic 80 year-olds in Black/Latino populations above/below the national average and both income populations.

Development of the Right-Handed Double-Stranded B-DNA Molecule Model using the MakerBot Replicator 2X Experimental 3D Printer

Student Names: Rida Javaid, Imran Ahmed, Fozia Syed, Moumita Khondaker
Faculty Mentor: Claude Gagna
Department: Life Sciences, College of Arts and Sciences

DNA Microarrays are sophisticated molecular, biological tools that can be used by researchers to study the expression of normal and abnormal genes. The first generation of DNA microarrays is based on hybridization, namely gene expression studies. The Gagna/NYIT patent represents the next generation of DNA microarrays, i.e., intact, unaltered, alternative DNA microarrays (e.g., left-handed Z-DNA), and multi-stranded DNA and RNA microarrays (e.g., quadruplex DNA). These next generation DNA and RNA microarrays can be employed for drug discovery and development, and characterization of gene structure and function. As part of Dr. Claude Gagna's Biomedical Research II class (Spring 2016), NYIT undergraduate students independently learned how to transfer the 2D images (i.e., obtained from ChemBio14 software) to the 3D MakerBot software to construct visual pictures of what molecules look like on paper in the 3D perspective. This particular project, involves the use of a 3D printer, with the generous help of faculty, staff and students (i.e., School of Engineering: Dr Xun Yu) to actually create the physical models of the DNA microarray prototypes, used as part of the next generation of DNA microarrays. Employing both 2D graphic art software, and physical 3D models of particular types of double-stranded and multi-stranded DNA, we will be able to better understand the chemistry (e.g., intercalators, minor groove binders and major groove binders), and molecular biology of how drugs and biologicals (e.g., therapeutic monoclonal antibodies, therapeutic nucleic acid binding proteins) interact with intact, unaltered DNA.

Source Code Analysis of FM Radio App

Student Names: Lijia Dong, Qiao Ding
Faculty Mentor: Sonali Chandel
Department: Electrical and Computer Engineering, School of Engineering and Computing Sciences

In 2008, the first Android-based smart phone came into people's eyes. Followed by subsequent improvements, Android became the most well-used operating system in smart phones. However, with its dispersal, more and more problems came to light. Has your phone quickly run out of battery? Has it used mobile data so quickly? Have you doubted if some applications are consuming battery and data? Well, we also doubted this and put effort into it. Problems arise when applications consume data rapidly. Maybe the applications or the companies behind them are doing something secretly. Additionally, in China, data is very expensive and precious. If true, our consumer trust has been violated. Taking the gravity of the problem into account, we decompiled an application. We chose an application for listening to music, which has high DAU (Day Active User), even though it faces the fierce competition from similar products. From reading the source code, we are shocked at the fact that the application has counterfeit DAU and ad views generated by malcode which leads to running down the smart phone's battery and mobile data. In effect, the malcode repeatedly clicks the displayed advertisements to generate ad views, using data and memory in the process. The reason for fraudulent DAU is to obtain more money from advertisers and appeal to an increasing number of investors. Due to this clever trick and the lack of professional knowledge, the ordinary users and investors rarely perceive their deception. Through our research project, we aim to tell people that we have to be confident before we choose applications and share data through it. As the company developing the application, their action has a bad effect on the IT industry, not only tricking investors, but also infringing on consumer trust. For the user, we must choose the applications carefully. If we find that the application uses data exceptionally, we should uninstall it. What's more, it is a good choice that we disclose companies's tricks and appeal to users to protect their rights.

A Dream Within A Dream

Student Names: Duo Wang, Yifeng Miao
Faculty Mentor: Robert Smith
Department: Fine Arts, College of Arts and Sciences

This project is to create a 2 minute long Virtual Reality creativity of a storytelling-based short CG interactive product, which contains both immersive 360 videos and interactions with the story. The main purpose of this project is opening our eyes to Virtual Reality, as a future technology, by learning and creating Virtual Reality content. Basically, it contains two parts: learning part and making part. For the learning part, we are going to visit top VR companies and attend a VR/AR conference in Los Angeles, as the leading area in the world, to learn the newest technology of VR. For the making part, we are going to watch online tutorials and participate in VR workshops to promote our skills.

Commercialization of Next Generation DNA Microarrays: Double-Stranded B-DNA Prototypes

Student Names: Sophia Ahmad, Stephanie Sawyer
Faculty Mentor: Claude Gagna
Department: Life Sciences, College of Arts and Sciences

NYIT is working with the Arrayit Corporation (Sunny Vale, California 94085) to produce prototypes of the next generation DNA microarrays (i.e., B-DNA, Z-DNA and quadruplex DNA microarrays). Novel DNA and RNA microarrays have been developed that allow for the immobilization of intact, alternative [e.g., left-handed double-stranded (ds-) Z-DNA], and multistranded nucleic acids [e.g., triplex DNA and quadruplex DNA]. They also allow for the study of transitional changes that occur in the structure of DNA and RNA [e.g., B-DNA to Z-DNA back to B-DNA]. Alternative types of DNA, RNA, and multistranded nucleic acids are immobilized by a variety of different surface chemistries onto substrate supports, using microarray products from the Arrayit Corporation. Some of the Arrayit microarray substrate and slide products were: A. SuperAmine, SuperAmine 2, and SuperAmine 2 Low Density. B. SuperAldehyde, and SuperAldehyde 2 microarrays. C. SuperEpoxy, and SuperEpoxy 2 DNA microarrays. The novel DNA microarrays were fabricated by the Arrayit Corporation in conjunction with Dr. Gagna's instructions (i.e., based on the Gagna/NYIT patent: U.S. 6,936,461 B2. 2205) using the Arrayit SpotBot® 4. This is one of the worlds most advanced microarraying systems for immobilizing DNA molecules. SpotBot® 4 System Specifications and Features: - Printhead permits precision pin guidance for precise rows and columns -Four printing pins configured in a 2 x 2 pattern at 4.5 mm spacing -Axis resolution and repeatability $\pm 10 \mu\text{m}$ -Deck accommodates 1 microplate (384-wells) -Humidity control option from 10-80% relative humidity -3,600 spots per sub-microarray (9 X 9 mm) -50,400 spots per entire substrate (18 X 63) ->1,000 samples in 6 hours ArrayPix™ Microarray Fluorescence and Colorimetric Plate Scanners: -Scans 96 microarrays in less than 3 min -Number of channels: 2-color fluorescence or single channel colorimetric -Capacity: 4 standard 25 X 76 mm glass substrate slides or 1 microplate -Sensitivity: 0.1 fluors per $2 \mu\text{m}$ and 1,000 fluors per spot -Microarray detection wavelengths: cyanine 3 (550 nm) and cyanine 5 (650 nm) This technology (i.e., novel microarrays) represents the next generation of DNA and RNA microarrays, which will aid in the characterization of nucleic acid structure and function, and accelerate the discovery of new drugs that bind to nucleic acids (e.g., inhibit gene expression). We hope that the generation of these prototypes will help NYIT obtain an STTR – NIH grant.

M+A MedPatch-Life Saving

Student Names: Emily Sun, Biqian Sun, Charles Chan, Morgan Friedlander,
Leon Doleon
Faculty Mentor: Edwin Knox
Department: Management, School of Management

Our company is a medical device company which aims to provide people around the world with a monitor and alert patch (M+A). The patch will serve to monitor several potentially deadly conditions, including cardiovascular disease and stroke, and in case those conditions become severe, will alert emergency services to hopefully save the user's life. The medical device industry has grown rapidly over the past several years, and with much improved processing and memory on various personal devices (computer, smartphones), devices can be made available to more people at far lower cost than before. The company will focus on providing the M+A Med Patch to the people most at risk, and this can extend the lifespan of many people around the world.

Neurovascular Calcification in a New Mouse Model

Student Names: Mohammad Khan, Elias Kampton, Yevgeniy Mayr
Faculty Mentors: Raddy Ramos, Olga Savinova
Department: Basic Sciences, Biomedical Sciences, College of Osteopathic
Medicine

Calcification has been extensively studied in the peripheral vasculature in the context of cardiovascular disease, diabetes, and kidney disease. In contrast, vascular calcification of the nervous system is much less understood and there exist few mouse models. Nervous system calcification such as in Fahr's Disease can be accompanied by cognitive impairment, dementia, and movement disorders; therefore, greater understanding of vascular calcification in the brain has important clinical implications. Recently, Savinova and colleagues (Savinova et al. 2015) described a novel mouse model with peripheral vascular calcification and accompanying cardiovascular defects including increased systolic and diastolic blood pressure. This model utilizes the Cre-loxP technology to overexpress tissue non-specific alkaline phosphatase (TNAP) specifically in endothelial cells (Tie2-Cre mice). In the present report, we use histological methods to describe the development and distribution of brain vascular calcification in this same model. In particular, we demonstrate the presence of calcified vascular lesions in the brainstem, cerebellum, thalamus, and basal ganglia as early as 15 weeks postnatal. Greater numbers of lesions are observed at 25 weeks; however, lesions do not progress to additional brain regions. Overexpression of TNAP in peripheral macrophages and granulocytes with Lyzm-Cre mice produced no phenotype. These data demonstrate that overexpression of TNAP in endothelial cells can cause neurovascular calcification with a specific spatial and temporal profile.

Genotyping the X Chromosome to Identify Paternal Sisters in Wild Blue Monkeys

Student Names: Stephen Pu, Nathan Ren, Marya Mozumdar, Diane Moya
Faculty Mentor: Eleni Nikitopoulos
Department: Life Sciences, College of Arts and Sciences

We tested 10 human oligonucleotide primers in a social group of blue monkeys to establish a panel of microsatellite genetic markers on the X chromosome. Female blue monkeys stay in their natal groups, living with their female relatives throughout their lives. As females inherit an X chromosome from each parent and maternal kin in this group are already known, genotyping the females' X chromosomes will allow identification of full sisters and paternal half sisters. Because of close phylogenetic relationship, all primates share considerable genetic similarity, which allows for cross-amplification of human primers in monkeys and apes. Using extracted DNA from stool samples collected from the ground from a wild blue monkey population in Kenya, we used polymerase chain reaction (PCR) and fragment sizing to screen the ten human primers.

Overview and Management of Giant Malignant Phyllodes Breast Tumor

Student Names: Amanda Carter, Matthew Cardinale
Faculty Mentor: Sharon Koehler
Department: Clinical Sciences, Medicine, College of Osteopathic
Medicine

Cystosarcoma phyllodes is a rare type of breast neoplasia arising from fibroepithelium. It occurs mainly in middle-aged women with a mean age of diagnosis of 51 years. The majority of Cystosarcoma tumors are benign, although they can be malignant. A unique feature of malignant phyllodes tumors is their potential to become massive in size and break through the skin. Also of concern is the potential for local recurrence and distant metastases. Here, we report a case of a 51-year-old Caucasian female who presented to the general surgeon's office with a massive left breast mass measuring about 10 kg and weighing 22 lbs. We discuss the clinical course and management of this tumor. A 51 year old Caucasian female presented with an enlarged left breast mass of 5 years duration with ulcerations that became infected over the last few weeks and draining foul smelling discharge. She presented to the emergency department 2 years prior with spontaneous bleeding from an ulcer on the surface of the breast mass, which was treated with suturing. At that time she was advised to follow up with surgery for excision of breast mass, but failed to follow up. She admits to feeling fatigued and having chest pain. She had no significant past medical history, other than having one child at the age of 14 delivered by C-section who was not breast-fed. She smokes cigarettes and uses snuff. She denies any family history of breast cancer. Physical exam revealed a giant, lobulated, Left breast mass measuring 26 cm and weighing 10 kg. The mass encompassed her entire breast including her nipple areolar complex and had numerous ulcerations with foul smelling discharge. Her remarkable lab values included: microcytic anemia, elevated white blood cell count of 17,051, albumin of 1.8, and an alkaline phosphatase of 312, hemoglobin of 9.4 (low), hematocrit of 27.7 (low). The patient's weight was 56.7 kg and height was 165.1 cm. Axillary lymph nodes were negative. The patient underwent total mastectomy of the left breast with skin flap advancement closure measuring approximately 8 by 24 cm in length. There was significant large subdermal vasculature, requiring a ligasure to ensure hemostasis along the subdermal plane, as well as to create skin flaps for primary closure. The breast was removed from medial to lateral using a combination of cautery and ligasure. Cystosarcoma phyllodes breast tumors are extremely rare (comprising only 0.3 - 0.5% of all female breast tumors), and only a small subset of these tumors are malignant. Due to the rarity of this disease, the role of various treatment options is unclear. Research shows that giant phyllodes tumor (defined as >10 cm) have higher rates of malignancy (25-48%) and recurrence (15-20%), requiring more aggressive treatment. Excision with 1 cm margins is recommended, however obtaining 1 cm margins upon excision is often not feasible with Giant Phyllodes tumors, making treatment challenging.

Chiral Switching of a Molecular Tweezer upon Complexation with Achiral Diamines

Student Names: Diego Orazi, Swetha Alluri, Theano Dimitrakis,
Emmayhony Mohammad, Marcelo Vargas,
Ahmed Aladarous, Donald Chen, Nadir McCoy
Faculty Mentor: Ana Petrovic
Department: Life Sciences, College of Arts and Sciences

The tweezer methodology relies on a stereo-differentiating host/guest complexation between bis-porphyrin tweezer, which acts as a host, and substrate containing two sites of coordination, which acts as a guest. When bidentate coordination proceeds under stereocontrol, a formation of 1:1 host/guest complexes with a preferred inter-porphyrin helicity takes place. While several spectroscopic methods, such as UV-Vis, are commonly used to confirm the complex formation, the most critical chiral (handedness) information derives from ECD chiroptical spectroscopy. The observation of an exciton split CD band within the porphyrin Soret region (~420nm) reveals that in solution prevail host/guest molecules with one preferred sign of chiral twist between the two porphyrins, which determines the sign of the observed exciton CD. The traditional use of the tweezer methodology has been to aid determination of the Absolute Configuration (AC) of the chiral guest upon complexation and subsequent chirality transfer to achiral tweezer host. The exciton CD signal is diagnostic of guest's AC. We will present research that represents a molecular modeling effort to explain and justify induction of chiral switching (change in handedness) upon host/guest complexation between a chiral tweezer and achiral diamines guests of various lengths. The molecular modeling studies, carried-out via newly developed OPLS-3 force field, give insight into the observed chiral switching by providing correlation between the experimental CD and the predicted preferred inter-porphyrin helicity as well as overall geometry of the tweezer complex. This fundamental molecular modeling based research carries relevance as it unveils one route towards controlled, reversible chiral switching. In general, molecular switches which inter-convert between bi-stable states, such a left/right handed chiral states, could prove to serve as memory components for building molecule-based devices.

The Role of Dance for Osteopathic Medical Students

Student Names: Kalle Yee, Carolyn Kwa, Sara Valentino
Faculty Mentor: Reem Abu-Sbaih
Department: Osteopathic Manipulative Medicine, College of Osteopathic
Medicine

Medical students are often excessively stressed, which predisposes them for difficulties in solving interpersonal conflicts, sleeping disorders, decreased attention, reduced concentration, and depression. According to Schwenk et. al, more than 20% of medical students are depressed. We created a dance group at our medical school called "Pacemakers," with the mission to alleviate stress, increase physical activity, boost creativity, and make medical school more enjoyable. Through Pacemakers, students reported that they were able to better develop their sense of touch, feel, and awareness of their own bodies, which are essential to osteopathic diagnosis and treatment. They also expressed that they were able to build relationships with each other that extended beyond the classroom, and learned more about themselves. Furthermore, Pacemakers partnered with a local nursing home to host dance events for the nursing home residents. In May 2015, Pacemakers performed a swing dance routine, taught dance moves to the residents, and then danced with the residents. Both residents and all 30 medical students who attended the event gave positive feedback regarding the dance event. Students have described Pacemakers as a "source of stress relief and exercise" and as "an opportunity to learn something new." Future research on implementing dance groups like Pacemakers in medical schools need to be performed to assess the mental and physical effects on medical students.

Resolution & Chiroptical Identification of Chiral Crystals: The Case-Study of NaClO₃

Student Names: Mohammed AlGarni, Malina Mohtadi, Favour Akinjiyan
Faculty Mentor: Ana Petrovic
Department: Life Sciences, College of Arts and Sciences

The crystallization of achiral compounds into chiral geometries, exhibiting equilibrium mixtures of left- and right-handed chiral crystals, is of interest in chiral resolutions and is a topic closely related to the spontaneous emergence of chirality as well as to understanding the robustness of the biological homo-chirality. Our case-study regarding the chiral crystallization of NaClO₃ and prediction of its enantiomeric chiroptical spectroscopic responses advances this field of research. In the crystallization under inert conditions, chiral nuclei of NaClO₃ are formed statistically essentially equally in left- and right-handed forms. These nuclei grow to form macroscopic-size crystals. Once the chiral nucleus is formed, it overtakes and dominates the entire development of the handedness of the crystals. Our molecular modeling efforts explore the size-limit of the smallest chiral unit-cell that distinguishes the two enantiomeric (handed) forms and allows their identification and differentiation via chiroptical spectroscopic methods. With this fundamental research, we are investigating the degree of chirality within the crystal as well as how large does the crystal nucleus have to be in order to exhibit stereo-specificity that permits resolution of the two enantiomeric forms. In addition to the fundamental interest regarding the chiral crystallization phenomenon, the ability to generate and distinguish enantio-pure crystals is of profound importance in the pharmaceutical and agrochemical industries, where the global market for chiral technology is forecasted to reach \$7.2 billion by the end of 2016.

Cell-Specific Gene Therapy for the Treatment of Glaucoma

Student Name: Erum Ahmed
Faculty Mentor: Anna-Maria Demtriades
Departments: Ophthalmology, Cornell Medical College/
Life Sciences, College of Arts and Sciences, NYIT

Glaucoma is the leading cause of irreversible blindness worldwide. New treatments focused on halting progression of this devastating disease are needed. The hallmark of the disease is retinal ganglion cell loss, which leads to optic nerve damage and vision loss. Current treatments involve lowering eye pressure, though disease progression and vision loss may still occur in patients despite adequately controlled eye pressure. The goal of this study is to develop a new treatment that can be translated into the clinical arena as an adjuvant therapy. We use a novel viral vector that targets Müller glial cells specifically and results in increased expression of a neuroprotective protein (glial cell-derived neurotrophic factor) in the retina. We tested the vector by injecting it into the eyes of DBA2J mice, which represent a long-term model of glaucoma. We demonstrated a significant reduction in eye pressure in addition to an increase in retinal ganglion cell survival with this treatment over a prolonged period of time.

Character Modeling and 3D Printing

Student Name: Stephen Solano
Faculty Mentor: Yuko Oda
Department: Fine Arts, College of Arts and Sciences

3D printing is a relatively new and rapidly developing technology that allows us to create physical models of almost any shape, in a vast variety of materials. For my SOURCE project, I would like to use this technology to showcase some of the 3D modeling work that I have been developing both inside and outside of NYIT. I would also like to provide a pipeline document that describes all the steps that I took to get from concept to final product. The models displayed consist mainly of 3D characters and sculptures. Content will include 3 original character models, 1 original sculpture model, 2 recreated sculpture models, both represented in a 3D printed and virtual format, 3D printing pipeline document with 6 still images, one for each model.

Modeling of Suspended Magnetic Particle Motion via Ferromagnetic Domain Structure Manipulation for Bio-Medical Applications

Student Name: Muhammad Ahsan
Faculty Mentor: Dorinamaria Carca
Department: Mechanical Engineering, School of Engineering and Computing Sciences

Functionalized magnetic nanoparticles under the application of magnetic field have been traditionally used in nanomedicine for a plethora of drug delivery treatments, cell separation and subcellular stimulation. Understanding the underlying physics of the controlled motion of a volume fraction of particles in viscous environment under the application of nonlinear and non-uniform magnetic field is of utmost importance in designing medical treatments using magnetic particles and applying the concept in biomedical devices. While the experimental demonstration of the novel physics concept has been remarkable in the last year, the integration of the physics in robust and reliable nano-biotechnological devices calls for substantial modeling tools, absent from the current literature addressing the highly coupled multiphysics involved at different length scales. As part of this we present a computational template coupling the multiphysics characteristics of magnetic particle motion control through the magnetic field produced by manipulation of ferromagnetic single and multi domain structures. This framework will enable fundamental studies on the concept design of novel, scalable and energy efficient integrated lab-on-chip devices and for the quantification of biological procedures prevalent in nanomedicine such as drug delivery and cell targeting.

Promoting Primary Care Progress through Student Engagement and Clinical Innovation Workshops

Student Names: Carolyn Kwa, Rebecca Grohman, Jonathan Katz,
William Wong, Benjamin Lieberman, Susannah Gemberling,
Shannon Moriarty
Faculty Mentor: Barbara Capozzi
Department: Academic Affairs, College of Osteopathic Medicine

The NYIT-COM's Primary Care Progress Chapter (PCP) is a community of medical students passionate about promoting innovation and interdisciplinary teamwork in primary care. Students attend leadership summits and video conferences with the national organization and hold innovation workshops to troubleshoot current barriers in medical education and improve patient care and education. As a think-tank advocating for a greater presence of primary care progress on campus and on the national level, the team consults practicing physicians with similar goals and collaborates with students and faculty members to bring ideas to fruition. On Wednesday, February 10th, 2016, PCP-NYITCOM hosted its first Clinical Innovation Workshop, which was attended by NYITCOM students, faculty, and administrators. The event began with four teams and the challenge was to select any healthcare problem and solve it in seven minutes. While initially a daunting task for the allotted time, participants quickly engaged with teammates and selected ideas to present to the other groups. The ideas ranged from topics in nutrition to interdisciplinary healthcare, engaging medical students for patient education, and student immersion in geriatric centers. Following the presentations and a short Q&A session, participants voted for three ideas and the members of the eliminated team were divided into the remaining groups. The format provided a unique opportunity to further develop each project through successive rounds, while also integrating perspectives from the newly added group members. This process continued until the winning project was selected: Utilizing 1st and 2nd year medical students at the end of patient encounters to review the plan of care and explain the importance of follow up testing and procedures. The idea originated from the time constraints experienced by primary care physicians and the opportunity for medical students to share their knowledge and gain increased patient interaction. This also addresses the issue of patient compliance - the hope is that in spending more time with patients to teach and explain potentially difficult to understand concepts, patients would be more willing to invest in their health. Since the workshop, PCP-NYITCOM has been working diligently to implement this idea at our new local clinic. The event highlighted the diversity of ideas and enthusiasm for innovation throughout the NYITCOM community and, through collaboration and teamwork, participants transformed their initial ideas into potential applications to improve our healthcare system. Administrators who attended the event are looking to hold the Clinical Innovation Workshop at our new sister school in NYITCOM Arkansas next year and PCP-NYITCOM hopes that this style of brainstorming and collaboration can also be shared with other medical education systems across the country.

The Envisioned Application of Classroom High-Tech 2.0

Student Name: Asad Richardson
Faculty Mentor: Youjeong Kim
Department: Communication Arts, College of Arts and Sciences

Education is what supports the world of tomorrow, and provides a basis for the future. But is education really where it should be in 2016, in the 21st Century and the dawn of technology? Smartphones have found their way into our everyday habits. Most of us need to check social media every couple of minutes, and we would find it excruciatingly hard to live without the Internet in today's world. When we look at most classrooms in the US, we still find an abundance of skepticism surrounding using technology in the classroom. Students are repeatedly told to hide their smartphones or put them away in lockers or book bags. The use of computers literacy is not universal across many K-12 schools in the US. Why not? Is it because we are afraid of further distraction among the students? Are we afraid that it will require such a learning curve for the teachers to use the technology that even considering the idea is taboo? This research seeks to explore the possibility of smartphone/tablet use in classrooms through User Experience and User Interface (UX/UI) design. It seeks to inform the possibility of a classroom 2.0 idea that can reduce the doubt about a prominent technology-based classroom and generate a call to action to step up antiquated practices frequently seen in today's classrooms including physical textbooks vs E-learning, verbal education vs. interactive education and antiquated forms of attendance and management vs. digital classroom management and contemporary digital reward systems. The approach used to research this topic strictly include designs made using the Sketch 3 program to design a mock application for smartphones, tablets and desktop interfaces and digital forms for design satisfaction.

Tetracyclines Disturb Mitochondrial Function across Eukaryotic Models: A Call for Caution in Biomedical Research

Student Name: Matthew Skalski
Faculty Mentor: Gavin McStay
Department: Life Sciences, College of Arts and Sciences

Tetracyclines have been recently used widely in both research and medical practice as a common antibiotic. In this study tetracyclines were used to examine the effect on Mitochondria, which has been theorized to have a bacterial origin in the past. This antibiotic has been used on several kingdoms of life under the Eukaryotic domain including plants, worms, flies, and mice. From this study it has been discovered that tetracyclines induce stress on the mitochondria leading to altered gene expression causing altered mitochondrial function and dynamics. This information is of great importance for antibiotics especially tetracyclines because they are widely used. If tetracyclines are used to treat livestock then it is possible for them to be exposed into the environment causing delays in plant growth and fertility.

Alexander Hamilton Library

Student Name: Harish Armogan
Faculty Mentor: Percy Griffin
Department: Architecture, School of Architecture and Design

The goal of my project was to design a remarkable and first class library to honor Alexander Hamilton. Alexander Hamilton was a Founding Father of the United States and the architect of the U.S currency. He was a general, a soldier, and George Washington right hand man. The Location of this project is uptown Manhattan (Harlem), specifically 141 street between Hamilton Terrace and Convent Ave. Originally, the site was used for the Alexander Hamilton House but the house was later relocated across the street. Today, the site is abandoned with natural vegetation and the remnants of the old Hamilton House. The dimension for the site is 45 feet by 200 feet. The empty site is sloped towards Hamilton terrace and sits adjacent to the St. Luke's Episcopal Church. The first thing that I focused on was the views toward the church and the Hamilton House Site. By doing so, I enable the walls to be angles so that the visitors can indulge the views. I then subdivided the site into 3 tiers with each having its own height. The form is then embedded into the site where a portion of the front façade is cantilevered towards Hamilton terrace. The Library is located at the center of the 3 tiers and represents the idea that a Library is the center that holds Knowledge. At the core of the library is an atrium that connects the 3 floors of the library. This atrium will be illuminated by a skylight that will transfer natural lighting into the spaces below. The basement level of the library is the archive areas that houses rare and fragile works. This area would only be open to the staff and caretaker. The caretaker and staff spaces would be located on the ground /1st level and they would enter from the Hamilton terrace. Two diplomat's rooms had to be incorporated in the programming as well so I decided to locate their rooms on the 4th level of the building. The two diplomats would then enter from Convent Ave. The café is located on the Second level and is connected to an exterior space to dwell and enjoy the wonderful views. The lecture hall is located on the 3rd level and seats 200. The lecture can be accessed by 2 elevators that will connect visitors from the convent Ave entrance. The structure of the building would be concrete with reinforced steel columns. The building exterior would be then clad in grey stone panels. The back interior walls would be glazed in brown stone that creates a transparency between the Church and the Alexander Library. I wanted to create and design that incorporated sustainability. The Hamilton Library house incorporates natural lighting with the curtain wall system and elongated ribbon windows. The roof of the library is a green roof system. This green roof will be great for keeping the building cool in the summer. The roof would also be used to harvest the rain water and recycle it into the building for multipurpose uses. Solar panels would be located on specific portions of the roof that will harness the sunlight and store it in the building for use. Overall, the Alexander Hamilton Library would be a masterpiece of Architecture that bridges the gap from past to present. This library would not only be one that brings people from all walks of life together, it will create a transitional experience and enable the visitors to gain knowledge of Alexander Hamilton.

Chemoprevention of Colorectal Cancer Using Natural and Modified NSAID's

Student Name: Ajit Aryal
Faculty Mentor: Eleni Nikitopoulos
Department: Life Sciences, College of Arts and Sciences

A hallmark of cancer is resistance to apoptosis, with both the loss of pro-apoptotic signals and the gain of anti-apoptotic mechanisms contributing to tumorigenesis. As inducing apoptosis in malignant cells is one of the most challenging tasks regarding cancer, researchers increasingly focus on novel and natural products to regulate apoptotic signaling pathways (Chen et al, 2014.).

Chemoprevention is a general term used to describe the utilization of a chemical compound, administered on a long-term basis to reduce the incidence of a disease, including cancer. Previous studies indicate that traditional non-steroidal anti-inflammatory drugs (NSAIDs) can reduce the incidence of colon cancer. However, medicine centers around a “low dose, high efficacy” philosophy, while minimizing side-effects. Long-term use of NSAIDs is associated with liver, renal, cardiovascular, and gastrointestinal toxicity; which can be fatal. It is then clear that new considerations must be made.

In this research, two synthetic NSAID's; Hydrogen sulfide-releasing naproxen, and Celecoxib; and one natural NSAID; curcumin, are examined for their efficacy in treating colorectal cancer, and inhibiting anti-apoptotic pathways, specifically, the NF-kB pathway.

Nuclear factor kappa B (NF-kB) signaling pathway plays important roles in the control of inflammation, cell growths, apoptosis, and stress response. Research indicates NFkB regulates the expression of genes involved in anti-apoptosis and proliferation. The pathway is *constitutively* active in a variety of human cancers.

The objective of this study is to investigate recent approaches to modulate (downregulate) NFkB activation as a method of chemoprevention using natural and modified non-steroidal anti-inflammatory agents (NSAIDs). This poster summarizes the methods and results from three articles, which were obtained from the NYIT & NYU databases using the keywords: ACF, curcumin, NFkB, and colorectal cancer. Each article was chosen to encompass three categories of research, mock transfection, Xenograft models of induced tumors on flank, and Xenograft tissue samples of affected organ systems. This collective approach to research effectively displays how proteins involved in the NF-kB pathway can be up/downregulated via various natural and modified NSAID's, and suggests that a combination approach could possibly have a higher outcome of inhibiting tumorigenesis.

Breakout Session Presentations

16 W. 61st St., 7th floor

Room 723

Moderator Blair Hoplight

1 - 3 p.m.

- “ChemBioDraw 14 Graphic Art Software: Construction of 2D Images of Right-Handed B-DNA Microarray Prototypes”
By: Nabila Siddiqui, Jess Chacko
- “Major Factors that affect Stress Levels”
By: Ashley Butera, Michael Chimenti, Ryan Brunet, Disha Devdas, Dixon Marble
- “Student Sleep and Impulsive Behavior”
By: James Kelly, Jonathan Costa, Josephine Santagata, Alfredo Vasquez, Jiaye Yao
- “Perception of Tattoos in the Workplace”
By: Kelli Walter, Michael O'Hora, Alexander Seltzer, Patrick Bonacum, Robert Fiato
- “The Role of Name Discrimination in Job Procurement”
By: Jeanine Masih, Jenna Campanella, Jessica Arguera, Alonzo Paulino, Palak Golwala
- “Traditional vs. Online Dating”
By: Kesi Goree, Angelica Rakowicz, Amit Patel, Muqadas Babar, Rainelly Abreu

Breakout Session Presentations

16 W. 61st St., 7th floor

Room 723

Moderator Blair Hoplight

1 - 3 p.m.

- “Identification of Cancer Associated Missense Mutations that relate to Colorectal Cancer in Caspase-7 & Lung Cancer in Caspase-6 and their Potential Impacts on Cancer Progression and Treatment”
By: Marwan Hamed, Sharif Zaher
- “Effects of Video Games and Aggressive Behavior”
By: Thomas Znack, Theodore Hamlin, Katie Hudson, Timothy Milligan

ChemBioDraw 14 Graphic Art Software: Construction of 2D Images of Right-Handed B-DNA Microarray Prototypes

Student Names: Nabila Siddiqui, Jess Chacko
Faculty Mentor: Claude Gagna
Department: Life Sciences, College of Arts and Sciences

Conventional DNA microarrays are powerful molecular biological tools that can be used by research scientists and clinicians to study gene expression. The Gagna-NYIT United States Patent (i.e., 6,936,461 B2) represents the next generation of DNA and RNA microarrays, namely, intact, alternative DNA and RNA microarrays (e.g., A-DNA, Z-DNA, cruciform DNA), and multi-stranded DNA and RNA microarrays (e.g., triplex DNA, quadruplex DNA). These novel microarrays will be used for drug discovery and development, inhibiting gene expression (e.g., cancer), and studying the structure/function of genes (or parts of genes). In order to publish research data involving the novel DNA and RNA microarrays (i.e., prototypes with Arrayit Corporation, Sunnyvale, CA, for eventual submission of an STTR – NIH grant), we need to draw extremely precise/accurate models of the immobilized double-stranded (ds-) B-DNA molecules interacting with DNA intercalators, DNA minor groove-binding drugs, DNA major groove-binding drugs, bis-intercalator, and anti-B-DNA monoclonal antibodies (i.e., biologicals). Additionally, we need to have precise models of DNA-protein, and DNA-protein-drug interactions. All these 2D drawings helps us and the Arrayit Corporation to better understand the complex interactions of many different molecules, chemicals, ions and drugs with DNA and RNA. This is also needed for peer-reviewed journals, abstracts at annual meetings and other grant applications. Simultaneously, we also want to show how the distal ends of the DNA molecule are labeled with either Cy5 (control: cyanine 5), or labeled with Cy3 (control: cyanine 3), namely, chemistry behind the DNA microarrays. Therefore, the purpose of this poster board presentation is to show how NYIT students learned how to independently use the ChemBioDraw 14 graphic art software to produce high-quality and chemically accurate 2D images of ds-DNA immobilized to a microarray (with or without interactions of other molecules). Included in our poster board are ten figures showing the step by step manufacturing of the drawings needed to manifest the final product.

Major Factors that affect Stress Levels

Student Names: Ashley Butera, Michael Chimenti, Ryan Brunet,
Disha Devdas, Dixon Marble
Faculty Mentor: Blair Hoplight
Department: Behavioral Sciences, College of Arts and Sciences

Chronic stress plays a major role in a college student's life. Every individual has different mechanisms to alleviate this stress during his or her college experience. Different individuals use methods like sleep, drugs, alcohol and technology as well as exercise routines to deal with this stress. The purpose of this study was to survey college students about the different factors that affect stress levels and how their chosen method of relaxation affected their stress levels. We hypothesized that each relaxation technique will work differently to alleviate stress. In this study, a survey was administered to students to gauge the different types of lifestyles and the daily routines of the students. The primary subjects for this study were undergraduate students in the behavioral sciences department. We went into classes and first administered the survey analyzing the student's lifestyle and habits, including: amount of hours slept, party habits, exercise and social media usage and then gave them a survey to gauge their stress levels. This survey provides valuable information regarding which of these relaxation techniques affects students stress levels the most and can impact the rest of their college experience in a negative or positive manner.

Student Sleep and Impulsive Behavior

Student Names: James Kelly, Jonathan Costa, Josephine Santagata,
Alfredo Vasquez, Jiaye Yao
Faculty Mentor: Emily Restivo
Department: Behavioral Sciences, College of Arts and Sciences

Sleep has been a vital necessity that provides a foundation towards the overall well-being of the individual. Disrupted sleep can effect daily behaviors in a negative manner, including mood, concentration, focus, and impulsivity. By targeting the population of college students at NYIT we conducted a study of an adverse population, which is unique. The main focus of a student within the college setting is their academics. Our study strives to show a correlation between students amount of sleep and their daily behaviors. The importance of sleep with the overall functioning of the students within the academic setting will be evaluated. Researchers presented a short survey with questions regarding sleep patterns over the past two months. Questions regarding behavior, such as vandalism and illicit drug use, were asked to evaluate impulsive behavior. Participation was voluntary and students were able to skip any questions they did not wish to answer. The data will help understand the relationship between sleep and impulsive/deviant behavior.

Perception of Tattoos in the Workplace

Student Names: Kelli Walter, Michael O'Hora, Alexander Seltzer,
Patrick Bonacum, Robert Fiato
Faculty Mentor: Blair Hoplight
Department: Behavioral Sciences, College of Arts and Sciences

In contemporary culture one can observe an increased number of individuals who have decided to modify their bodies with tattoos, a practice that historically comes with negative connotations. These connotations could have an effect on the hiring practices of tattooed individuals in the workplace. We hypothesized that there is a stigma associated with visible tattoos in regards to occupation level. As a result of this observation, our group generated a survey using the SurveyMonkey website comprised of certain questions to gain perspective on the public's opinion of tattoos in the workplace. Subjects of the experiment answered questions based on images of individuals and were asked to rank the likeliness that he or she holds a particular occupation in an unbiased computer lab setting. The surveys were conducted using Behavioral Science students from NYIT, Old Westbury campus. Data has been collected and analyzed in order to clarify our hypothesis that tattoos negatively impact individuals in the workplace.

The Role of Name Discrimination in Job Procurement

Student Names: Jeanine Masih, Jenna Campanella, Jessica Arguera,
Alonzo Paulino, Palak Golwala
Faculty Mentor: Dina Karafantis
Department: Behavioral Sciences, College of Arts and Sciences

Discrimination is an issue that has taken place in society for decades. Stereotyping involves ascribing traits to group members that share the same characteristics. Prejudice involves negative emotions to describe a member of an outgroup. Our research attempted to show that there was a systematic reoccurring bias when it came to racial discrimination, prejudice, and stereotyping on resumes. We hypothesized that African Americans and Hispanics were most likely to be discriminated against, and that Caucasians were least likely to be discriminated against. We assumed that people favored a Caucasian rather than an African American for the marketing job position. We created three resumes pertaining to a specific job description, which were identical except for names, based on various ethnicities. These were placed individually in different folders, along with the job description, consent form, and a survey. Participants were asked to evaluate the randomly given resume on a questionnaire in regards to how qualified the individual was for the job description provided. Our study participants consisted of undergraduate students from NYIT Old Westbury. The goal of this study was to show that initial perceptions based off of ethnic names can lead to discrimination.

Traditional vs. Online Dating

Student Names: Kesi Goree, Angelica Rakowicz, Amit Patel, Muqadas Babar,
Rainelly Abreu
Faculty Mentor: Blair Hoplight
Department: Behavioral Sciences, College of Arts and Sciences

Before the development of social media, such as Instagram, Twitter, Facebook, and Tinder, social interaction was solely based on face-to-face communication. One area that this has affected is dating and romantic relationships. The purpose of our study was to survey college students in efforts to better understand their views on how traditional dating has changed in regards to the rise of social media use. We hypothesized that there would be distinct differences between individuals that preferred online dating as opposed to traditional dating practices. Students were recruited from the New York Institute of Technology, Old Westbury campus. During the student's arrival in class they were given a consent form which they voluntarily signed. Each student was then requested to complete the survey questionnaire after the consent form was collected. There were two separate forms of the survey. Form A included questions regarding social media dating websites such Facebook, Tinder, and Instagram. Form B incorporated questions that focused on traditional dating behaviors and practices. The resolution of this study was to survey college students in efforts to better understand their views on how traditional dating has changed due to the rise of social media use. The goal of this study was to determine how and why traditional dating has changed and how online dating affects a relationship between two individuals. This study will help us determine our purpose, because we are directly comparing online and traditional scenarios in which describes the aspect more of the real and verbal world.

Identification of Cancer Associated Missense Mutations that relate to Colorectal Cancer in Caspase-7 & Lung Cancer in Caspase-6 and their Potential Impacts on Cancer Progression and Treatment

Student Names: Marwan Hamed, Sharif Zaher
Faculty Mentor: Gavin McStay
Department: Life Sciences, College of Arts and Sciences

Apoptosis is defined as programmed cell death and defects in apoptosis are associated with cancer progression. Caspase-7 (apoptosis-related cysteine peptidase) is a protein which serves the role of executioner in terms of apoptosis. Caspase-6 can also serve as an executioner but can also go through self-processing that does not require other cascading caspases. We speculated that missense mutations of caspase-6 and caspase-7 may be present in whole genome sequencing analyses of patient cancer samples. Due to these errors/mutations within or affecting caspases 6, 7, or any other that are linked to apoptosis may be associated with carcinogenic properties. This study is based to a large extent upon secondary research mainly using the cBioPortal and PDB databases. cBioPortal is a website which maintains mass-scale data sets on various cancer genomics and offers tools utilized for visualization and analytical purposes. The Protein Data Bank (PDB) is a database which maintains research necessary resources, such as: nucleic acids, amino acid assemblies, 3D protein structures, etc. We identified the mutations that appeared to be of the greatest relevance in terms of their effect on structure and activity of caspase-6 and caspase-7 that may have an impact on the onset of various cancers. Ultimately, the conclusion is that there are numerous mutations, but the alterations of specific amino acids requires further studies to determine the effect of the mutation on the enzyme. To do this, we are focusing specifically on two amino acid mutations: D169N in caspase-7 which may have links to colorectal cancer and R220L in caspase-6 which is linked to lung cancer. Through use of Site-Directed Mutagenesis (SDR) and polymerase chain reaction (PCR) technology, it may be possible to determine the links between alterations of amino acid properties in caspases and carcinogenesis.

Effects of Video Games and Aggressive Behavior

Student Names: Thomas Znack, Theodore Hamlin, Katie Hudson,
Timothy Milligan
Faculty Mentor: Blair Hoplight
Department: Behavioral Sciences, College of Arts and Sciences

The purpose of this study is to test whether there is a statistically significant link between playing video games and aggression. Over the past decade, video games have been scrutinized by media outlets with claims that playing video games cause aggression in adolescents. We hypothesized that video games will have a temporary effect on aggressive feelings. However we did not believe it will lead to tangible aggressive behavior. This study was conducted at New York Institute of Technology in Old Westbury. Our survey was designed to measure aggressive feelings and behaviors; it involves scenarios that have increasing levels of potential aggression. The other group played the video game Grand Theft Auto 5 on a PlayStation 3 for a time period of five minutes, afterwards they took the same survey as the control group. The data collected has helped us further understand the link between video game violence and its effect on real world aggression in people.

Breakout Session Presentations

16 W. 61st St., 8th floor

Room 822

Moderator Kevin LaGrandeur

1 - 3 p.m.

- “Better Higher Level Education in the United States”
By: Tiffany Montoya, Ana Robakidze, Xiaoyue Che
- “Darknets: Crime and Warfare in the Cyber Space”
By: Rafael Martinez
- “Tetra Hand”
By: Steven Patrikis
- “College Debt: Analyzing Investment in Education in the United States of America”
By: Ana Robakidze
- “Creating a Safe and Secured USB Manager”
By: Zecheng Wang, Yangu Zhou, Shi Yuxuan, Ren Xudong, Qiao Zhu
- “Targeted Advertising and Demand Side Platform: Who is Peeping into Our Privacy?”
By: Peidi Xu, Peng Huang, Biao Huang
- “Guarding Chinese Internet Wallet”
By: Liliang Chen, Siyuan Tang
- “Improving Daily Life with Big Data: Make the Taxi System More Efficient”
By: Yuchen Pang, Zhicheng Jin, Qiang Luo, Di Hu

Better Higher Level Education in the United States

Student Names: Tiffany Montoya, Ana Robakidze, Xiaoyue Che
Faculty Mentor: Laihan Luo
Department: Mathematics, College of Arts and Sciences

Although the US holds one of the highest global ranks in high school attendance, many who graduate from high school and go onto higher education will not graduate from their respective college or university. The enrollment of students in higher education institutions is not enough, as many require outside funding and assistance in order to complete their studies. This is a major concern that is in dire need of rectification because a decrease in graduated individuals will pave the way for an uneducated and ill prepared work force in the future. In order to ensure that students will continue and complete a higher-level education, it is evident that additional funding must be provided. However, funding alone will do little to solve this problem if an optimized and strategic means of allocating the funds is not generated. Resolving this problem requires immediate action and optimization; for this, four mathematical models are developed. We created three models to demonstrate how funds should be allocated. Model 1 generates an accurate list of higher education institutions that require assistance in an appropriate order. This list is generated through standardizing and compiling numerous data, which allowed for solid results. In order to determine which schools require funding over another school, the data was analyzed and the most appropriate contributing factors were selected. It is evident that the budget is not unlimited and therefore it was necessary to establish a method to prioritize the institutions. Model 2 furthers the work from the previous model. With the generation of an exact list, model 2 focuses on the allocation of funds to the schools, respectively. Knowing which schools are a priority with regard to requiring funding, it is then imperative to determine the amount each school will receive. An equation is generated in order to distribute the funds per institution based on the tuition and number of enrolled students. Model 3 reveals whether the investment made by the foundation is a success or a failure. This is done so by simultaneously analyzing the change in retention rate within the specified time.

Darknets: Crime and Warfare in the Cyber Space

Student Name: Rafael Martinez
Faculty Mentor: Michael Silva
Department: Computer Science, School of Engineering and Computing Sciences

"Darknets: Crime and Warfare in the Cyber Space" focuses on spreading knowledge of the many hacktivist groups as well as other well known groups on the public internet (surface web) that "hack" for profit or even for fame. Topics include various malicious areas and groups present around the world affecting daily life.

Tetra Hand

Student Name: Steven Patrikis
Faculty Mentor: Babak Dastgheib-Beheshti
Department: Telecomm and Electrical Engineering Technology, School of
Engineering and Computing Sciences

Tetramorph Engineering Solutions strives to create low cost and high customized medical devices using modern day technology. Our two most current projects include two full lower arm prosthesis; the MINI Hand and the Tetra Hand. Both of these devices were created using 3D - Printing Technology and were designed to not only keep the device safe, but to keep the user safe as well. The MINI Hand Prosthetic was the first project created by Tetramorph and incorporates an all-in-one palm, with an angled thumb, dramatically cutting down on the number of pieces that needed to be created. After the completion of MINI Hand, Tetramorph decided to create a more advanced prosthetic device, one that would incorporate a hinged angular palm as well as angled fingers, creating a more realistic grip. While MINI Hand used elastics to act as tendons, Tetra Hand uses high powered torsion springs to assist the user while operating the device. An added feature to the Tetra Hand includes a more natural feel while writing using a pen/pencil, as well as a realistic look and feel while typing on a keyboard. Tetra Hand also incorporates a hinged wrist, which was created as a safety mechanism, but doubles as a useful feature while steering a car wheel while driving.

College Debt: Analyzing Investment in Education in the United States of America

Student Name: Ana Robakidze
Faculty Mentor: Susan Gass
Department: Computer Science, School of Engineering and Computing Sciences

As Americans pursue more education, they also accrue more debt. Outstanding student loan balances in the United States total roughly \$1 trillion (Federal Reserve Bank of New York 2013). This paper analyzes student college debt, their demographics and salaries after graduation. The main goal is to determine if investment in US college education is worth it.

Creating a Safe and Secured USB Manager

Student Names: Zecheng Wang, Yangu Zhou, Shi Yuxuan, Ren Xudong,
Qiao Zhu
Faculty Mentor: Sonali Chandel
Department: Electrical and Computer Engineering, School of Engineering
and Computing Sciences

Nowadays, almost everyone has a USB flash disk. It has been our best assistant for saving and carrying data. However, the USB flash disk is not without problems. For example, there can be too many files for classification and security. So, in order to solve these concerns, we can create USB administrative software which would have several functions to make USB flash disks more convenient and secure. Firstly, to organize data, classification of documents according their suffixes, such as pdf, mp4 (it means these files with same suffixes would be saved together) and also classification can depend on the keywords. When you input key word “math”, files with this keyword would be saved in the same folder. Secondly, combined with the first function, a flash disk action listener can be made to allow users to save the files which have been classified on your personal computer from the disk automatically; for example, when your boss orders you to manage lots of files and choose some specific files from the USB. This function would save you much trouble. Thirdly, security is an important concern. Especially for businesses, leakage of private information means loss of money. Our software would set the security code for USB flash disk using an RSA algorithm (a public key system to improve the safety factor of using USB). The software would ask you to bind your account to your email address. If the password is wrong three times, the software would send an email warning to you and lock the USB until the next day, so that you will have time to find your lost USB without losing your private information. Finally, we also want to associate (bind) the USB disk with the computer. Our software would improve the USB disk into a “boot up key” so that when you leave your computer and remove the USB flash disk, the computer would be locked automatically. This function might be suitable for careless office workers, who always forget to lock down their computers because of being buried with heavy work. This function would help them avoid some loss of private information by some peeping co-workers. Our software aims to help you save time and effort when you are using USB during work and study. What’s more, keeping your privacy from illegal invasion is also one of our software’s main purposes. Further research in this area can help us develop even a more secure system.

Targeted Advertising and Demand Side Platform: Who is Peeping into Our Privacy?

Student Names: Peidi Xu, Peng Huang, Biao Huang
Faculty Mentor: Sonali Chandel
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Nowadays, when we search or do anything on the internet, there are usually some areas on the web page showing advertisements. These advertisements are often not random like the traditional ones that we see on TV, but seem to be more precise based on our interests. This new way of advertising is called Targeted Advertising, where a third party will collect and analyze our information and target ads that it thinks are suitable for us. This can be quite convenient for both the users and company. Users will spend less time watching some useless advertisements, and the company will spend less money advertising to people not interested in them at all. However, it can also be terrifying to think that when you do something online, someone will keep track of the links you visited, the key words you researched, or even the email you wrote and select the suitable advertisements for you based on them. This can be seen as a violation of your privacy. In the US, Google is one of the main companies that do this. In China, Baidu and Alibaba also follow in Google's footsteps. As we cannot avoid using the services that these companies offer and there are not clear laws either in China or in the US regulating this action, it is important for us users to know how it works, to judge whether it is actually dangerous or not, and to know how to protect our privacy from it. The first part of this research presents the principle those three companies use to keep track of us and do targeted advertising, such as Demand-Side Platform (DSP) that allows buyers of digital advertising inventory to manage multiple ad exchange and data exchange accounts through one interface. The second part focuses on the analysis of both the advantages and disadvantages of targeted advertising. The last part will introduce some ways to protect our privacy by restraining from submitting personal information, such as Tracking Protection List (TPL), and Privacy mode. Some further research may be needed for the governments to better supervise these companies that use targeted advertising, given prior work on this subject only focuses on the basic understanding of it.

Guarding Chinese Internet Wallet

Student Names: Liliang Chen, Siyuan Tang
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Our research is focused on the topic of the security of the network payment system in China and the ways to make the payment safer. In recent years, the mobile payment in China has become more and more widespread due to the fast development of the Internet. The innovation of the mobile application in smart phone and the growth of China's economy, as well as China's huge online market have also played an important role in this field. As a result, many third party payment platforms have been born with their mobile client. According to our investigation, we found that the two most influential payment platforms in China are Alipay, developed by Alibaba, and Wechat Pay, developed by Tencent. These two platforms have great impact on our daily lives, to say the least. They have brought about a totally new life-style. Either debit card or credit card can be bound to these platforms which is a big convenience to people. Also the mobile client of Alipay and Wechat Pay are integrated with the functions of transferring, scanning for pay, loaning and so on. However, there are still a lot of people holding a doubtful attitude toward the safety of these applications. So our research is focused on this topic. Actually, people used to use several actions to ensure the safety of network payment: U aegis, third party platform. Then more safe measures such as e-token, USB key, and SMS verification became more and more popular. These show good progress but still have many disadvantages and can't satisfy today's requirement completely. Naturally, our purpose is to make the applications safe enough for people to use and popularize these products throughout the world. First, we need to research the unsafe cases of network payment and the frequency of these things by consulting and survey. This measure will have global coverage, which is the point to make our survey more persuasive. Last but not least, analyzing collected data and summarizing it is the pivotal step. We found some important issues like the loophole of the network payment stage or the staff selling the users' information to data companies. To solve the issue, we came up with some thinking angles to solve the problem, such as the safety awareness of the users, the habits of using the network payment, the environment to use the network payment and so on. We've tried our best to address the issue but there is still a lot of scope for this rescanned to be continued in the future since cyber security is an unending field of study.

Improving Daily Life with Big Data: Make the Taxi System More Efficient

Student Names: Yuchen Pang, Zhicheng Jin, Qiang Luo, Di Hu
Faculty Mentor: Sonali Chandel
Department: Electrical and Computer Engineering, School of Engineering
and Computing Sciences

Information is of great use when it comes to making decisions and arranging resources. However, dealing with large amounts of data is not easy. Only in recent years have technologies such as distributed systems and parallel computing become mature enough to enable us to store and analyze much more data at a relatively lower cost than before. These technologies have become so useful that a new term has appeared: “Big Data”. Using big data, companies are able to analyze what their customers like and recommend adequate products to them, governments are able to spend money and make policies more efficiently, and engineers are able to build machines and software which have more “intelligence”. As students living in a big modern city, we consider whether we could apply big data technologies to better our lives. We noticed that traffic problems are often the first concern in a big city, and we often hear complaints that taxis seem to have all disappeared when people need them. We think this problem results from some defects in the taxi system and we decided to write software to improve it. We hope that taxis can always go to the places that need them the most instead of driving around for customers in empty streets. We propose to use big data to accomplish this goal. Given the data of the taxi transaction in a period of time, we can find out the distribution of taxi demand according to time and by analyzing this information we can recommend the best place to go for taxi drivers. In this way, taxi drivers will find customers more quickly, people will save the time to wait for a taxi beside the streets, and hence the overall efficiency of the traffic systems will be improved. Specifically, we applied our method on the data of taxis in New York. With tools such as Hadoop and Leaflet, we have efficiently processed the data from several years and visualized the result for taxi drivers to use. There are additional issues that need further study, such as security problems, real time analysis and better algorithms for route arrangement. We hope to continue this research in the future as well.

Breakout Session Presentations

16 W. 61st St., 10th floor

Room 1026

Moderator Terry Nauheim

1:00 p.m. - 3:00 p.m.

- “The Chinese Consumers’ Perception Affecting Behavior Intention to Use Mobile Education Applications”
By: En Li
- “Rolling at NYIT”
By: Yiqun (Richard) Li
- “Analysis on WordPress”
By: Suhail Rafiuddin
- “Texting While Walking”
By: Tiy-Chereigna Neufville, Ai-Lin Tung, Rebecca Helene Liwer, Joji Kusunoki, Sophie Durand
- Starbucks's Coffee Commercial, “Bringing Friends Together” and Metro Cafe's Coffee Commercial, “Metro Café Wakes You Up”
By: Pakkaporn Chatthaworn, Tomader Alrehaili, Delphine Maillot, Yasmeen Hejazi

Breakout Session Presentations

16 W. 61st St., 10th floor

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Moderator Terry Nauheim

1 - 3 p.m.

- “The Zero-Sum Game: A Feminist Perspective”
By: Maylan Studart

- “VR Film Project "Tree of Life"
By: Yifeng Miao, Duo Wang, Linjie Xia

- “Parametric Design: An Architectural Forthcoming”
By: Nicholas Soniprasad

The Chinese Consumers' Perception Affecting Behavior Intention to Use Mobile Education Applications

Student Name: En Li
Faculty Mentor: Ming Chung Han
Department: School of Management

Mobile education applications (apps) are growing fast in China. In 2015, the scale of Chinese mobile education apps market reached 170 billion. With the 32.1% growing rate, this market will reach at 226 billion in 2016. At the same time, in 2015, Chinese mobile education app users were over 380 million, which was 30.3% of the total mobile app users (1.24 billion). The number of the Chinese mobile education app users was two times more than that in 2014 (171 million). As the market is developing, education app is also occupying an important place in Chinese mobile app market. In China, education app remains the top three most popular apps in iTunes and Android market. The previous research showed that the education apps can provide individual study environment with high efficiency and effectiveness any time and place (Eschenbrenner & Nah, 2007; K, Hirsh-Pasek, et al., 2015). Thus, the mobile education apps are more popular in China. Also, the previous research clarified that consumers showed the high positive willingness to use education apps (Khaddage, & Lattenman, 2013; Falloon, 2013). However, the previous research didn't pay much attention on the mobile education apps in China. Understanding how Chinese consumers accept mobile education apps can help the marketer to build more effective marketing strategies. Hence, this study develops a main question: what makes Chinese consumers use mobile education apps? Based on the research question, this study suggests following for two main hypothesis:

H1: Perceived usefulness, perceived ease of use and perceived enjoyment have positive relationship to the attitude of using education apps;

H2: Perceived usefulness, perceived ease of use and perceived enjoyment have positive relationship to the behavior intention of using education apps;

The Technology Acceptance Model (TAM), is considered as a principle model in this study. 125 college students in China recruited as a representative sample. The result showed that H1 is supported; H2 is partially supported. The perceived usefulness, perceived enjoyment are significantly affecting behavior intention to use mobile education apps. Whereas, the perceived ease of use has no direct significant relationship with behavior intention. It is the opposite result with majority of research papers, however, the previous research also found that the perceived ease of use didn't have direct effect on the behavior intention in the case of the participants already had a basic understanding to use new learning system platform (Venkatesh et al., 2003; Chang et al., 2012; Van Raaij & Schepers, 2008; Straub et al., 1997). According to the previous research, around 90% of college students in China already used mobile apps in daily life in 2013 (Chen & Denoyelles, 2013). Based on the data, therefore, this study assume that perceived ease of use didn't affect behavior intention because the most of participants used the mobile education apps before.

The findings of this study suggests that in order to attract Chinese consumers to use mobile education apps, the marketer can emphasize more on the usefulness and the fun of using the education apps.

Rolling at NYIT

Student Name: Yiqun (Richard) Li
Faculty Mentor: Youjeong Kim
Department: Communication Arts, College of Arts and Sciences

I use time lapse and hyper lapse in videography to record a daily routine in NYIT campus by videotaping around Manhattan campus and inside the school buildings. By using time lapse videography, the video can show us a different view of our campus that we cannot see with our bare eyes and provide an angle of what our school is really like from a different dimension (probably fourth-dimension). This video project is produced in Manhattan campus only, since I am based in Manhattan and have trouble commuting to the Old Westbury campus. I would love to make another video of the Old Westbury campus which is more favorable to nature.

Analysis on WordPress

Student Name: Suhail Rafiuddin
Faculty Mentor: James Fauvell
Department: Communication Arts, College of Arts and Sciences

The analysis of websites or blogs on WordPress shows that WordPress is the most feasible platform for anyone who is motivated and driven to create and communicate with the online world. Not all platforms give the option to really personalize what you're trying to present. There are advantages and disadvantages of each option you use to blog on. WordPress is the best.

- What is the difficulty on starting out?
- What are the costs to improve my blog?
- How to impact your respective industry with a website?
- What are the E-Commerce capabilities?
- What are the mobile capabilities?
- What can I improve to make it even better?

Texting While Walking

Student Names: Tiy-Chereigna Neufville, Ai-Lin Tung,
Rebecca Helene Liwer, Joji Kusunoki, Sophie Durand
Faculty Mentor: Youjeong Kim
Department: Communication Arts, College of Arts and Sciences

A 30 second PSA created to encourage young people to not text while walking. The target audience is between ages 15-30. As part of a Television 101 class, my teammates and I are required to film a public service announcement on our topic of choice. We selected the idea of texting and walking, which was written by Ai-Lin Tung. However, the team agreed in having me as the mouth piece to deliver the message to a wider audience. This PSA is intended to encourage young people to not use their mobile phones while walking. It will focus on a masked killer who is standing on the street while people are passing by and ends up with a man who is using his mobile phone while walking and is hit by a car. The idea is to show viewers one consequence from texting while walking. The masked killer is standing at the corner of the street waiting for something with the “Jaws soundtrack”. People are walking passed him but they can’t see him. Mike is a college student and is texting his girlfriend while walking. When he is crossing the street, the masked killer slowly turns to where he is going and the “Jaws soundtrack” reaches its highest tension. And then the audience will hear a car brake sound effect. The screen goes to the masked killer pulling Mike’s foot with blood and the mobile phone is on the ground. This is one consequence of texting while walking. A short statement “Problem Solved” will appear while the masked killer is pulling Mike’s foot.

Starbucks's Coffee Commercial, “Bringing Friends Together” and Metro Cafe's Coffee Commercial, “Metro Café Wakes You Up”

Student Names: Pakkaporn Chatthaworn, Tomader Alrehaili,
Delphine Maillot, Yasmeen Hejazi
Faculty Mentor: Youjeong Kim
Department: Communication Arts, College of Arts and Sciences

Both presentations are advertising Starbuck's coffee and the Metro Cafe's coffee. The first commercial is about coffee, Bringing Friends Together. One friend goes to Starbuck's and orders the new coffee. At that time, she buys one for herself and another for her friend by using the application. She has one and sends a gift/drink to her friend via the Starbucks application. She also texts her friend so she knows about it. Her friend receives the message and picks up her coffee at the cafe. This commercial shows that the Starbucks coffee brings friends together. The second, Metro Cafe Commercial, is promoting the coffee in Metro Cafe. The idea is that the coffee cup can express feelings. For example, when you fill the cup with hot coffee, it wakes up and is happy. Every time when you drink or hold it, the cup will change emotion. If you are not drinking metro coffee, the cup will fall asleep. So, every time when you are drinking the metro cafe's coffee, it always wakes you up.

The Zero-Sum Game: A Feminist Perspective

Student Name: Maylan Studart
Faculty Mentor: Anthony Dimatteo
Department: English, College of Arts and Sciences

Based on observations taken from Charlotte Perkins Gilman's famous story, "The Yellow Wallpaper," the zero-sum game is clearly in play. The individualistic, paternal, and controlling mindset is present in this story, and is a theme in many other literary works. By using the feminist perspective to analyze this story and putting it in historical context, we can begin to identify how the zero-sum game is present in our own minds and thoughts. The goal of this paper is to get readers to identify if their thoughts are indeed their own, or if it has a long, cultural foundation in society at large, this way identifying bias.

VR Film Project "Tree of Life"

Student Names: Yifeng Miao, Duo Wang, Linjie Xia
Faculty Mentor: Robert Smith
Department: Fine Arts, College of Arts and Sciences

Virtual Reality has become a most exciting and promising technology in 2015. Since Facebook acquired the company of Oculus which is the most professional and powerful company in this area, this technology will be pushed to become a next innovational product. At the same time, the other companies such as New York Times, Samsung, HTC, Google and Sony, have presented their VR Headset and Cardboard to audiences, which can also be purchased from on-line Shop. So contents of VR films and videos will become needed in the future, and compared with the traditional film and video production, the ways to create VR contents is totally different. So this time my team will focus on Virtual Reality 3D Animation. We want to create a 2 minute VR immersive 3D Animation named "Tree of Life". "Tree of Life" is an animated VR short film, which focuses on the theme of the circle of life. Based on mythology, "Tree of Life" contains everything in nature, and the female has ability to breed new life. So we tell a story though the mother's point of view to see the key moments of "your daughter" growing up to be a mother and form the circle of life.

Parametric Design: An Architectural Forthcoming

Student Name: Nicholas Soniprasad
Faculty Mentor: Mathew Ford
Department: Architecture, School of Architecture and Design

Parametric design has revitalized the field of architecture and design. With recent advancements in technology, new design tools allow designers to represent any idea. Using new software plug-ins, such as Grasshopper and Dynamo, designers are provided with new methods for creating interesting and different forms of architecture. This presentation will delve into the defining aspects of parametric design, and will illustrate its current role in the world of architectural design. It will follow with a series of researched precedents. Finally, it will discuss a theory on how parametric design can supplement the creation of future architecture, using student examples and a series of successfully built examples from architects. Parametric design is a discipline of boundless opportunity, and the new software that is being implemented to control such parameters is allowing the practice to have a much more successful response to the future of architecture.