

URCAD 13

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3D Modeling for Older Adults

Uvonne Andoh, Farnaz Feizian, Joshua Dutterer

Amy Hurst, Assistant Professor, Department of Information Systems

Vision impairment and cognitive disabilities (Such as Alzheimer's disease and dementia) are common within the older population. These problems create higher risk of disability among older adults and limits functional independence. We believe that providing older adults with the ability to design and build 3D prototypes has the potential to assist and support their everyday tasks and help them regain independence. Our team's research goal is to examine how older adults use 3D printers and if they design and build their own objects right in their home without going out to buy them. The objective of my project is to design 3D models attached to a calendar that will assist older disabled adults with their daily schedule. By building various 3D objects representing biological, societal, interpersonal, creative and symbolic needs, we will enable older individuals to determine their day-to-day tasks. Some of the beneficial things older adults can design and build on their own are an everyday custom pill bottle to keep track of their medicine intake, as well as an assistive bag holder to help older adults with arthritis.

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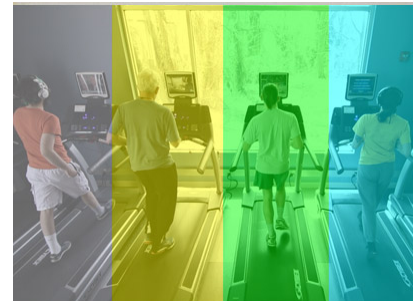
Media Crisis

Pierre Andre

Fred Worden, Professor, Department of Visual Arts; John Sturgeon, Professor, Department of Visual Arts

This experimental video is inspired by the critical writings of marginalized British filmmaker Peter Watkins. According to Watkins, "media crisis" refers to "the increasingly irresponsible manner in which the mass audiovisual media (MAVM) function, and to their disastrous impact on society, human affairs, and the environment." In my video, a fixed camera observes joggers on treadmills in a gym, each with their own TV set. The screen is divided vertically into columns of color that change frantically and sporadically, dictated by the rhythms of the edits on the TV sets. The sounds of all the TVs in the room are heard simultaneously creating a deafening cacophony that matches the visual action. The intention is to bring viewers to an increasing awareness of the underlying, hidden and often manipulative nature of the MAVM.

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My Gray Life: Performing for the Spectator

Christina Animashaun

Mark Durant, Professor, Department of Visual Arts – Photography

Since the rise of performance art in the 1960s, artists began to use their bodies as a medium to transmit cultural commentary, creative expression, and sequential narrative. In the documentation of those performances the artists often took the main focus, overlooking an essential entity that is crucial to existence of performance as a whole. This past year, I executed a piece utilizing my body in order to critically analyze audience spectatorship and participation in Baltimore City, Washington D.C., New York and Philadelphia. After painting my skin gray and wearing only black and white clothing, I walked in these cities as a pedestrian with a sound recorder embedded on my person and with a photographer taking pictures of my interactions. Though these works sought to challenge the focus often kept on the performing artist, this project highlighted the inseparable dynamics of the artist and witness and the wide range of artistic



interpretation held by spectators of performance. Photographs of the performances and video response to the overall performance experience can be viewed on a website dedicated to the project.

This work was funded through an Undergraduate Research Award from the UMBC Office of Undergraduate Education.

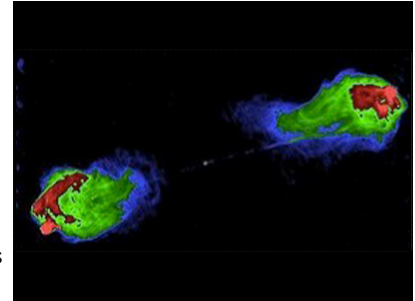
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The Radiative Deceleration of Large-Scale Extragalactic Jets at Large Cosmological Redshifts

Aryana Arsham

Markos Georganopoulos, Associate Professor, Department of Physics

The purpose of this research is to study the radiative deceleration of relativistic jets of plasma found in very distant, thus high cosmological redshift z quasars. The deceleration is due to Inverse Compton scattering of CMB photons off the jet relativistic electrons. In this case, and if the jets decelerate substantially, no significant X-ray emission due to inverse Compton scattering of the CMB is anticipated from the large scale jet. We casted a system of two coupled autonomous, non - linear ordinary differential equations (ODEs). We produced an analytic solution, under the approximations: (i) the energy density of the plasma in the jet is dominated by the relativistic electrons and that the contribution of the protons can be neglected and (ii) the electron energy distribution is monoenergetic. We showed that the first assumption is justified for those large scale jets that exhibit a hard synchrotron spectrum extending to the optical energies. We found substantial deceleration taking place for values of z greater than approximately 4, corresponding to 11.5 billion years ago, about 2.2 billion years after the Big Bang. We are dropping the second assumption by adopting more realistic electron energy distributions, producing numerical solutions, and assessing its astrophysical implications.



This work was funded through an Undergraduate Research Award from the UMBC Office of Undergraduate Education.

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Literary Discourses on Women's Evolving Social Status in Nigeria

Comfort C. Azubuko-Udah

Jessica Berman, Professor, Department of English

Studies on women's status in post-colonial countries like Nigeria often fail to acknowledge the multifaceted nature of women's station and role in the society. In such developing countries, women's status is a historically evolving phenomenon and imported patriarchal ideas have both speeded up and changed the paths of its evolution. My project suggests that by studying literary works produced by a crop of Nigerian academics and feminists we can begin to understand the complexity of women's positions. Applying a blend of post-colonial and feminist theories, I explore depictions of the legacies of colonization in three novels: *Efuru* by Flora Nwapa (1966), *Joys of Motherhood* by Buchi Emecheta (1979), and *Purple Hibiscus* by Chimamanda Ngozi Adichie (2003). I uncover an underlying stream of discourse in the way all three writers chose to represent women and men, their relations, and their navigation of societal norms and traditions, which reflects the sequence of changes in culture. This discourse serves to educate readers on the neglected female in Nigerian fiction, and expand our understanding of her. They also fill in the gaps in the literary history caused by insufficiency of female presence in Nigerian Literature.



This work was funded through an Undergraduate Research Award from the UMBC Office of Undergraduate Education.

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Platform 9 ¾: The Entrance to a Potterhead Created Community

Mallory L. Brooks

Kathy Bryan, Associate Professor, Department of American Studies



The Harry Potter series is a popular culture phenomenon. As was said in the first chapter of the initial book in the seven-part series, “There won’t be a child in our world who doesn’t know his name.” This study examines seven different fan groups or Potter-based organizations to explore why they become fans, to create groups and establish organizations in Harry’s name. Textual analysis of the web pages of these groups and participant observation were used to identify cultural themes in the discourse of these communities and analyze the intertextual experiences of selected fans through their written accounts of their involvement in the fan community. Consistent cultural themes were identified across the various groups, including but not limited to love, equality, dedication, unity, and literacy. The analysis of accounts of fan involvement suggests that the series appeals to our natural desire to be social. As the groups reflect, there is a diverse following of Harry Potter. People are able to find themselves within the story and see themselves uniting with people who are unlike them. The series represents the desire to find community among the differences.

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Syncretism in Pompeii

Sierra Benson-Brown, Greg Brinsley, Heather Burtch

Marilyn Goldberg, Senior Lecturer, Department of Ancient Studies

This research investigated the various elements of the blending of cultures, syncretism, throughout Pompeii, demonstrating the diversity of influence from several cultures that can be found in the excavated portions of the town. This project was initially inspired by a collection of figurines from a household shrine at Pompeii now displayed at the Walters Art Gallery. It was expanded from a study of religion to one that also took into account



cultural, social and religious impact of various neighboring civilizations. Through a focus on certain deities represented in the Walters collection, specifically Isis-Fortuna, Alexander-Helios, and Jupiter, some of the complexities of Egyptian and Greek interactions with Roman culture were found. The research concerning Isis-Fortuna identified a substantial Egyptian connection with Pompeii in both social and religious life. The investigation of Alexander-Helios was focused on the adoption of a Greek figure and style. The study of Jupiter was based on the two temples in which he was worshipped in Pompeii, one depicting the Roman Jupiter of the Capitolium and the other Hellenistic Zeus Meilichios. After researching these various examples of syncretism demonstrated in Pompeii, it can be concluded that Pompeii was part of a larger cultural sphere than originally believed.

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St. Cuthbert and Pilgrimage 664-2012 AD: The Heritage of the Patron Saint of Northumbria

Lauren Bucca

Gail Orgelfinger, Senior Lecturer, Department of English



The purpose of this research was to shed light upon pilgrimage during the Middle Ages, as well as to reveal the continuity of a medieval pilgrimage route in contemporary times. To accomplish this goal, my research considered both the literal and figurative aspects of pilgrimage during the Middle Ages. This study centered on the cultural influence of St.

Cuthbert, a seventh-century prior and patron saint of Northumbria who was himself a missionary and pilgrim. Today, a walking route retraces St. Cuthbert's journey from Melrose, Scotland to Lindisfarne, England. This route has been traveled by pilgrims since the Anglo-Saxon Era, both during and after St. Cuthbert's life; today the route has been termed "St. Cuthbert's Way." In addition to analyzing early illuminated manuscripts of two texts of St. Cuthbert's life, I also researched secondary sources on medieval travel. During the summer of 2012, I followed part of this pilgrimage route, photographing sites and interviewing present day pilgrims along the way. My research demonstrates that a 1,300 year old pilgrimage route has only increased in relevance in the twenty-first century, ever evolving as an exercise appealing to the spiritual and physical needs of present day pilgrims.

This work was funded through an Undergraduate Research Award from the UMBC Office of Undergraduate Education. Travel funds for the study were provided by the UMBC Office of Undergraduate Education.

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Neo-Corporatism and the 2008 Financial Crisis: The Relations between Western States and Supranational Corporations

Nathaniel C. Buechler

Carolyn Forestiere, Associate Professor, Department of Political Science



This research project examines why German insurance industries were more sheltered from economic hardship in the 2008 Economic Crisis relative to their American counterparts. The project suggests that Germany's extensive use of Neo-Corporatism is a primary explanation of German superior performance. Neo-Corporatism is a system of interest group aggregation whereby government, corporations, and labour unions work together to find consensus for economic policies. To assess the role that Neo-Corporatism demonstrated in sheltering German insurance industries, this study investigated the differences between Allianz in Germany and AIG in the United States. Specifically I find that AIG sold Credit Default Swaps allowing for economic vulnerability and other negative consequences of the Securitization process, while Allianz encountered less adverse financial exposure due to differences throughout American and German markets. In sum, Neo-Corporatism is the key difference to the success of Allianz.

This work was funded through an Undergraduate Research Award from the UMBC Office of Undergraduate Education.

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Acculturative Experiences, Psychological Well-being, and Parenting among Chinese Immigrant Families

Grace Calvin, Jing Yu

Charissa Cheah, Associate Professor, Department of Psychology



The goal of the present study was to explore factors that may contribute to the parenting styles and practices of Chinese immigrant parents of young children, an understudied group. Previous research demonstrates that positive acculturation to American culture and higher psychological well-being in parents may predict more positive parenting (e.g., warmth and reasoning) (Bornstein & Cheah, 2006; Cheah, Leung, Tahseen & Schultz, 2009). In contrast, maternal depression is associated with harsher parenting behaviors (Bor & Sander, 2004). We hypothesized that positive acculturative experiences would lead to higher levels of psychological well-being and more positive parenting. Chinese immigrant mothers in Maryland (N = 155) reported on their acculturative experiences (behavioral and psychological acculturation), psychological well-being, and parenting styles (authoritative and authoritarian parenting styles). Preliminary analyses revealed significant correlations in the hypothesized directions between acculturative experience and psychological well-being, and between psychological well-being and parenting style. However, no direct relations were found between acculturative experiences and parenting styles. Further analyses will be conducted to explore the mediational processes through which acculturative experiences may influence parenting.

This project was funded in part by an Undergraduate Research Award from the Office of Undergraduate Education at the University of Maryland, Baltimore County.

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Ceremony of Memory

Alexis R. DeVance

Doug Hamby, Professor, Department of Dance



In cultures where the written word is not the primary method for communicating history and knowledge, the body serves as a repository holding the collective narrative of a community's cultural heritage, identity, and history. Interested in deepening my understanding of dance and the dancing body as an embodied form of collective remembering within diasporic communities, I traveled to Trinidad. While in Trinidad, I immersed myself in rhetoric and movement that examined the intersections of transnational identity and the contemporary dance world. I gained a deeper understanding of my own multiethnic heritage and furthered my study of traditional and contemporary dance styles of Africa, India and the Caribbean. Ceremony of Memory, a contemporary dance performance work, explores issues concerning body and identity politics as they relate to colonized bodies. My process involved experimenting with contrasting both movement and music to illustrate a mass of contradictions that exist as diasporic and indigenous bodies contest and subvert colonization and domination. I deconstruct the power of dance as a form of cultural resistance and a primary vehicle for holding cultural memory and experience. Ultimately what surfaces are questions of authenticity, identity and the constructs of "home".

This work was funded by the Summer Research and Study award through the UMBC Dance Department.

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Storytelling

Mabelle Fomundam

Alan Kreizenbeck, Associate Professor, Department of Theatre

In order to identify what techniques a storyteller should use to bring their story to life, I have drawn comparison between the art of storytelling and the craft of acting. Lessons in acting can be applied to storytelling. For example, the experienced actor knows that the process of playing their character goes beyond knowing how to memorize lines and therefore conducts character-work. Similarly, simply knowing the lines to the story is not sufficient in storytelling. The storyteller needs to go through the process of re-

experiencing the story multiple times. Undoubtedly, there are also differences between acting and storytelling that prevent the two from being identical. For example, the actor and the storyteller have two different challenges: The actor deals with the question 'why is this important to my character?' The storyteller answers the question 'what happened', and then connects together the various happenings. As a result, it is important for the storyteller to learn how to gracefully make connections between occurrences. At URCAD, I will present original stories to which I have applied different skills, some of which are borrowed from the craft of acting and others that distinguish acting from storytelling.

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Horror Movies and Emotional Calibration: How Revulsion Heightens Fear

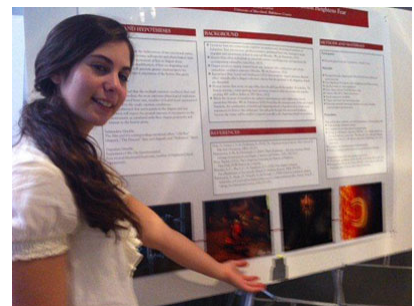
Briana Garrett

Diane L. Alonso, Program Director/Senior Lecturer, Department of Psychology

Horror films, especially grotesque and bloody cinema, are becoming increasingly popular and prevalent. This study examines the two major emotions that horror films prey on, disgust and fear; specifically, how these emotions affect arousal during a short movie clip.

Prior research on arousal, fear, and revulsion has focused on advertising appeals. In the current study, 90 participants age 18 and above are recruited from the Universities at Shady Grove. Participants are assigned to one of three conditions: observing a disgust-inducing scene, a fear-provoking clip, or a fear and disgust-producing scene. All participants have their heart rate taken, are videotaped, and fill out four self-report questionnaires concerning their arousal level, disgust-propensity, enjoyment of horror films, and what emotions the film generated. Data collected from this research will shed light on the interactive effect of disgust and fear and may contribute to an etiology of mental disorders with this mixed emotion component such as obsessive-compulsive disorder.

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Teaching Music Notation Using Music Learning Theory Pattern Instruction versus Traditional Instrumental Methods

Ellen L. Green

Jonathan Singer, Associate Professor, Department of Education

Two fourth grade classes, one consisting of 21 students and the other consisting of 22 students, are to begin learning music notation after aurally practicing the first three songs in the Recorder Karate curriculum by Barb Philipak. Most instrumental method books follow a sequence of teaching students to read notation through logical steps that make sense to mathematically minded adults. However, recent research in the development of Music Learning Theory by Edwin Gordon and other members of the Gordon Institute for Music Learning has shown that children understand music syntax and music notation best through pattern



instruction. In this method of teaching, tonal and rhythm pattern instruction are initially separated. In this comparison study one class was taught using the traditional instrumental sequence and the other class was taught using Music Learning Theory-based pattern instruction. Instruction occurred over the course of four weeks with one 45-minute lesson each week. Students were assessed for prior music notation knowledge at the beginning of the first lesson. At the end of the fourth lesson, students were given a short piece to perform and assessed based on accuracy.

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Development of a Low-Tech Process for Treating Bacterial Contaminants in an Unprotected Spring in Isongo, Kenya

Dalton Hughes, Chris Mullen

Lee Blaney, Assistant Professor, Department of Chemical, Biochemical, and Environmental Engineering



Approximately 760 million people do not have access to clean drinking water; a disproportionate amount of those people are located in Sub-Sahara Africa. High chemical and bacterial contaminant levels in drinking water may cause a myriad of health complications. The small community of Isongo, Kenya lacks clean drinking water for its 500 residents. The residents currently retrieve water from an unprotected spring located roughly 20 minutes away. In January 2013, the UMBC Chapter of Engineers Without Borders (EWB-UMBC) travelled to Isongo to assess the current water quality and interview community members that use this water source. Results from the water quality tests reveal high levels of nitrogen and phosphorus. The stream is also contaminated with high levels of indicator organisms and tested positive for fecal and rapid coliforms. Interviews indicated that most children suffer from dysentery and a high prevalence of other waterborne diseases. Residents also expressed an interest in receiving information on topics of sanitation and hygiene. We are currently developing an inexpensive and low-tech method for the removal of these contaminants from the water source. The results of these studies will result in a treatment system that will help to improve the overall health of the Isongo population.

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The Culture in Linguistics: How Language Colors Childhood Imagination

Hannah Kurlansky

John Stolle-McCallister, Assistant Professor, Department of Modern Language, Linguistics, and Intercultural Communication



Though communication is often thought to be transparent, language is closely related to culture and inherently conveys societal differences. This research examines the relationship between language and perception, specifically the role in imagination and artistic creation of bilingual children. I wrote the text of a children's book using simple vocabulary in both English and Spanish, then asked bilingual children to illustrate the sets of texts. The meaning of the text remained the same, yet the different languages evoked different illustrations from the students. Though many factors may have contributed to the differences, I am exploring language as a principal influence. An analysis of the pictorial differences and similarities demonstrates the possible influence of language on interpretation and artistic output.

This work was funded through an Undergraduate Research Award from the UMBC Office of Undergraduate Education.

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Detached, Video Game

David Mai, Lisa Thompson, Erin Williams, Deborah Firestone, Brianna Paige, Stephanie Ruff, Jonovan Sanders, Shelvie Taylor
Marc Olano, Associate Professor, Department of Computer Science and Electrical Engineering

Detached is a video game in which we used a new game dynamic where, as a zombie, players journey to obtain the limbs of defeated foes to defeat a villainous Necromancer. The core gameplay has the player discover various combinations of limbs for tactical purpose. Challenges for animators in this game circled around creating a believable and manageable environment for the gameplay. Animators worked together creating a cohesive style for characters and the environment. In addition to the overall look of the game they worked diligently to depict the body language of undead creatures and to stimulate players during gameplay. Programmers were challenged to create an effective user interface and manage nesting of animated parts within the game environment. Furthermore, programming control schemes that felt natural to ensure smooth gameplay and enemy artificial intelligence behavior that were challenging to the player. Most importantly, the challenge of synchronization between both groups played a vital role in our successful teamwork.



This work was funded, in part, by gifts from Microsoft, Next Century Corporation, Northrup Grumman, NVIDIA, and Zynga.
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This Moroccan Life

Asif Majid

Steven McAlpine, Assistant Director, Interdisciplinary Studies

My yearlong study abroad experience resulted in an interdisciplinary play that highlights multiple themes - migration, transnational identity, human rights, gender, sexual harassment, and the Arab spring - specific to Morocco. In writing, I was influenced by Berthold Brecht's epic theatre structure and the performers of Marrakech's Djemaa el Fna, both of which are reflected in the interrupted frame story of *This Moroccan Life*. After researching Brecht's model and visiting Djemaa el Fna while still in country, I authored the play as part of an Independent Study Project for my study abroad program. After a semester's worth of rehearsals, the end result of this research is a production of *This Moroccan Life* to be held on May 12 in the UC Ballroom. At URCAD, I will chronicle the journey of interdisciplinary influence, contextualized process, and final product that is *This Moroccan Life*.



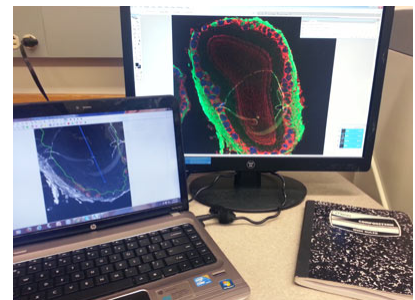
This work was funded by a David L. Boren Scholarship from the National Security Education Program, through the Sondheim Public Affairs Scholars Program at UMBC, and by an Undergraduate Research Award from the UMBC Office of Undergraduate Education.
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Role of TRPM5 in Survival of Olfactory Sensory Neurons

Hiba O. Malik, David Dunston

Weihong Lin, Associate Professor, Department of Biology

The survival of olfactory sensory neurons (OSNs) is influenced by sensory activity. We have previously found the transient receptor potential channel M5 (TRPM5) in a subset of OSNs that also express cyclic nucleotide gated channel A2 (CNGA2), an essential ion channel in the canonical pathway responsible for most odor transduction. OSN axons



terminate in glomeruli in the olfactory bulb. In *CNGA2* heterozygous (*CNGA2*^{+/-}) female mice, OSNs express either a functional or null *CNGA2* tagged by green fluorescence protein (GFP⁺). To determine whether TRPM5 activity in OSNs provides signal to sustain the survival of OSNs, we used an olfactory bulb mapping program GLOM.MAP and manually marked GFP⁺ glomeruli, that receive axons from OSNs with a null *CNGA2*, in the olfactory bulbs of mice expressing either TRPM5 or a null TRPM5. We found significantly higher intensity and density of GFP⁺ glomeruli in the ventral regions of the MOB of mice with functional TRPM5. This corresponds with previous evidence that OSNs expressing TRPM5 target to the ventral regions of the MOB, and supports our hypothesis that functional TRPM5 enhances the survival of OSNs. Future studies will explore whether a TRPM5 dependent pathway can activate OSNs.

This work was funded, in part, by NIH/NICDC grant DC009269, DC012831, and ARRA administrative supplement to WL
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AI Tishkach: A Story of Holocaust Survival in the Context of Modern Anti-Semitism

Adam Mayer

Susanne Sutton, Lecturer. Department of Modern Languages, Linguistics, and Intercultural Communication



Much literature and video documentation have been produced over the years in the hopes of preserving the memory of the Holocaust in the face of a rapidly dwindling eyewitness generation. As the number of Holocaust survivors continues to decline, a concomitant increase in denial of the Holocaust has been observed. This documentary aims to tell the story of two Holocaust survivors against the backdrop of twenty-first century anti-Semitism and Holocaust denial. The survivors are English-speakers and retell their experiences in English. The narrator, a direct descendant of the survivors, narrates the documentary in German, symbolizing the triumph of the oppressed against their persecutors. Ultimately, this work allows viewers to relate to the survivors' story and raises awareness of growing Holocaust denial.

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Identifying PRRSV Structural Components that Activate Regulatory T Cells and Diminish Protective Immunity

Chelsea R. Meh, Stephanie Michelle Todd, Tanya LeRoith

Tanya LeRoith, Assistant Professor, Department of Biomedical Sciences and Pathobiology



Porcine reproductive and respiratory syndrome (PRRS) is widespread throughout swine populations worldwide. PRRS is caused by an arterivirus, which causes many symptoms including abortion, weak or stillborn piglets, edema, and a spectrum of respiratory ailments. Though there is a vaccine currently used, the PRRS modified live virus (MLV) vaccine contains epitopes that induce regulatory T cells (Tregs), which may contribute to delayed protective immunity and lack of homologous protection. To determine which epitopes activate Tregs, the open reading frames (ORFs) of the PRRSV genome were isolated and inserted into a plasmid, which was then introduced into *Escherichia coli*. Translation was induced using IPTG and protein concentrations were quantified. Only ORF 4 produced the protein of interest so further experiments are required to produce proteins from the other ORFs. After this is accomplished, the proteins will be incubated with dendritic cells and analyzed for Treg induction. Lastly, specific epitopes will be identified and mutated to produce a more effective vaccine.

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Developing Technique through Professional Studies

Megan C. Pejsa, Amy Hahn, Nicole A. Magin, Chelsea R. Meh, Shashanna Eaton, Rachel Nicholson, Sydney Baker, Antonia N. Jankowiak, Kristen R. Kreider, Samantha M. Braatz, Andrea Owusu-Sekyere, Laura Lewis, Melissa M. Zarger, Nicole Gosnell
Lynnda M. Dahlquist, Professor, Department of Psychology



Pain intervention research examining video game distraction effectiveness is critical for young patients in hematology-oncology clinics, who could benefit from distraction during repeated uncomfortable medical procedures. However, there are no guidelines on how long one should train individuals with video games before they can use video game distraction as an effective pain-reduction tool. The current study investigated: (1) the effectiveness of video games as a distraction for acute pain management during exposure to an uncomfortable cold water stimulus (cold pressor), and (2) the impact of training duration on the video games' effectiveness as a distracter. A sample of 56 UMBC students underwent a baseline cold pressor trial, a pre-trial video game practice session, and a distraction cold pressor trial. Half of the sample had a four-minute pre-trial practice session and the other half had a 12-minute pre-trial practice session. Data collection for this experiment is complete and data verification is in progress. Subsequently, a mixed-design analysis of variance will be conducted to examine the effects of the video game distraction intervention and the length of pre-trial practice session on pain tolerance. Understanding how pre-trial practice sessions influence distraction intervention will serve as a useful guide for future distraction research designs.

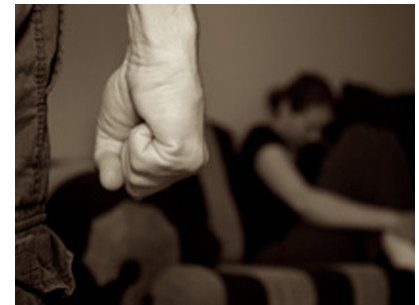
This work was funded through an Undergraduate Research Award from the UMBC Office of Undergraduate Education.

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Motivational Interviewing and Intimate Partner Violence Recidivism: An Eight Year Follow-Up on Men Who Batter

Megan Powell

Christopher M. Murphy, Professor, Department of Psychology



Intimate partner violence (IPV) has persisted in society as a major public health issue. The current study focuses on intervention for men who perpetrate IPV. The findings are generally divided and inconclusive, and experts in the field continue to struggle to find a universally-successful IPV intervention program. However, recent literature shows promise in the way of an approach called motivational interviewing (MI), which is meant to instill a sense of responsibility and a desire to change in batterers. Recent study findings have revealed improvements in IPV perpetrators' engagement into a change process when exposed to MI. The current research analyzes the long-term criminal recidivism rates over an eight year period after treatment, comparing groups of men who were treated either using MI or a standard intake (SI) at the Howard County Domestic Violence Center. Data on criminal recidivism is currently being organized and quantitative findings will be available to present at URCAD. If the findings demonstrate significantly lower recidivism for men who received MI, this will provide strong support for more IPV intervention programs to adopt MI methods, and will contribute to the search for more universally-effective treatments for male perpetrators of IPV.

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"Terms of Art": Interpreting Mamet's *Oleanna* for the Stage

Daniel Roeder

Susan McCully, Senior Lecturer, Department of Theatre

When David Mamet's *Oleanna* debuted in 1992, reviewers immediately contextualized the play as a response to the Clarence Thomas-Anita Hill sexual harassment scandal. The play was widely seen as a polemic against notions of political correctness in academia, and past productions have provoked notoriously misogynistic reactions from its audiences, with many critics labeling the play as inherently anti-feminist. My research attempted to challenge these perceptions. While directing the play, I have used script analysis skills, rehearsal techniques and the manipulation of promotional material to create a production that subverts anti-feminist insinuations and focuses on the power of language and the dangers of corrupt or inefficient pedagogy.

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Designing Online Content to Involve Parents in School-Based Prevention Programming

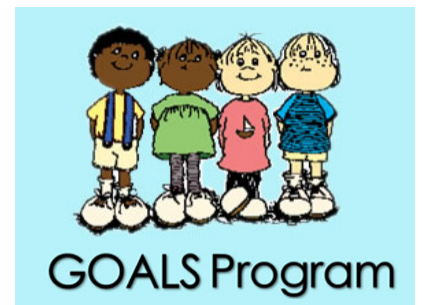
Sabrina A. Shah, Mary Shuttlesworth, Katherine Flynn, Jennifer Betkowski

David Schultz, Associate Professor, Department of Psychology

Previous research shows that parent involvement in school-based prevention programs is generally low. The current study examined the potential of online technology to involve parents in a school-based program to prevent child behavior problems, the GOALS Program. Thirty parents from two Head Start centers in Baltimore tested a website based on the GOALS Program and offered suggestions for website improvements. Website testing resulted in a finalized version of the GOALS website that is both user-friendly and contains content relevant to the target population. To market the website, the present study used various modalities (i.e., text messaging, newsletters) based on parent preferences. Although the present study aimed to implement various methods of contacting parents to encourage all the parents to access the website, results showed that only 20 percent of the parents visited the website. A possible direction for future research includes focusing on a small sample of parents in order to demonstrate the relationship between website engagement and improved child outcomes.

This work was funded, in part, by the UMBC Graduate Student Association.

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Interpretation in the Museum: An Ancient Gem in a Modern Context

Caitlin Smith

Timothy Phin, Lecturer, Department of Ancient Studies

Museums are often presented as repositories for material culture from ages past or distant places. They are storehouses where visitors can go to look at and learn from objects they might otherwise never see in their lifetimes. This presentation adopts a different perspective, examining the museum instead as a reflection of modern mental constructs and interpretations of a past which we can never objectively know. It explores the history of the Gem with Oedipus and the Sphinx from its creation in Hellenistic Greece to its current setting in the Walters Art Museum's massive collection, focusing on the gem's changing functions and meanings over the course of its existence. My research suggests that as the gem has evolved from a private object to a public one, its uniqueness has been largely subverted. Instead, it is only one among many objects which the museum categorizes and employs to convey a highly generalized modern interpretation of the people and culture of Ancient Greece.

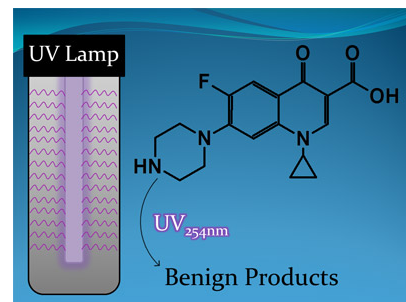


Wastewater Treatment of Fluoroquinolone Antibiotics Using UV-Based Processes

Sebastian J. Snowberger

Lee M. Blaney, Assistant Professor, Department of Chemical, Biochemical, and Environmental Engineering

With recent advancements in medicine, consumption of pharmaceuticals is steadily increasing and unprecedented amounts of pharmaceuticals are entering wastewater streams. Currently, wastewater treatment plants do not specifically treat for pharmaceuticals, and concentrations of pharmaceuticals are discharged to the environment and drinking water supplies. Health concerns of ingestion of pharmaceuticals through drinking water are widespread, and numerous studies have identified ecological impacts associated with pharmaceutical contamination. Fluoroquinolone (FQ) antibiotics are among the most frequently detected classes of pharmaceuticals in wastewater and surface water. As more wastewater treatment plants implement ultraviolet (UV)-based disinfection processes, we posit that there is potential for transformation of FQs into benign derivative compounds. To test this hypothesis, we studied the transformation of pharmaceuticals under UV irradiation and the UV-hydrogen peroxide (UV-H₂O₂) advanced oxidation process. For direct photolysis (UV only) testing, experimental solutions were prepared by spiking FQs into buffered deionized water with varying concentration of tertiary effluent (partially treated wastewater); hydrogen peroxide was added during UV-H₂O₂ testing. Fluoroquinolone concentrations were measured using high performance liquid chromatography. Analysis of the results from both methods, varying pH and concentration tertiary effluent, showed a superior transformation rate using UV-H₂O₂, which demonstrates the effectiveness of the process for water and wastewater treatment of pharmaceutical contaminants.



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Social Entrepreneurship: My Strategy to Bring about a Change on UMBC Campus

Yohka Tanaka

David Hoffman, Assistant Director of Student Life for Civic Agency, Office of Student Life

My project involves action research (oriented to practical problem-solving) to explore options for encouraging healthier eating on campus. My project has both an information gathering and analysis component and an advocacy component. My information-gathering addresses the question, "What changes to menu options in UMBC campus restaurants would result in students' consuming a more balanced diet and win support from UMBC's primary food vendor?" My advocacy has involved the relationship-building, pulse-taking and information-sharing needed to lay the groundwork for the potential changes I have identified. My research methods have included conducting a literature review relating to nutritional health; participating in meetings with administrators from UMBC and its primary dining services provider, Chartwells; soliciting opinions from students using social media; and conducting observation studies at campus eateries. I reviewed my data and refined my strategy with help from peers and instructors in my Civic Agency & Social Entrepreneurship course. What I found was that nutritional health is an enormous problem on U.S. college campuses; UMBC students are likely to respond favorably to more healthy options; and Chartwells is willing to experiment with menu changes. Chartwells is reviewing my specific proposal for the addition of an affordable menu option in The Commons.



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Overcoming Reproductive Barriers: Memoirs of Gay Fatherhood

Kevin Triplett

Carole McCann, Professor, Department of Gender and Women's Studies

Gay fatherhood identities are constructed in relational terms which configure access to alternative reproductive practices as a means of negotiating the contradictory traits of gay and fatherhood identities. Contemporary rhetoric has policed the boundaries of appropriate families and reproduction to exclude gay couples from being active participants. A content analysis engaging two memoirs, *The Kid: What Happened after My Boyfriend and I decided to go Get Pregnant* (1999) by Dan Savage and *A Gay Couple's Journey through Surrogacy: Intended Fathers* (2006) by Michael Menichiello, looks to critically examine how gay men speak regarding their assimilation of gay fatherhood identities through both adoptive and surrogate methods. Recognizing the concept of multiple positions of fatherhood helps to not only create legitimacy for same-sex parenting, but also debunk the naturalized assumptions regarding who can participate in reproduction based on gender and sexuality. The analysis is self-reflective on the procedures which limit authenticity of the memoirs as effective, yet complex texts.

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