Undergraduate Research and Innovation Symposium

Lyman Beecher Brooks Library
April 4, 2019
9 a.m. until 2 p.m.

AN EXPLORATION OF UNDERGRADUATE RESEARCH ACROSS THE DISCIPLINES

• POSTER PRESENTATIONS
• ORAL PRESENTATIONS
• LIVE PERFORMANCES

NORFOLK STATE UNIVERSITY
ACADEMIC DIVISIONS PARTICIPANT LISTING

COLLEGE OF LIBERAL ARTS
COLLEGE OF SCIENCE, ENGINEERING, AND TECHNOLOGY
ROBERT C. NUSBAUM HONORS COLLEGE
SCHOOL OF BUSINESS
SCHOOL OF EDUCATION
ETHELYN R. STRONG SCHOOL OF SOCIAL WORK

THIS IS A TITLE III FUNDED EVENT.

“Research is formalized curiosity. It is poking and prying with a purpose.”
Zora Neale Hurston
WELCOME!

We welcome you to the 2019 Undergraduate Research & Innovation Symposium in the beautiful Lyman Beecher Brooks Library! We are delighted to present just a sampling of the tremendous scholarly and creative works of Norfolk State University’s talented undergraduate students. This year’s symposium will showcase more than 40 oral and poster presentations representing multiple disciplines across NSU’s five colleges and schools.

We extend a heartfelt thank you to the students and faculty mentors who so graciously agreed to share their ideas with the Spartan community. It is our sincere hope that students who were unable to present at this year’s symposium will be inspired to develop a scholarly project for presentation at the 2020 Undergraduate Research & Innovation Symposium.

We would also like to thank the members of the Planning Committee: Page Laws, Sonji Crum, Steve Opfer, and Robin Marable. We welcomed the additional insight and creativity. Thank you again for participating in this important scholarly event.

With Warmest Regards,

Karen Y. Holmes, Ph.D.
Associate Professor
Department of Psychology
Co-Chair, Undergraduate Research & Innovation Symposium

Claire E. Hoffman
Coordinator of Access Services
Lyman Beecher Brooks Library
Co-Chair, Undergraduate Research & Innovation Symposium
Norfolk State University

Academic Divisions Participant List

College of Liberal Arts

College of Science, Engineering, and Technology

Robert C. Nusbaum Honors College

School of Business

School of Education

Ethelyn R. Strong School of Social Work
8:00 AM - 8:45 AM  REGISTRATION
LBB Library, Circulation Area

9:00 AM - 9:10 AM  GREETINGS / OPENING REMARKS
LBB Library, Rotunda
Dr. Page Laws, RC Nusbaum Honors College

9:10 AM – 12:30 PM  POSTER PRESENTATIONS
LBB Library 2nd Floor

10:00 AM – 11:45 AM  ORAL PRESENTATIONS
LBB Library 1022
LBB Library 1040
LBB Library Writing Center

12:00 PM –12:15 PM  PERFORMANCE (LBB Library, Rotunda)
McCoy, Niambi A.  Sociology, Senior
"Voice of the Black Woman: Storytelling, Agency and the African Aesthetic"

12:15 PM - 12:30 PM  CLOSING REMARKS (LBB Library, Rotunda)
Dr. Karen Y. Holmes, Co-Chair, Undergraduate Research & Innovation Symposium
NSU Undergraduate Research Symposium 2019
ORAL PRESENTATIONS

(Complete abstracts are available below.)

10:00 AM-10:45 AM

LBB Library, Room 1022  Moderator: Karma Gaines-Ra    Judges: Michelle Rozga, Shannon Ponack
Hayes, Myahh N.    “The Depiction of Sexual Consent and Misconduct in Contemporary Black Film”
Mayer, Johnny W.    "Black Directors as Social Activist"

LBB Library, Writing Center  Moderator: Cyanna Rodney-Hill    Judges: Donna Wolf, AprilFaye Manalang
Citizen, Sandreca    “Wilson versus Brustein: A Reconnaissance on the Perspective of Political and Artistic Expression within American Culture”
Jackson, Aysia A.    "400 Years of Misrepresentation: Analyzing Works and Impacts of Past and Present Negative Black Media"

LBB Library, Room 1040  Moderator: Marlene Ballou    Judges: Elsie Barnes, Joy Cooley-Doles
Cerja IV, Thomas    "Disciplining Self-Efficacy: Mass Incarceration of African American and Hispanic Students"
Taliaferro, Aniya M.    "Surviving R. Kelly: The Power of Documentaries in the Fight for Justice"

11:00 AM -11:45 AM

LBB Library, Room 1022  Moderator: Karma Gaines-Ra    Judges: Rosalie Kiah, Ophera Davis
Price, Ayevi J.    "Fearful Reality: The Genre of Black Horror in Film and Literature"
Price, Malya A.    "The Depiction and Correction of Stereotypes of Black Women in Recent Films"
LBB Library, Writing Center  Moderators: Cyanna Rodney-Hill / Patricia Saunders Nixon  Judges: Felisa Smith, Aliecia McClain, Patricia Saunders Nixon

Varner, Baldwin-Akin F.  "Modeling surface acoustic wave coupled surface plasmon resonance in layered structures"

Barnes, Jordan I.  "The Effects of the Jazz Age on Modern Behavior and Music"

LBB Library, Room 1040  Moderators: Marlene Ballou / Bernadette Holmes  Judges: Karen Boyd, Lenora Armstrong

Rogers, Liquitha M.  "Young People with Geriatric Problems: Millennials’ Alcoholic Cirrhosis of the Liver”

Williams, Jenee  "PTSD in the Black Community: When the War comes to your front door"
NSU Undergraduate Research Symposium 2019

POSTER PRESENTATIONS

(Complete abstracts are available below.)

Posters are located on the second floor of the library throughout the north and south lobbies on either side of the rotunda.

Alicea-Kuilan, Kevin R.  Health, Physical Education and Exercise Science,  Junior

Poster #: 417

Additional Presenters: Tiffany Barnhart

"Army ROTC cadet ranking doesn't impact their functional movement pattern"

Bass, Malcolm  Biology

Poster #: 436

Additional Presenters: Nazir Barekzi

"A Journey of Phage Discovery for Bassalto"

Bond, Morgan M.  English and Foreign Languages,  Freshman

Poster #: 422

"Traditional medicine v Hollistic medicine"

Boyd, Joedy  Biology

Poster #: 435

Additional Presenters: Nazir Barekzi
"Characterization of Mycobacteriophage Using Direct or Enrichment Isolation Techniques"

Brown, Mikellah N.   Social Work,   Senior

Poster #: 421

"Understanding How Gun Violence Impacts the African American Community"

Bunch, Ashaila T.   Social Work,   Senior

Poster #: 432

"Perpetrators of Child Sexual Abuse"

Carmichael, Amoni C.   Early Childhood/Elementary & Special Education,   Sophomore

Poster #: 408

Additional Presenters: Collette Kieth, Brittany Mcghee, Kaylah Moseley-Pressley, Christina Pinnock, Anisah Lee

"The use of technology mathematics teaching and learning: A decade of reflections from in-service and preservice educators"

Chambers, Kiara E.   Engineering/Materials Science/Physics,   Freshman

Poster #: 427

"Betz & Ohm's Law and its Application in Windmills"

Chapman, Nechelle K.   Social Work,   Senior

Poster #: 428

"Reconsidering Self-Care in Social Work"
Dorsey, Tyleama S.  Early Childhood/Elementary & Special Education,  Junior  

Poster #: 406  
Additional Presenters: Jalisa Benson, Sheja Leary, Jada Minor, Maysa Whitley, Ashley Judge  

"Using positive oral response in elementary math classroom”

Edwards, Oshay M.  Psychology,  Sophomore  

Poster #: 415  

"Relationship Between Religion and Psychology: Can we Conclude that Religion and Spirituality are Entwined with a Person’s Psychological Well-being and Stress”

Hawkins, Shanita M.  Social Work,  Junior  

Poster #: 418  

"Biopsychosocial: Reactive Attachment Disorder"

Herrera, Josiah A.  Health, Physical Education and Exercise Science,  Senior  

Poster #: 425  

"Phase 2 of The Enhanced Physical Readiness Education and Training Partnership (ERPT)”

Jackson, Tazhane J.  Social Work,  Senior  

Poster #: 419  

"Domestic Violence Against Women"
Lofton, Thandiwe M.  Biology,  Freshman

Poster #: 429

Additional Presenters: Keyani Gregory, Desyni Hubbard, Marcia Neblett, Aylin Marz

"Enhancing Creativity in Biology Using Art"

McCaster, Ajari

Poster #503

“The Deconstruction of Law and Order Digital Forensics Process @ Norfolk State: A Socio-Cybersecurity Analysis”

Nance, Dasiree M.  General Studies,  Junior

Poster #: 413

"Art in Activism"

Page, Zhanasia K.  Social Work,  Senior

Poster #: 416

"The Impact of Trauma Sex Trafficking has on Children”

Pina, Lauren A.  Social Work,  Senior

Poster #: 409

"The Future Predictive-Analysis Algorithms in Social Work Practice"

Quivers, Kena L.  Mathematics,  Junior
Poster #: 411

Additional Presenters: Ariyon Robinson, Kayla Jordan, Dayna Doster-Fields, Azja Cotton

"Calculator Use in Classrooms Serving Young Children"

Rogers, Liquitha M. Sociology, Senior

Poster #: 401

"Young People with Geriatric Problems: Millennials' Alcoholic Cirrhosis of the Liver"

Rogers, Liquitha M. Sociology, Senior

Poster #: 504

“Examining Experiential Learning Outcomes: Cybersecurity Content in Social Problems Classes”

Vaughan, Danielle C. Social Work, Senior

Poster #: 431

"Mental Health with African American Males"

Poster Presentation Judges

<table>
<thead>
<tr>
<th>Name</th>
<th>Poster Presentation Judges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arasho</td>
<td>Wondwossen</td>
</tr>
<tr>
<td>Armstrong</td>
<td>Melody</td>
</tr>
<tr>
<td>Bahoura</td>
<td>Messaoud</td>
</tr>
<tr>
<td>Brisgone</td>
<td>Regina</td>
</tr>
<tr>
<td>Curiel</td>
<td>James</td>
</tr>
<tr>
<td>Darden-Woody</td>
<td>Beatrice</td>
</tr>
<tr>
<td>D'Silva</td>
<td>Joseph</td>
</tr>
</tbody>
</table>

Poster 

<table>
<thead>
<tr>
<th>Poster #</th>
</tr>
</thead>
<tbody>
<tr>
<td>429, 435, 436</td>
</tr>
<tr>
<td>417, 419, 504</td>
</tr>
<tr>
<td>427, 435, 436</td>
</tr>
<tr>
<td>408, 409, 418</td>
</tr>
<tr>
<td>409, 416, 419, 425</td>
</tr>
<tr>
<td>406, 417, 425</td>
</tr>
<tr>
<td>422, 429, 436</td>
</tr>
<tr>
<td>Last Name</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Ericksen</td>
</tr>
<tr>
<td>Ferguson</td>
</tr>
<tr>
<td>Fischer</td>
</tr>
<tr>
<td>Fitzgerald</td>
</tr>
<tr>
<td>Floyd</td>
</tr>
<tr>
<td>Ford</td>
</tr>
<tr>
<td>Gadsden</td>
</tr>
<tr>
<td>Kamatchi</td>
</tr>
<tr>
<td>Park</td>
</tr>
<tr>
<td>Thomas</td>
</tr>
<tr>
<td>Turner</td>
</tr>
<tr>
<td>Wallace</td>
</tr>
<tr>
<td>Ward</td>
</tr>
<tr>
<td>Washington</td>
</tr>
<tr>
<td>Wilkens</td>
</tr>
<tr>
<td>Ward</td>
</tr>
<tr>
<td>Washington</td>
</tr>
<tr>
<td>Wilkens</td>
</tr>
</tbody>
</table>
Alicea-Kuilan, Kevin R.  
Health, Physical Education and Exercise Science,  Junior

Poster #: 417

Additional Presenters: Tiffany Barnhart

"Army ROTC cadet ranking doesn't impact their functional movement pattern"

Introduction: The Army Reserve Officer’s Training Corps (AROTC) develops students to become effective leaders in careers in the military and civilian sector. Cadets classifications based on college academic year. Year(s) 1=MS1; 2=MS2; 3=MS3. Functional Movement Screening (FMS) can identify imbalances in mobility and stability using seven fundamental movement patterns. Methods: 16 AROTC cadets (7 females; age 22±3) volunteered for FMS. Sum of the seven individual tests (scores 1-3) comprised the total score for each cadet. Use of a one-way analysis of variance (ANOVA) to determine differences between sex and cadet level with alpha level at p<0.05. Results: No significant differences were found between MS1 (16.5 ±2), MS2 (14 ±2), MS3 (15±2). Additionally, female (16±2) and males (15±2) did not significantly differ in FMS total score. Conclusion: Findings indicate cadet classification and sex don’t significantly influence functional movement. While not significant, females tended to have greater overall FMS scores than males.

Mentor: Kathleen Thomas, NSU, Health, Physical Education and Exercise Science, Professor

Barnes, Jordan I.  
History & Interdisciplinary Studies,  Junior

Oral Presentation

"The Effects of the Jazz Age on Modern Behavior and Music"

This research project examines the role of Jazz in the turmoil and strife of African Americans during the Roaring Twenties Era (1920-1929). African American musicians helped change the social culture of the Roaring Twenties Era by developing an intellectual and artistic renaissance within their segregated community. As Jazz became more popular, it crossed racial barriers and transformed the minds of many in relation to being constrained by the government. Thusly, the idea of Jazz emerged and became the sense of freedom and fresh air that released the constricted grip of the government on the country. Jazz is an art form that cannot be contained,
organized, or formatted; thus, allowing the sense of individuality and expression. Jazz, in connection with speakeasies and rent parties, served as a loophole around a rather organized and contained idea, which allowed growth and happiness. This renaissance has contributed to numerous musical and behavioral patterns today.

Mentor: Janira Teague, NSU, History & Interdisciplinary Studies, Assistant Professor

**Bass, Malcolm**   Biology

*Poster #: 436*

Additional Presenters: Nazir Barekzi

*A Journey of Phage Discovery for Bassalto*

Our lab works with a model organism (Mycobacterium smegmatis mc2155) that is biosafety level 1 and much safer for undergraduate research. The significance of this research is threefold: (1) the novel phage discovered and isolated could be used as an alternative treatment to pathogenic bacteria and multi-drug resistant Mycobacterium; (2) provide a better understanding of phage genomics and horizontal gene transfer; and (3) provide a better understanding of phage-bacteria interaction. Methods and Controls: The control host was Mycobacterium smegmatis. The control phage was phage that had been previously isolated and annotated. Bassalto was isolated and the DNA was extracted from a high titer lysate and sequenced using an Illumina MiSeq Next Generation Sequencer. Hypothesis: If we use a non-pathogenic Mycobacterium to isolate novel phage, then we can use newly discovered and isolated phage as an alternative to antibiotics against Mycobacterium tuberculosis.

Mentor: Nazir Barekzi, Biology

**Bond, Morgan M.**   English and Foreign Languages,   Freshman

*Poster #: 422*

A Traditional medicine v Hollistic medicine *

I began research in early February in regards to the effects of the implementation of holistic medicine in the world of western medicine. I researched the pros and cons of the outlook on implantation as well as countries considered less developed than the United States who are slowly implementing it. I also talked about the effect of the use of traditional medicine along with pharmaceuticals and how they have placed a negative effect on the biochemical wiring of
our bodies. Holistic medicine intends to allow physicians to go through healing more naturally. The idea is that as physician assess the patient as a whole (mind body spirit) and allow healing in all areas so illness and disease are not recurrent.

Mentor: Shannon Ponack, NSU, English and Foreign Languages, Professor

Boyd, Joedy    Biology

*Poster #: 435*

Additional Presenters: Nazir Barekzi

"Characterization of Mycobacteriophage Using Direct or Enrichment Isolation Techniques"

The aim of the current study was to isolate and characterize novel bacteriophage using the host bacterium *Mycobacterium smegmatis* mc2155. *M. smegmatis* is a soil bacterium and an ideal host for isolating mycobacteriophage. Soil samples were collected from campus grounds at Norfolk State University. Bacteriophage were isolated from the soil samples through direct and enrichment procedures. The efficiency of each isolation method was determined. Direct isolation and purification methods yielded distinct phage including, JoePord, Pcols, Jambo, Joeran and RecJoe. The correctness of the following hypothesis was determined: If enrichment isolation is productive then there will be an increase in bacteriophage and studying the viral-host interaction will lead to a better understanding of phage and bacterial life cycles. The overall goal of studying mycobacteriophage is to advance our understanding of phage diversity and microbial ecology in the tidewater region of Virginia.

Mentor: Nazir Barekzi, Biology

Brown, Mikellah N.    Social Work, Senior

*Poster #: 421*

"Understanding How Gun Violence Impacts the African American Community"

Gun violence in the African American community has become pervasive, socially, emotionally, and mentally impacting children and families. Thorough research indicates a correlation between several mental health issues (PTSD, depression, delinquency, etc.) and exposure to gun violence. Victims of homicide are neglected by policymakers, forcing natives to fearfully adapt to their community. This creates ruthless environments in predominantly African American neighborhoods. Living in an environment perpetuated by gun violence becomes
second nature, decreasing the likelihood of escaping violence and poverty. I intend to bring awareness to the needs of the vulnerable population with respect to gun violence and define clear and effective methods to restore the development of youth impacted by trauma.

Mentor: Sandra Williamson-Ashe, NSU, Master of Social Work, Assistant Professor

Bunch, Ashaila T.   Social Work,   Senior

Poster #: 432

"Perpetrators of Child Sexual Abuse"

Child sexual abuse is defined as any interaction between a child and an adult (or another child) in which the child is used for the sexual stimulation of the perpetrator or an observer. Sexual abuse can include both touching and non-touching behaviors, Non-touching behaviors can include voyeurism (trying to look at a child’s naked body), exhibitionism, or exposing the child to pornography. Risk factors for perpetrators of child sexual abuse includes the perpetrators amount of contact with children, degree of sexual preoccupation with children, juvenile and adult antisocial behavior, frequency of prior sexual offenses, psychiatric problems, and social status of perpetrators and history of alcohol and substance use disorders. There are several preventions available for perpetrators including, Primary Prevention, Secondary Prevention, and Tertiary Prevention. There are also several treatments that exist, these include, Cognitive Behavior Therapy (CBT), multisystemic therapy (MST), and surgical or pharmacologic treatments.

Mentor: Viola Vaughen-Eden, NSU, PHD in Social Work, NA

Carmichael, Amoni C.   Early Childhood/Elementary & Special Education,   Sophomore

Poster #: 408

Additional Presenters: Collette Kieth, Brittany Mcghee, Kaylah Moseley- Pressley, Christina Pinnock, Anisah Lee

"The use of technology mathematics teaching and learning: A decade of reflections from in-service and preservice educators”

Technology is everywhere in the world especially in mathematics. Research shows how technology can support children’s learning mathematics, which involves critical thinking skills. Research shows that technology can be an aid to learning mathematical concepts. When
technology is used in elementary mathematics teaching, it can positively impact children’s learning and confidence in classrooms serving and can significantly impact growth and improvement in overall mathematics skills. Technology in classrooms serving young children builds upon activities such as mathematics games, mathematics problems, and other mathematics activities. Our research examines how technology affects young children’s learning mathematics, how technology is used in mathematics classrooms, and how technology can impact learning, as well as teacher attitudes. Additionally, our research includes reflections from inservice teachers about trends in the use of technology in classrooms serving young children.

Mentor: Mona Bryant-Shanklin, NSU, NA, Professor

Cerja IV, Thomas  History & Interdisciplinary Studies, Sophomore

Oral Presentation

"Disciplining Self-Efficacy: Mass Incarceration of African American and Hispanic Students"

This research project investigates: 1) How does the American Public-School Disciplinary System (APSDS) impact the self-efficacy of African American and Hispanic Students? 2) How can we empower them to strengthen their self-efficacy? Self-efficacy is one’s beliefs about their innate capabilities to achieve goals. This study will explore how APSDS can impact one of students’ determinants to success: their self-efficacy. Confident students (strong self-efficacy) expect their high quality of work to lead to the accumulation of benefits. The opposite is true for students who lack confidence (Huang ’03). These minority students can initiate innovative work, but that potential is reliant on their self-efficacy. This research proposes how we can empower the self-efficacy of students. Essentially, this project is important because public education is not only a powerful tool, but a right to all students to have it work in their best interests; elevating their intellect and output in our society.

Mentor: Aprilfaye Manalang, NSU, History & Interdisciplinary Studies, Assistant Professor

Chambers, Kiara E.  Engineering/Materials Science/Physics, Freshman

Poster #: 427

"Betz & Ohm's Law and its Application in Windmills"

Electrical Engineers: Wind Turbines and The Use of Calculus. Wind energy is a free, renewable energy that has little environmental concerns and is form of solar energy. The terms “wind
“energy” and “wind power” describe the process by which the wind is used to generate mechanical power or electricity (windis.gov). According to awea.org, the way wind turbines work is as follows: “When the wind blows past a wind turbine, its blades capture the wind’s kinetic energy and rotate—mechanical energy. The rotation turns an internal shaft connected to a gearbox, which increases the speed of rotation by a factor of 100. That spins a generator that produces electricity.” Engineers use three methods to calculate wind energy produced by turbines: Mechanical Energy Betz’ Law Newton’s Second Law. This presentation will focus on Betz and Ohm’s Law.

Mentor: Shahrooz Moosavizadeh, NSU, Mathematics, Department Head

Chapman, Nechelle K. Social Work, Senior

Poster #: 428

"Reconsidering Self-Care in Social Work"

Social workers represent a significant segment of human service professionals in the public and private sectors. Social workers are taught to recognize the importance of self-care but results reveal that social workers practice self-care at a moderate level. Findings indicate that social workers are aware of their need to practice self-care but due to their caseload they choose to limit their self-care practice or negate self-care all together. Self-care has been showed to reduce factors such as burnout, secondary traumatic stress, and fatigue. Due to the high volume workload that social workers face during their workdays, it is imperative that social workers practice a form of self-care daily.

Mentor: Charles Birore, NSU, Bachelor of Social Work, Professor

Citizen, Sandreca Business,

Oral Presentation

“Wilson versus Brustein: A Reconnaissance on the Perspective of Political and Artistic Expression within American Culture”

This paper will discuss the intransigent perspective of August Wilson and Robert Brustein, on the topic of color-blind casting in American Theatre and the controversies that followed their disagreement. The quarrel between Wilson and Brustein pinpointed the very issues regarding race that otherwise would have led many to a diffident and vexatious conversation. Wilson believes that black theatre in its essence serves the purpose of empowering African American
culture and mitigating the obligation for cultural assimilation. Whereas Brustein believes, that is only through coexisting with myopia towards culture can that culture expand past its racial borders. Their conversations created a tacit disarray about the governance of culture and politics within American Theatre.

Mentor: Page Laws, NSU, English and Foreign Languages, Professor

**Dorsey, Tyleama S.**  Early Childhood/Elementary & Special Education,  Junior

*Poster #: 406*

Additional Presenters: Jalisa Benson, Sheja Leary, Jada Minor, Maysa Whitley, Ashley Judge

"Using positive oral response in elementary math classroom"

Many children, whether in public or private school setting(s) have experienced raising their hands and being told that their answer is wrong. After such an encounter, the child may start to feel discouraged. When it comes to mathematics, many children may to feel anxious and apprehensive about giving oral responses, especially during oral instruction. Positive corrections can help children be more confident with providing oral responses. Positive corrections may also assist children with retaining information and ultimately improve their class performance. Our research looks at key issues in identifying the effects of positive oral responses of teachers during mathematics instruction. Our research also explores children’s beliefs and understanding of mathematics.

Mentor: Mona Bryant-Shanklin, NSU, Early Childhood/Elementary & Special Education, Professor

**Edwards, Oshay M.**  Psychology,  Sophomore

*Poster #: 415*

"Relationship Between Religion and Psychology: Can we Conclude that Religion and Spirituality are Entwined with a Person’s Psychological Well-being and Stress"

Religion has been around since the beginning of time. It was when matters seemed bleak that people relied heavily on their faith to cope with their respected realities. 140 years ago, psychology emerged as a scientific discipline. Psychology is the study of the mental processes and behavior of an individual. The credit was awarded to Wilhelm Wunt when he founded the first laboratory dedicated to psychological research in Leipzig. With psychology being a
relatively new area of study, there is much left to be discovered. This leads me to question whether religion and spirituality are entwined with a person’s psychological well-being and stress. The study comprises of historical background context, correlational research with support from scholarly peer-reviewed articles, and a survey conducted from the population of Norfolk State University’s department of psychology students.

Mentor: Ernestine Duncan, NSU, Psychology, Department Head

Hawkins, Shanita M.  Social Work,  Junior

Poster #: 418

"Biopsychosocial: Reactive Attachment Disorder"

Identifying effective treatment methods for children diagnosed with Reactive Attachment disorder is essential to reconciling pragmatic relationships with caregivers. Reactive attachment disorder is a trauma informed disorder that may have lasting effects on development. Cumulative risk factors such as abuse and neglect have been reported to impact youth as young as 9 months of age. Children with this disorder may may exhibit poor social skills throughout their adolescence years. Research has implicated that stabilizing the child’s environment has shown some promise in improving symptomatic affects in children with RAD. Agencies committed to serving youth between the ages of 5 through 18 may counter the potential long term effects on development and rebuild the social functioning for some children.

Mentor: Sandra Willamson-Ashe, NSU, PHD in Social Work, Professor

Hayes, Myahh N.  Psychology

Oral Presentation

“The Depiction of Sexual Consent and Misconduct in Contemporary Black Film”

There has been an increasing concern for salient consent being given within sexual contexts. Common misunderstandings that occur in these settings must be avoided. A deeper understanding of the typical pragmatics of sexual consent and how it can be more realistic and accessible to any party involved is very much needed in order to work towards preventing further instances of sexual misconduct. By extensive research into the pragmatic patterns of these unfortunate acts, through self-examination and incrimination, we can make strides in clarifying the types of miscommunications faced. Instances for sexual interpretation will be taken from clips of Spike Lee’s She’s Gotta Have It (1986) and Gina Prince-Bythewood’s Love &
Basketball (2000). Since the media have the strongest influence on how consent is internalized, this will be the best method to see where the miscommunication lies emanating from the screen to the people.

Mentor: Page Laws, Robert C. Nausbaum Honors College, Dean

Herrera, Josiah A. Health, Physical Education and Exercise Science, Senior

Poster #: 425

"Phase 2 of The Enhanced Physical Readiness Education and Training Partnership (ERPT)"

A high level of fitness is required to be a successful military member. An effective strategy to improve physical fitness training may help lower musculoskeletal injury rates and improve performance. Therefore, the purpose of this study is to design programs to combat the barriers to implementation of a successful fitness program. The Army Reserve Officer’s Training Corps (AROTC) and Exercise Science (ES) department collaborated to improve the educational, motivational, and physical readiness of cadets entering the program. This project provided data that will allow for a broader use of the intervention. The subjects were all NSU Cadets, with significant challenges in their ability to pass and/or maintain fitness and body composition. Self-reported surveys on motivation, history of physical activity and barriers were administered. This project identified challenges and successes of tracking profile data including fitness, body composition and injury prevention in order to determine outcomes of a collaborative fitness program.

Mentor: Donna Wolf, NSU, Health, Physical Education and Exercise Science, Assistant Professor

Jackson, Aysia A. General Studies, Junior

Oral Presentation

"400 Years of Misrepresentation: Analyzing Works and Impacts of Past and Present Negative Black Media"

400 years after the landing of African slaves, African Americans are enjoying seeing their own superheroes, judges, Presidents, and so much more in many different forms of media. America should hope to see this positive representation continue to increase over time; however, the country cannot fully move forward without reflecting on its past. For the last 400 years, African Americans have been misrepresented in many different forms of media. This study will analyze the effects of famous negative representations of African Americans during different eras that
impacted them the most, including: slavery, the Jim Crow era, the Civil Rights era, the 2000s, and today. The researcher will analyze famous works made throughout time and conduct interviews to gather data on the impact of the 400 years of misrepresentation of African Americans in media.

Mentor: Page Laws, NSU, General Studies, Dean

Jackson, Tazhane J. Social Work, Senior

"Domestic Violence Against Women"

Domestic violence (DV) is an act of violence that occurs physically, sexually, emotionally, and psychological within the home. Risk factors of DV include physical injury, psychological trauma, and even death. Each year, 1.3 to 5.3 million women in the United States experience intimate partner violence. Nationwide 1,615 females were murdered by males in single victim/single offender incidents in 2013, at a rate of 1.09 per 100,000. Short term and long term effects include women's physical injuries and mental trouble either interrupts, or ends, their educational and career paths leading to poverty and economic dependence. Family life gets disrupted which has a significant effect on children, including poverty (if divorce or separation occurs) and a loss of faith and trust in the institution of the family. These sequelae not only affect the quality of life of individuals and communities, but also have long-term effects on social order and cohesion.

Mentor: Nathaniel Worley, NSU, NA, Professor

Lofton, Thandiwe M. Biology, Freshman

"Enhancing Creativity in Biology Using Art"

Creativity is crucial for success in sciences. Focusing on the significance of visual imagery of the micrographs used in tissue biology (histology), we designed a histology-art project aiming to enhance creative thinking in our students. We had a group of art students visit the histology class to be instructed by the biology professor and students on histology topics. Each histology student then defined a concept important in histology, and explained the concept to their art
partner with the goal of generating a creative product to visually represent the concept. The art professor then instructed all students on the art disciplines of metamorphosis and surrealism to loosely structure the exercise of creating the visual product. Based on student surveys to evaluate gains from the project, we concluded that interactions of histology and art benefit both disciplines by improving students’ abilities to think, interpret, and create.

Mentor: Aylin Marz, NSU, Biology, Assistant Professor

Mayer, Johnny W. General Studies, Junior

*Oral Presentation*

"Black Directors as Social Activist"

Influential directors have utilized their medium to depict African Americans and their social oppression through film. Each director conveys an image of the African American, corresponding to the time of the film’s production. During these portrayals, ethical messages are entwined within the plot, so that the audience is educated about certain social injustices. This was done in movies ranging from Singleton’s Boyz n the Hood (1991) to Riley’s Sorry to Bother You (2018). Boots Riley, well known for his anti-racism activism, has used his voice on several platforms. In addition to directing, Riley has combined music and writing to spread social messages throughout his career.

Mentor: Page Laws, NSU, General Studies, Dean

McCaster, Ajari

*Poster #503*

“The Deconstruction of Law and Order Digital Forensics Process @ Norfolk State: A Socio-Cybersecurity Analysis”

**Background:** This poster presents NSU’s efforts to integrate cybersecurity lessons into Criminal Justice courses. The outcome from integrating a Digital Forensic Evidence module into the American Court System course is the focus of this presentation. Students were taught the process of gathering digital forensics in hands-on, experiential learning sessions. The rational for this module is that students have better learning outcomes if they experience the concepts.

**Methodology:** My poster will be composed of qualitative data collected from NSU students in Spring 2018. The students watched a 10-minute clip from Law and Order-SVU. They then conducted a content analysis of the forensics process in groups of six.
**Hypothesis:** The driving hypothesis will be: Ha: Students learning outcomes were more explicit because of the hands-on activities.

**Results:** After review the clip, most group concluded that the digital forensic process was followed. They students used a standard evidence form for the content analysis.

Mentor: Carlene Turner, PhD.

---

**McCoy, Niambi A.** Sociology, Senior

*Performance*

"Voic of the Black Woman: Storytelling, Agency and the African Aesthetic"

African stories are drawn upon the collective wisdom and tradition of the diasporic people. The power of storytelling lies in its potential to change the attitude surrounding social issues, political climate and the narrative of black experience. Black women’s storytelling is a critical tool used in the intersectional movement of Black feminism and womanism. In the late 1800’s Sociologist Anna Julia Cooper created A Voice from the South which is considered to be the beginning of the black feminist and womanist movement. My performance incorporates the Literature of Anna Julia Cooper A Voice from the South, Patricia Hill Collins Black Feminist Thought and Langston Hughes Negro Mother using an interdisciplinary approach to examine the sociological navigation tool of storytelling.

Mentor: Yuying Shen, NSU, Sociology, Professor

---

**Nance, Dasiree M.** General Studies, Junior

*Poster #: 413*

"Art in Activism"

Art has been used as a form of expression since the beginning of time, but it has also been used to inform people of other worldviews and experiences. Artmaking and education have been used as vehicles for social justice and for social and political activism (Campana, 2011). Art has an important place in social movements, change, and culture. “Activism through art encompasses a variety of work toward social and political consciousness, empowerment, and change (Campana, 2011).” Art plays such a pivotal role in expressing the experiences and attitudes of African Americans throughout history yet, in my experience, it has been widely underappreciated and overlooked in African American history courses. By examining the art of
the Civil Rights Movement, one can understand the role art plays in activism and why it deserves more attention in African American studies.

Mentor: Janira Teague, NSU, History & Interdisciplinary Studies, Professor

Page, Zhanasia K. Social Work, Senior
Poster #: 416
"The Impact of Trauma Sex Trafficking has on Children"

Human trafficking can be described as a human rights violation and a global public health issue. Domestic minor sex trafficking, also known as child sex trafficking, is the commercial sexual abuse of selling, buying, or trading children in sexual acts and this a form of child maltreatment that affects their well-being and causes trauma. The sexual act involves engaging in a child, younger than 18 years old, in pornography, prostitution, and other sexual services. This study represents the impact trauma has on the children, the challenges faced while helping their recovery, as well as the prevalence and risk factors reported (Kotrla, 2010).

Mentor: InSoo Chung, NSU, PHD in Social Work, Professor

Pina, Lauren A. Social Work, Senior
Poster #: 409
"The Future Predictive-Analysis Algorithms in Social Work Practice"

Harnessing technology for social good is a grand challenge for social work and society. The use of predictive-analysis algorithms (PAA) to assess future client risk may lead to implications for social work practitioners who encounter this intervention method. PAA are software applications designed to predict behavior or action based on pre-determined variables. Those who champion the use of PAA believe bias and inequality of variables are reduced with the use of PAA. Critics raise concerns about the potential violation of civil liberties based on suspected future offense. Social work practitioners must remain competent in technological advancements to ensure that the digital divide, between those with access to technology and marginalized groups who do not readily have access to technology, begins to close. The purpose of this research study is to determine if future social work practitioners find PAA useful in social work practice.

Mentor: Dr. Colita Fairfax, NSU, Bachelor of Social Work, NA
Price, Ayevi J.  General Studies,  Junior

Oral Presentation

"Fearful Reality: The Genre of Black Horror in Film and Literature"

The recent rise of Black horror movies has opened discussions about the influence of historical realities on those movies, as well as the validity of including black characters in the horror genre. Black-made horror entertainment often holds a message on the state of race relations and the Black experience. These messages often express a call for awareness in real life, if not only representation in the genre at all. The researcher will examine the movie “Get Out,” directed by Jordan Peele, as well as the collection “Bloodchild and Other Stories” by Octavia Butler. The examination will be focused on story content and reader/viewer reception, including overt and covert messages on race relations and racial society. The researcher will analyze any central black characters for their portrayal and contribution to minority representation, and their experiences throughout the media, which may reflect real experiences from real-world history.

Mentor: Page Laws, NSU, English and Foreign Languages, Professor

Price, Malya A.  History & Interdisciplinary Studies,

Oral Presentation

"The Depiction and Correction of Stereotypes of Black Women in Recent Films"

This presentation studies the depiction of Black women in Tyler Perry Diary of A Mad Black Woman (2005), Theodore Melfi’s Hidden Figures (2016), Tate Taylors’ The Help (2011) and Steve McQueen’s Widows (2018). The evaluation includes overviews and symbolic features incorporated in each film. It also compares and contrasts the destructive and uplifting stereotypes black women face. An image or stereotype can be strong and cause someone to change everything about themselves, even if it takes them out of their origin. The image of black women may not be as horrifying as it was during the 1600s, however there are several talented projects today that use art for justice.

Mentor: Page Laws, NSU, NA, NA

Quivers, Kena L.  Mathematics,  Junior
"Calculator Use in Classrooms Serving Young Children"

The popular and persistent modes in calculator use in schools have varied over the years. Calculators in classrooms are used for recording, tallying numbers, counting, and broadening the complexity of numbers. Calculators serve as an aid to advance children’s understanding of mathematics. Calculators are also advantageous in improving children’s’ higher-order thinking and reasoning skills. Studies show that children can perform complex mathematics calculations much better when allowed to use a calculator. From four-function calculators to the advanced graphing calculators, calculators have helped improve the quality of mathematics teaching. With the use of the first calculators in classrooms in the early 1970s, it was not until the 1990’s that a theory was proposed supporting the use of calculators in classrooms. Additionally, there have been a many developments and advancements in calculator use in classrooms serving young children. This research looks at how calculator use has evolved in classrooms serving young children.

Mentor: Mona Bryant-Shanklin, NSU, NA, Professor

Rogers, Liquitha M. Sociology, Senior

"Young People with Geriatric Problems: Millennials' Alcoholic Cirrhosis of the Liver"

Introduction: American millennials, between the ages of 25-34, are increasingly dying of alcoholic-cirrhosis-of-the-liver (ACL). ACL is usually a disease diagnosed within an older demographic after years of excessive-alcohol use. So why are millennials dying of ACL at such an early age? The root causes of this phenomenon need to be addressed as each year millennials ACL deaths increase along with social and medical cost. The hypothesis that drives this research is: Hypothesis: Excessive-alcohol use among millennials, due to stress, causes an increase in their mortality rates of cirrhosis-of-the-liver. Methodology: No funding provided. Secondary quantitative research was used to gather data from two CDC’s databases (2016) and the U.S. Census Database (2016). A multiple-correlation and multiple-linear-regression analysis was conducted to determine relationships and significance. Results: Overall, findings were statistically insignificant. Millennials measurements of excessive-alcohol use and stress as a group, did not predict millennials ACL mortality rates.

Mentor: James Curiel, NSU, Sociology, Assistant Professor
Rogers, Liquitha M.  Sociology,  Senior

Poster #: 504

“Examining Experiential Learning Outcomes: Cybersecurity Content in Social Problems Classes”

Background: This poster presents the learning outcomes of two cohorts of students in the Social-Problems course after they were taught a Password Module in a Socio-cybersecurity project. The rational of this research is that students will experience better learning outcomes if experiential-techniques are utilized. The National Institute of Standards and Technology recognizes passwords as the most widely used authentication mechanism.

Methodology: Data was collected from two cohorts of students in Social Problems classes (Spring 2017, Spring 2018). Pre and post-test surveys were used to evaluate the Password Laboratory Module that was taught, then a T-test analysis was conducted.

Hypothesis: There is no difference in the mean of the password indicators across the pre- and post-test conditions for both sets of students.

Results: Two of the eight password indicators had significant mean differences for the Spring 2017 cohort; One for the 2018 cohort; and Five for the 2017/2018 combined cohort.

Mentor: Carlene Turner, PhD

Rogers, Liquitha M.  Sociology,  Senior

Oral Presentation

“Young People with Geriatric Problems: Millennials’ Alcoholic Cirrhosis of the Liver”

Introduction: American millennials, between the ages of 25-34, are increasingly dying of alcoholic-cirrhosis-of-the-liver (ACL). ACL is usually a disease diagnosed within an older demographic after years of excessive-alcohol use. So why are millennials dying of ACL at such an early age? The root causes of this phenomenon need to be addressed as each year millennials ACL deaths increase along with social and medical cost. The hypothesis that drives this research is:

Hypothesis: Excessive-alcohol use among millennials, due to stress, causes an increase in their mortality rates of cirrhosis-of-the-liver.
Methodology: No funding provided. Secondary quantitative research was used to gather data from two CDC’s databases (2016) and the U.S. Census Database (2016). A multiple-correlation and multiple-linear-regression analysis was conducted to determine relationships and significance.

Results: Overall, findings were statistically insignificant. Millennials measurements of excessive-alcohol use and stress as a group, did not predict millennials ACL mortality rates.

Mentor: Dr. Curiel

---

Taliaferro, Aniya M. General Studies, Junior

Oral Presentation

"Surviving R. Kelly: The Power of Documentaries in the Fight for Justice"

In the climate of feminist movements such as #MeToo and #TimesUp, men who have chosen to abuse their power are finally being held accountable. Singer and songwriter R. Kelly has been the latest to receive backlash for his sexual and physical abuse of Black women and girls. In the riveting docuseries Surviving R. Kelly (2018), director Dream Hampton exposes the gruesome details reported by survivors of R. Kelly’s abuse. With the airing of the docuseries a domino effect of consequences has ensued. Surviving R. Kelly has compelled not only the justice system, but the whole music industry to reevaluate their stance on Robert Kelly. Film has been used as a weapon for justice in this very powerful documentary.

Mentor: Page Laws, NSU, NA, Dean

---

Varner, Baldwin-Akin F. Engineering/Materials Science/Physics, Freshman

Oral Presentation

"Modeling surface acoustic wave coupled surface plasmon resonance in layered structures"

Surface plasmon resonance is widely studied and used for chemical and biological sensing. Current technology is based on angle resolved resonance detection at specific optical wavelengths. That is, changes in the reflectivity at the resonant angles are correlated to the chemical or biological substance at the surface of the sensor. In this work, we discuss the modeling and numerical techniques used to analyze a method to characterize plasmon resonances through surface acoustic wave (SAW) coupling of the incident light. The design
strategies used to optimize the sensing performance of layered structures is described for several materials that are typically used as substrates and thin films.

Mentor: Doyle Temple, NSU, Physics, Professor

**Vaughan, Danielle C.** Social Work, Senior

*Poster #: 431*

"Mental Health with African American Males"

Mental Health in African American Males Mental health is defined as a person’s condition with regards to their psychological and emotional well-being. African American are leading this country with troubling statistics in areas of child abuse and neglect, unemployment, and domestic violence. This is exacerbated by stress, which leads this community, in this country, to mental health struggles. Institutional racism is a leading cause of mental illness in the African American community. Racism is not the only cause of mental health; however, it can psychologically affect African Americans by allowing society to deny their value as individuals and internalizing the racist conceptions of themselves. People who are impoverished, homeless, incarcerated or have substance abuse problems are at higher risk of mental health issues. Although progress has been made over the years, racism continues to have an impact on the mental health of African Americans

Mentor: Tiffany Lane, NSU, Bachelor of Social Work, Department Head

**Williams, Jenee** Social Work

*Oral Presentation*

"PTSD in the Black Community: When the War comes to your front door"

PTSD (Post Traumatic Stress Disorder) is a chronic psychological disorder that is developed after experiencing trauma. While considerable research into treatments of PTSD has been conducted, little research about the effects of PTSD on the Black American community has been done. The 2018 census shows that Blacks make up 13.4% of America's population. Though such a small percentage of the population, the Black community receives the greatest amount of institutional racism. Some Black Directors have created films that expose the disparities and violence that take place within the Black community. This presentation examines these films by showcasing the psychological effects of racism within the Black community and presenting the lasting effects of this disorder in Black homes.
Mentor: Page Laws, Robert C. Nusbaum Honors College, Dean
NSU Undergraduate Research Symposium 2019

LIST OF JUDGES

Arts/Humanities/Education Judges

Adrienne Washington
AprilFaye Manalang
Beatrice Darden-Woody
Charles Ford
Danelle Wallace
DeVaughn Q. Scott-Smith
Donna L. Wolf
Gary Wilkens
Michelle Rozga
Mona Bryan-Shanklin
Ophera Davis
Patricia Saunders Nixon
Rosalie Kiah
Seung Park
Shannon Ponack
Sheila Ward
Business/Social Science Judges

Benadette Holmes
Carlene Turner
Elsie Barnes
James Curiel
Joy Cooley-Doles
Karen Boyd
Kirsten Ericksen
Leah Floyd
Marilyn Lewis
Michael Fischer
O’Shan Gadsden
Regina E. Brisgone
Ronald Thomas

STEM Judges

Aliecia McClain
Ashley Haines
Felisa Smith
Ganesan Kamatchi
Joseph D’Silva
Lenora Armstrong
Melody Armstrong
Messaoud J. Bahoura
Rhonda Fitzgerald
Wondwossen Arasho
NSU Undergraduate Research Symposium 2019

ACKNOWLEDGMENTS

Undergraduate Research and Innovation Symposium Committee

- Dr. Karen Holmes, Co-Chair
- Ms. Sonji Crum, Member
- Mr. Steve Opfer, Member
- Ms. Claire Hoffman, Co-Chair
- Ms. Robin Marable, Member
- Dr. Page Laws, Member
- Ms. Zenora Spellman, Technical Support
- Mr. Wei Wang, CSET Server Administrator

Robert C. Nusbaum Honors College

- Dr. Page Laws, Dean
- Ms. Mia Smith, Educational Support Specialist

Lyman Beecher Brooks Library

- Ms. Claire Hoffman, Interim Co-Dean and Coordinator of Access Services
- Ms. Sonji Crum, Reference Librarian
- Mr. Steve Opfer, Media Manager
- Ms. Cyanna Rodney-Hill, Library Specialist
- Ms. Cathy Fuller, Circulation Manager
- Ms. Dondrell Dyson, Office Manager
- Ms. Cynthia Lynne Harrison, Interim Co-Dean and Coordinator of Technical Services
- Ms. Marlene Ballou, Acquisitions Librarian
- Ms. Brittany McCoy, Media Specialist
- Ms. Karma Gaines-Ra, Library Specialist
- Mr. Wilbert Wiggins, Administrative Office Specialist
- Mr. Eric Wilson, Program Support Technician
- Ms. Annette Montgomery, Assistant Archivist
- Mr. Antwanne Marable, Administrative Program Specialist
- Ms. Patricia Kendalls, Program Support Technician
- Lyman Beecher Brooks Library Student Workers

Office of Information Technology

- Mr. Reginald Sands, Senior Lab Technician
• Ms. Janice Smith, Web Services and Integrated Solutions Manager

Student Pathways & Academic Formation

• Ms. Robin Marable, Associate Director

Office of Academic Engagement

• Dr. Andrea Neal, Associate Vice Provost
• Ms. Carrie Brown, Writing Center

Office of Communications and Marketing

• Ms. Stevalynn Adams, Director
• Mr. Donald Spencer, Graphic Designer

THIS IS A TITLE III FUNDED EVENT.