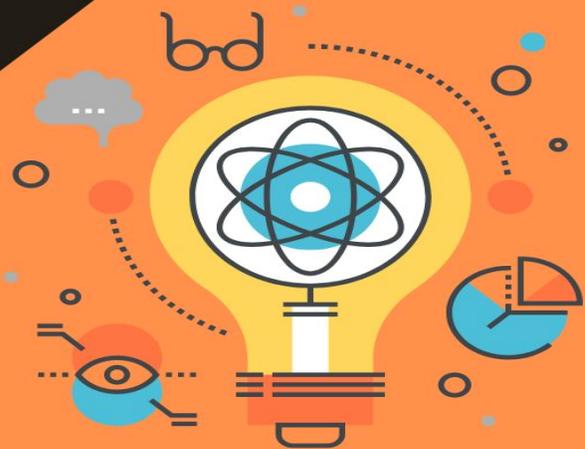


WILLIAM PATERSON UNIVERSITY



**FALL 2022  
HONORS  
RESEARCH  
NIGHT**

**Monday, November 28**



*Thank you for joining us for Honors Research Night 2022 showcasing the work of 99 first-year Honors students who are enrolled in Honors 1000 Research Seminars and 9 Honors students who are completing their senior thesis projects in the fall 2022 semester.*

**5:00 p.m. — 6:00 p.m.**  
**University Commons Ballrooms**

## **5:00 — Welcome**

*Remarks by Dr. Barbara Andrew, Dean*

*Remarks by Dr. Joshua Powers, Provost and Senior Vice President for Academic Affairs*

## **5:05 - 6:00 - Presentations by first-year Honors students**

### **HON 1000-001— *Marine Fossils from the WPU Campus***

Well-preserved Devonian marine fossils (~ 400 Mya) occur scattered throughout wooded areas around the William Paterson (WP) backyard. These fossils were transported in boulders from the Hudson Valley region of New York State during our last glacial episode. The lithology of the fossiliferous boulders is distinct from our local volcanic basalt and consists of sandy limestone. The WP backyard fossil assemblage is significant and archives the complexities of sea-level and climate change as well as evolution of marine organisms. This assemblage also offers a straightforward body of evidence by which humans can appreciate timing associated with geologic processes and our impact on climate change. Our evidence does not occur in some remote location on earth but surrounds the WP backyard.

### **HON 1000-002— *The Impacts of Social Identity and Bias on Self and Society***

This seminar examines various, overlapping, structural inequalities that are rooted in social identity and bias. We will use personal experiences, current events as well as historical examples to explore how structural inequalities have been built and maintained, the impacts of these inequalities, and tactics to rectify disparities with a particular focus on bias. Each student will choose a topic related to the impacts of social identity and bias on self or society.

### **HON 1000-003—*How can the themes of justice and equity in PK-12 public schools be integrated into the PK-12 educational experience?***

Our seminar's driving research question orbits around how can the themes of justice and equity in PK-12 public schools be integrated into the PK-12 educational experience. This theme will create a door of engagement for students to consider researching what factors and entities influence pedagogy, exploring a pedagogy of justice and equity, and investigating the need and impact of critical pedagogy in PK-12 school contexts. The course, ultimately, aims to create an experience in research for students, and serve as a compassing guide to apply to academic research and life in general. This seminar is intended for students who are interested in changing the pedagogical narrative in schools and promoting an understanding of and need for justice and equity in education and society today.

### **HON 1000-004— *Humanities and Film***

First-year students are interpreting films and researching their representations of historical figures and events they are based upon. Each student group is examining a different recent film. Their examinations question all selected aspects of their chosen film, from directorial and artistic choices, to plot, characterization, and historical basis.

### **HON 1000-005—*Identity and Hybridity***

Honors Research 1000 spent the semester exploring the power of storytelling and the ways in which it allows us to share our experiences, listen to others and find empathy, explore new worlds, theories and ideas. Storytelling is an important communication tool that helps us to strengthen or challenge our opinions and beliefs. It can also be a skill that helps us build inclusion, confidence and change. In the end, it's about connecting with others.

## ABOUT THE PRESENTERS...



### ***HON 1000-001— Marine Fossils from the WPU Campus—Dr. Martin Becker, Professor, Department of Environmental Science***

|                    |                  |                      |                    |
|--------------------|------------------|----------------------|--------------------|
| Kayla Castillo     | Ian G. Mattison  | Sydney Pinzon        | Alyssa P. Sneddon  |
| Jordan P. David    | Sydney J. Mecca  | Mia D. Quezada-Rios  | Jakia Uddin        |
| Samantha Fernandez | Seif Osman       | Adon C. Roy          | Ryan P. Williamson |
| William G. Hammann | Sheroden C. Oyco | Roa M. Salim         | Julia Wojtanowicz  |
| Timothy R. Leonard | Kayla F. Pierre  | Madeline A. Schwartz |                    |

### ***HON 1000-002— The Impacts of Social Identity and Bias on Self and Society—Dr. Elizabeth Harkins, Assistant Professor, Department of Special Education, Professional Counseling, and Disability Studies***

|                    |                         |                       |                   |
|--------------------|-------------------------|-----------------------|-------------------|
| Lorenzo D. Assante | Tyler J. Cooper         | Leila L. Gil          | Simone Ramilo     |
| Hailey Backo       | Christopher M. Cugliari | Abigail Hayth         | Angelina L. Reyes |
| Stephen I. Borrás  | Noel M. Debonta         | Frederick A. Liller   | Emily Terzano     |
| Tajae Chevannes    | Matthew T. Digirolamo   | Laurel Ovbiye         | Alanna M. Timmons |
| Simon A. Condemí   | Brian A. Gavarrete      | Francisco Perez Ramos |                   |

### ***HON 1000-003 — Justice and Equity in Public Education - Mr. Neil Grimes, Education and Curriculum Materials Librarian, and Dr. Darlene Russell, Professor, Department of Educational Leadership and Professional Studies***

|                      |                      |                      |                   |
|----------------------|----------------------|----------------------|-------------------|
| Ah'jahnae Barker     | Brandi L. Dziekonski | Angela L. Marcucilli | Joseph T. Quimby  |
| On'yaé S. Barker     | Mia Herrera          | Dania S. Mustafa     | Mikayla G. Reimer |
| Santiago J. Bermudez | Avery M. Kasbarian   | Kezia O. Oshuporu    | Patricia Walsh    |
| Gabriella L. Cardona | Kendrick Lopez       | Aishat O. Owonla     | Renee G. Wells    |
| Daniel B. Coloso     | Faith R. Macarthur   | Ava N. Padwelka      |                   |

### ***HON 1000-004— Humanities and Film - Dr. K. Molly O'Donnell, Professor, Department of History***

|                       |                     |                   |                    |
|-----------------------|---------------------|-------------------|--------------------|
| Kylie E. Anthony      | Abigail A. Herring  | Daniel J. Maichin | Audrey R. Ricker   |
| Bijay Bhat            | Camila B. Jovel     | Aiden A. Montero  | Kiara I. Rodriguez |
| Grace Bintliff        | Rachel H. Kim       | Niamh A. Morrison | Natalya L. Ross    |
| Luke M. Fournier      | Madison B. Knuettel | Aliza Nanku       | Lotte Scalé        |
| Andres Guerra Morales | Maria Kolesnik      | Tanisha Nunez     | Killian C. Winn    |
| Jayce Tyler D. Harmon | Joseph A. Lepera    | Shaurya Pandey    |                    |

### ***HON 1000-005— Identity and Hybridity - Dr. Rosa Soto, Associate Professor, Department of English and Latin American and Latinx Studies***

|                      |                         |                     |                  |
|----------------------|-------------------------|---------------------|------------------|
| Isabella C. Bermudez | King Nathan R. Fernando | Rohit K. Rauniyar   | Owen M. Walter   |
| Jessica Anne Blaza   | Luna S. Kirby           | Hannah J. Seo       | Evan J. Wohlrabe |
| Daniel J. Burke      | Denzel Locquiao         | Natali Sutuj        | Aiden K. Woods   |
| Jordan Chapman       | Anders G. Pedersen      | Amelia C. Tolentino |                  |
| Sean J. Creamer      | Yocelin Ramirez         | Ava V. Travis       |                  |

### ***HON 1000 (from Fall 2021) —Voice Literature - Dr. Christopher Herbert, Assistant Professor, Department of Music***

Haleigh Longo

## Senior Presentations— 6:00 p.m.—UC 168 A/B

| Time | Name             | Honors Track                            |
|------|------------------|---|
| 6:15 | Angelina Cirovic | Music                                   |
| 6:30 | Henry Ruty       | Music                                   |
| 6:45 | Collin Deman     | Biology                                 |
| 7:00 | Tricia Calabrese | Clinical Psychology and Neuropsychology |
| 7:15 | Patricia Gwozdz  | Clinical Psychology and Neuropsychology |
| 7:30 | Vonesa Qira      | Clinical Psychology and Neuropsychology |
| 7:45 | Liam Hornbostel  | Humanities                              |
| 8:00 | Shannon Portway  | Humanities                              |
| 8:15 | Aldijana Redzic  | Social Sciences                         |

### PRESENTERS *(listed in alphabetical order)*



#### TRICIA CALABRESE

**Honors Track:** Clinical Psychology and Neuropsychology

**Majors:** Psychology and Criminology and Criminal Justice

**Thesis Title:** *The Differential Diagnosis of Attention-Deficit Hyperactivity Disorder (ADHD) and Autism in Children: A Case Study*

**Thesis Advisor:** Dr. Bruce Diamond

Attention-Deficit Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder are two conditions that are commonly diagnosed and that are characterized by some overlapping symptoms. The goal of this research was to better define the symptoms that differentiate the two conditions in order to reduce diagnostic ambiguity. This research involves a case study of a six-year-old child who exhibits the symptoms of both disorders. The hypothesis was that symptoms of ADHD and Autism can overlap and differentiating the conditions would be beneficial to clients and parents. Two assessments, the AQ-10 (Child Version) and ADHD Rating Scale-IV: Home Version, were administered to the mother of a child diagnosed with ADHD and Autism. The mother rated the severity of her child's behaviors. The results confirmed that the child scored in the 91<sup>st</sup>-92<sup>nd</sup> percentile for ADHD symptoms and fell borderline on the autistic spectrum. It was concluded that various ADHD symptoms were common in Autism, but not vice versa. Techniques to differentiate the conditions and gain a better understanding of the two disorders are discussed to assist parents and clients.



#### ANGELINA CIROVIC

**Honors Track:** Music

**Major:** Music Education

**Thesis Title:** *Mozart's Incomplete Fantasia in D Minor, K. 397: A Compositional Revision Written in the Style of the Late-Romantic Era Applying Rachmaninoff's Pianistic Gesture*

**Thesis Advisors:** Dr. Carl Bolleia and Dr. Lauren Fowler-Calisto

This paper poses a philosophical question regarding Wolfgang Amadeus Mozart—what would his compositions sound like if he had lived in the Late Romantic Era? Throughout Mozart's life, he composed over 600 works, some of which were never completed, including the *Requiem in D Minor, K. 626*. In the Classical Era, August Eberhard Müller is believed to have finished Mozart's *Fantasia in D Minor, K. 397* after the composer's death. This paper investigates what the *Fantasia in D Minor* would have sounded like if Mozart was a Late Romantic Era composer and lived to complete the work. The style of the piano work is a theoretical recreation of Mozart's writing as well as the pianistic gestures of Sergei Rachmaninoff. This project focuses on Mozart's compositional style, the Late Romantic Era, and virtuosic Romantic piano tradition in the style of Rachmaninoff. A revision of *Mozart's Fantasia in D Minor* composed by the author will be performed on the piano in a lecture recital format.

# HONORS RESEARCH NIGHT SCHEDULE



## COLLIN DEMAN

**Honors Track:** Biology

**Major:** Biotechnology

**Thesis Title:** *Investigation of mrp Gene Function in Marinobacter adhaerens, a Bacterial Member of the Karenia brevis Marine Community*

**Thesis Advisors:** Dr. Carey Waldburger and Dr. Joseph Spagna

*Karenia brevis* is a toxic dinoflagellate that forms blooms in the Gulf of Mexico, harming the surrounding ecosystem. *Marinobacter adhaerens* and *Alteromonas mediterranea* are two closely related gamma-proteobacteria that are marine community members with *K. brevis* and were isolated from laboratory cultures of *K. brevis*. We have used a bioinformatic approach to examine their genomes for interesting features with potential impact on bloom formation. Each of these bacteria showed a high content of sodium and iron transport clusters of orthologous groups (COGs) and additional analysis of the sodium transport-related COGs revealed that genes encoding the Mrp (multi resistance and pH) family of proteins were present in *Marinobacter adhaerens* yet absent in *Alteromonas mediterranea*. *mrp* genes are found in a wide variety of bacteria where they play roles in sodium and pH homeostasis. Analysis of the salt and acid tolerance of these two bacteria showed similar profiles, indicating that if the *mrp* genes play any role in salt or acid tolerance in *M. adhaerens*, *A. mediterranea* must use mechanisms other than these genes to achieve comparable tolerance levels. We have developed the genetic tools to perform a gene knockout and introduce complementing genes on a plasmid vector in order to knock out the *mrp* genes in *M. adhaerens* and determine if salt or pH tolerance is affected. We have ascertained antibiotic sensitivity profiles for these bacteria as well as developed a cell growth curve for wild type *M. adhaerens* in varying conditions of sodium concentration and pH level in order to compare to the expected phenotypic change in the *mrp* knock out *M. adhaerens*.



## PATRICIA GWOZDZ

**Honors Track:** Clinical Psychology and Neuropsychology

**Majors:** Nursing and Psychology

**Thesis Title:** *The Use of Ketamine for Treatment Resistant Depression*

**Thesis Advisor:** Dr. Bruce Diamond

Major depressive disorder (MDD) ranks as one of the top causes of disability worldwide. MDD is accompanied by physical changes in the brain such as synaptic dysconnectivity and a reduction in brain-derived neurotrophic factor (BDNF). While some patients respond effectively to selective serotonin reuptake inhibitors (SSRIs), about one-third of patients do not reach functional recovery and are classified with treatment-resistant depression (TRD). Ketamine, an NMDA receptor antagonist, has shown promising results in its ability to enhance brain connectivity and provide relief for those with TRD. The goal of this research is to investigate ketamine's intricate effect on depression and gather further information on its usefulness and potential side effects. Given the traditional anesthetic and even recreational use of ketamine, ethical limitations are explored in order to provide a comprehensive perspective. Ketamine shows promise for treating TRD, however, there is a lack of long-term clinical and empirical data predicting the effects of long-term use.



## LIAM HORNBOSTEL

**Honors Track:** Humanities

**Major:** History

**Thesis Title:** *Star Wars and History: From Vietnam to Today*

**Thesis Advisor:** Dr. K. Molly O'Donnell

Everyone loves *Star Wars*, or they've at least heard of it and its general plot and setting. It is a multi-billion dollar franchise with countless books, movies, and TV shows to its name, also making it one of the most influential pieces of media. And I personally have always found it to be a fascinating topic, worthy of deeper examination. With this paper, I intend to explore the historical context behind *Star Wars* and its creator, George Lucas, to discuss the historical inspirations for the setting and themes of a universe that has had a major influence upon our culture. This paper will discuss George Lucas and his works prior to *Star Wars*, discussing the historical context around the release of *Star Wars*, discussing how *Star Wars* reflects and parallels real life historical and political events, and finally how *Star Wars* has evolved beyond the original trilogy of George Lucas. Much of the examination will be around the Vietnam War, the inspirations for the Galactic Empire, parallels between Emperor Palpatine and real life figures like President Nixon, and the general theme Lucas develops of resisting authoritarianism and imperialism. This will go beyond just Lucas however as I will also discuss *Star Wars* in the modern political context, as viewed by people growing up in the post-9/11 world.



## SHANNON PORTWAY

**Honors Track:** Humanities

**Majors:** Secondary Education (K-12) and History

**Thesis Title:** *Simone Biles' Activism for Adolescent Mental Health*

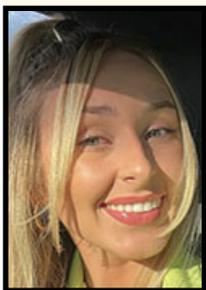
**Thesis Advisor:** Dr. K. Molly O'Donnell

My thesis explores how the gymnast Simone Biles has mobilized her fame and her social media savvy to advocate for young people's mental health. My study examines news articles and transcripts from talk shows, and especially social media postings from Simone Biles herself as well as her critics and supporters, across multiple platforms. In support of my research, I consulted academic journals and professional recommendations from mental health professionals pertaining to young people dealing with mental health issues and from expert sports psychologists. Through this research, I was able to gain insights into how Biles' experiences and actions have worked to change how young people regard mental health. My research concludes that Simone Biles' decision to remove herself from the 2020 Tokyo Olympics, as well as the public and media reaction, gave global attention to the need to destigmatize personal mental health challenges and promote the mental health of adolescents.

***Save the Date!***

**Honors Research Week—April 17-21, 2023**

*130 Honors Seniors in 10 tracks will present their thesis projects!*



**VONESA QIRA**

**Honors Track:** Clinical Psychology and Neuropsychology  
**Majors:** Sociology and Criminology and Criminal Justice  
**Minor:** Anthropology  
**Thesis Title:** *Psychological Maltreatment: The Most Detrimental Form of Child Abuse Associated with the Lowest Quality of Life: A Literature Review*  
**Thesis Advisor:** Dr. Bruce Diamond

Psychological maltreatment is the most common form of child abuse but the most overlooked which consists of emotionally abusing and/or neglecting a child. Having the most detrimental effects on a child, these victims have the highest probability of developing mental health issues and this form of maltreatment is associated with a lower quality of life than other forms of abuse including physical or sexual. Psychological maltreatment leads to low self-esteem, insecure attachments, emotional/behavioral dysregulation, poor coping skills, and altered reward processing which all contribute to lifelong unhappiness and depression. With mental health issues such as depression and suicidal ideation being on the rise, the goal of this research is to bring awareness to psychological maltreatment and teach parents about the importance of having a healthy emotional connection with their child while making society realize that emotional abuse and neglect is a very real thing that adversely impacts one's ability to live a healthy and happy life.



**ALDIJANA REDZIC**

**Honors Track:** Social Sciences  
**Major:** English (Writing)  
**Thesis Title:** *Consumer Privacy & Apple's Big Change*  
**Thesis Advisor:** Dr. Neil Kressel

Advances in technology, including the ubiquity of the Internet, are far outpacing government's ability to address privacy issues in these new and ever-changing contexts. Former President Barack Obama once stated, "it's one of the great paradoxes of our time – that the very technologies that empower us to do great good can also be used to undermine us and inflict great harm" – the price we pay for such convenience in our modern technological world is data tracking and selling. My thesis research addresses a recent Apple iOS update: Apple allows users permission to accept or decline tracking features on every application. It is easy to bypass pop-ups for 'cookies' and tracking allowances when we would just like to get to the point of it all – the everyday convenience technology allots us. Becoming an informed consumer is just one of the many ways in which you can protect your data from the innumerable threats that exist in modern technology. In this thesis, I discuss why we should as consumers think twice about bypassing annoying pop-ups on the screen of our smartphone, what competitors are doing as a result of Apple's big change, as well as how we as Americans are protected by our elected officials.



**HENRY RUTTY**

**Honors Track:** Music  
**Majors:** Sound Engineering and Jazz  
**Thesis Title:** *Exploring the Relationship Between Jazz Techniques and Experimental, Sample-Based Hip Hop Music*  
**Thesis Advisor:** Dr. Carl Bolleia

After the boom of the swing era in the 1940s, jazz saw a rise in smaller, improvisation-based bands and later, more cacophonous and experimental methods. In the 1970s, soul music—closely related to funk and disco and built from the roots of gospel and jazz—became popularized, establishing a foundation for the world of rhythm and blues. Extending into the late 1970s and early 1980s, hip hop would rise from the gutters of poverty-stricken neighborhoods and take shape in a similar way that its predecessors had while also borrowing heavily from jazz and soul music techniques. Hip hop began to evolve in a similar fashion with the advent of technology such as samplers and computers. This project aims to examine the relationship between experimental hip hop and its predecessors and influences—from early blues and jazz to modern rap—in order to establish a foundation for sample based hip hop production, record a jazz composition, and electronically sample the composition in the style of various DJs and producers to create three-four new hip hop instrumentals.

**WILLIAM PATERSON UNIVERSITY HONORS COLLEGE**

**Barbara Andrew**  
Dean

**Jill Nocella**  
Honors College Fellow

**Jan Pinkston**  
Associate Director

**Nicole Joachim**  
Graduate Assistant

**Rebecca Gilliland, Emily Martinez, Jessica Momanyi**  
Student Assistants

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