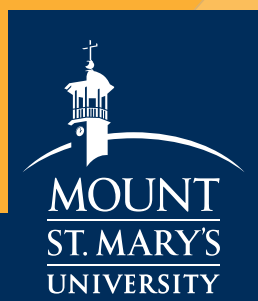


# SPARC FESTIVAL



## Celebration of Academic Excellence

Featuring Senior Honors Projects  
from the Class of 2019

**APRIL 24-26, 2019**

[MSMARY.EDU/SPARC](http://MSMARY.EDU/SPARC)

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## SPARC Committee

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**Abstracts for Lightning Talks, Panel Discussions, Posters & FIRE Talks are available online at [msmary.edu/sparc](http://msmary.edu/sparc)**

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**Get social and follow us!**

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**Use our hashtag:  
#WhatsYourSPARC**

# Greetings from the University Honors Program Director and SPARC Festival Co-Chairs

## Welcome!

Members of the Mount St. Mary's University faculty dedicate themselves to excellence in both scholarship and teaching, integrating the latest developments in their disciplines into classroom instruction. Our students follow suit by presenting their work at the annual SPARC Festival.

Each year, we celebrate our academic excellence by showcasing the scholarly and creative projects of our faculty and undergraduates who represent the College of Liberal Arts, the School of Natural Science and Mathematics, the Richard J. Bolte, Sr. School of Business, the Division of Education and Human Services, and the University Honors Program.

We are pleased to announce that Constance Rice, Esq. will be delivering the SPARC Keynote address, "Race, Truth and Your Power in Reconciliation: #WhyBlackfaceStillMatters" in Knott Auditorium on Thursday, April 25 after 11:30 a.m. Rice is a civil rights lawyer who has worked passionately to engineer systemic fixes to entrenched inequality and injustice. For this reason, she has been designated as one of the top 10 most influential attorneys in California by the *California Law Business Journal*. In addition, the Honored Faculty Speaker, chosen by the Honors Committee, is Patrick Lombardi, Ph.D., Assistant Professor of Biochemistry. His talk, "Deciphering the Code: How our Cells Recruit DNA Repair Factors Using the Protein Ubiquitin," will take place on Thursday, April 25 in Knott Auditorium at 4:30 p.m.

We invite you to join us on the Mount's main campus in Emmitsburg, Maryland. Our senior honors project presentations reflect our students' year-long studies of work closely mentored by outstanding faculty on topics of shared interest. These projects serve both as capstone experiences in students' majors and as springboards to graduate school or a profession. Honors presentations are in the O'Hara Dining Room located in Patriot Hall and Laughlin Auditorium located in the Coad Science Building; SPARC events are campus-wide. Speakers, times and topics are listed in this brochure and can found online at [msmary.edu/SPARC](http://msmary.edu/SPARC). These, and all SPARC events, are free and open to the public.

If you need directions to these venues or any further information, please email us at [sscott@msmary.edu](mailto:sscott@msmary.edu); [kennedy@msmary.edu](mailto:kennedy@msmary.edu); [turner@msmary.edu](mailto:turner@msmary.edu).

We look forward to seeing you at these events!

**Sarah K. Scott, Ph.D.**  
Director, University Honors Program

**Mary Catherine Kennedy, Ph.D., & Michael Turner, Ph.D.**  
Co-Chairs, SPARC Festival



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## Keynote Speaker

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### **Constance Rice, Esq.**

**“Race, Truth and Your Power in Reconciliation: #WhyBlackfaceStillMatters”**

**Thursday, April 25, 2019**

**11:30 a.m.-12:30 p.m. | Knott Auditorium**

Connie Rice is a civil rights lawyer who engineers systemic fixes to entrenched inequality and injustice. *California Law Business Journal* twice designated her one of the top 10 most influential attorneys in California. Through impact litigation, campaigns and inside bureaucratic maneuvering, she has led coalitions and clients to win more than \$30 billion in damages, bonds and policy changes. Bus riders, death row inmates, folks abused by police, school kids, whistleblowers, cops and sufferers of every stripe of discrimination (sex, race, disability, age), have sought her counsel. But so have her opponents, like the Los Angeles Police Department she sued for 15 years but which now reserves a parking space for her at its new headquarters.

Rice grew up all over the world in an Air Force family headed by her parents Anna, a biology teacher, and Phillip, a pilot and colonel. She graduated from Harvard-Radcliffe colleges in 1978, achieved her black belt in taekwondo in 1981 and entered New York University School of Law on a Root Tilden Scholarship. In law school, she worked extensively on capital punishment cases at the NAACP Legal Defense and Educational Fund. After graduating from law school in 1984, she clerked for the Honorable Damon J. Keith at the United States Court of Appeals for the Sixth Circuit for two years before winging it west to California where she joined the law firm of Morrison & Foerster in San Francisco. She rejoined the NAACP Legal Defense Fund in 1989 as Western Regional Counsel, won several landmark cases and, in the words of one magazine, established herself as “the voice of Los Angeles’ oppressed.” Together with Co-Directors Molly Munger, Penda Hair and Steve English, Rice launched The Advancement Project, a policy action and technology organization in 1998, and in the words of *Los Angeles Magazine*, “picked up where Clarence Darrow left off.” Rice serves on the board of public radio station KPCC and as chief of staff to Sinbad, her jet black cat.



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## Honored Faculty Speaker

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### **Patrick Lombardi, Ph.D., Assistant Professor of Biochemistry**

#### **"Deciphering the Code: How Our Cells Recruit DNA Repair Factors Using the Protein Ubiquitin"**

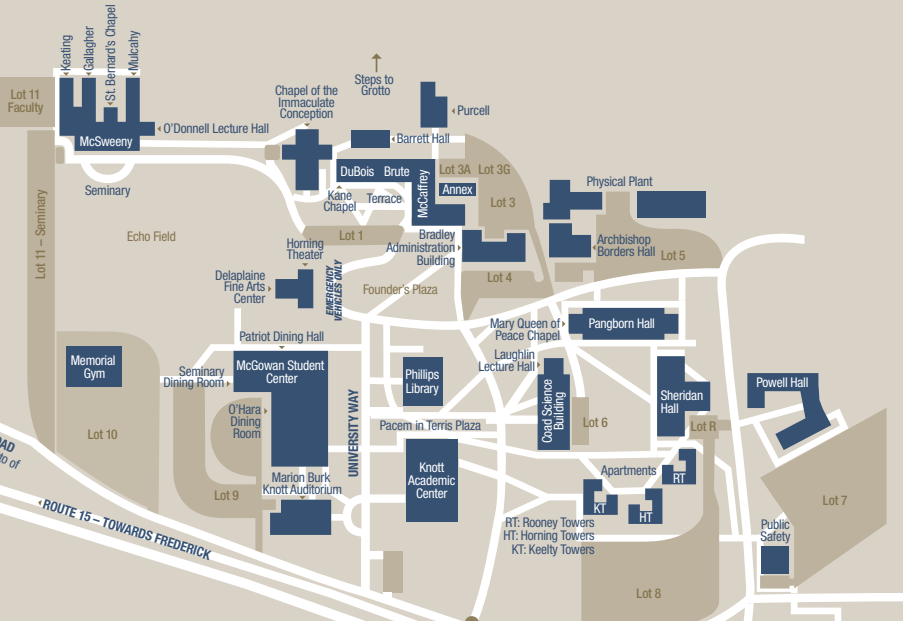
Thursday, April 25, 2019

4:30-5:15 p.m. | Knott Auditorium

Patrick Lombardi, Ph.D., received his Bachelor of Science degree in chemistry from Yale University in 2006. He earned his doctoral degree in chemistry from the University of Pennsylvania under the guidance of Professor David W. Christianson, Ph.D. While in the Christianson laboratory, Lombardi used X-ray crystallography to determine the three-dimensional structures of several bacterial metalloenzymes, including a polyamine deacetylase and a terpene cyclase. Lombardi joined the laboratory of Professor Cynthia Wolberger, Ph.D., at the Johns Hopkins University School of Medicine in 2012 where his research focused on understanding the structural basis of ubiquitin signaling in the DNA damage response. At the Mount, Lombardi works with undergraduate researchers to study ubiquitin signaling using a combination of biochemistry, biophysics and structural biology.

#### **Abstract**

*DNA is the blueprint for making everything in our bodies. However, we all continuously experience DNA damage from both internal and external sources. We are able to preserve our genetic information because our cells are equipped with DNA repair machinery that detects and fixes this damage. Our group is interested in understanding how the cell's DNA repair machinery is targeted to damage sites. This talk will focus on how cells utilize the protein ubiquitin to recruit DNA repair factors, with emphasis on the experiments Mount St. Mary's students are conducting to characterize the protein-binding interactions that are essential for this process.*



← **OLD ANTHONY ROAD**  
To National Shrine Grotto of  
Our Lady of Lourdes

← **ROUTE 15 - TOWARDS FREDERICK**

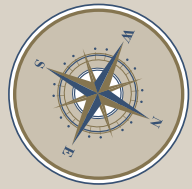
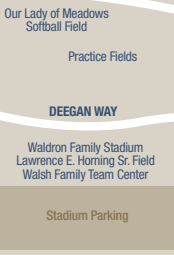
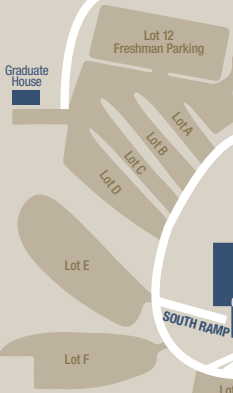
Pedestrian  
Lobby Pass

**ROUTE 15 - TOWARDS GETTYSBURG**

**JIM PHELAN WAY**

**JOHN WALSH WAY**

**AMANDA DALE ROAD**



# SPARC Festival Schedule

**Wednesday, April 24, 2019**

<b>3:30-4:45 p.m.</b>	<b>Opening Celebration</b>	<b>Founder's Plaza</b> (Rain Location: Patriot)
<b>4:30 p.m.</b>	<b>President Trainor's Address</b>	<b>Founder's Plaza</b> (Rain Location: Patriot)
<b>5:00-6:00 p.m.</b>	<b>FIRE Talks I</b>	<b>President's Dining Room</b>
5:00 p.m.	Dr. Emil Berendt, Economics	
5:20 p.m.	Dr. Emil Berendt, Economics	
<b>5:00-7:00 p.m.</b>	<b>Student Exhibition</b>	<b>Williams Art Gallery</b>
<b>5:00-6:00 p.m.</b>	<b>Student Debate</b>	<b>Seminary Dining Room</b>
Debate Moderator: Dr. Jordan Loveridge, Communication & English		
Debaters: COMM 303 Argument Class		
	Deldridge Berry	Jeremiah Paige
	Libia Cepeda-Balcazar	Morgan Weigle
	Isaac Hamilton	Rachel Wheeler
	Cuyler McCorkindale	Mitchel Wilczek
	Joshua Moreno	
<b>5:40-9:00 p.m.</b>	<b>Lightning Talk I</b>	<b>Phillips Library - Main</b>
5:40 p.m.	Emma Gehringer, Biology	
6:00 p.m.	Frances Patricia Stump, Biology	
6:20 p.m.	Elaina Perry, Biochemistry	
6:40 p.m.	Zach Lawson & Mike Hochstein, Chemistry	
7:00 p.m.	Christopher Homick, Biochemistry	
7:20 p.m.	Gianna Pomykacz & Chardane Logan, Chemistry	
7:40 p.m.	Emily Davis, Chemistry	
8:00 p.m.	Scott Lawrence Korte, Chemistry	
8:20 p.m.	Ashley Kegley, Chemistry	
8:40 p.m.	Erik Menjivar, Environmental Science	
<b>6:00-9:00 p.m.</b>	<b>Honors I</b>	<b>O'Hara Dining Room</b>
6:00 p.m.	Ariana R. Aragón, Communication	
6:45 p.m.	Kielce Gussie, Theology	
7:30 p.m.	Melody Connell, Communication	
8:15 p.m.	Stephanie Kennedy, Criminal Justice	
<b>7:00-8:00 p.m.</b>	<b>VPA Dept. Music Showcase</b>	<b>Delaplaine Fine Arts Center</b>
Featuring the Mount Chorale & Student Soloists		

## Thursday, April 25, 2019

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<b>8:00-11:00 a.m.</b>	<b>Honors II A</b>	<b>Laughlin Auditorium</b>
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8:00 a.m.	Natasha Akomeah, Biochemistry
8:45 a.m.	Katelyn Comeau, Biochemistry
9:30 a.m.	Elizabeth O'Hare, Biochemistry
10:15 a.m.	John Owens, Biochemistry

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<b>8:00-11:30 a.m.</b>	<b>Honors II B</b>	<b>O'Hara Dining Room</b>
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8:00 a.m.	Kaitlyn Heintzelman, English
8:45 a.m.	Roderick Stephen Thomson, International Studies
9:30 a.m.	Matthew McKenna, Business & Philosophy
10:15 a.m.	Sydney Johnson, Philosophy
11:00 a.m.	Bryanna Youtzy, Accounting & Philosophy

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<b>8:40-11:15 a.m.</b>	<b>Lightning Talk II A</b>	<b>Phillips Library - Main</b>
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8:40 a.m.	Taylor Carhart & Kristen Akers, Psychology
9:00 a.m.	Joseph Contreras & Patrick Aquino, Mathematics
9:20 a.m.	Bryan Dorbert, Computer Science
9:40 a.m.	Anthony Drake, Computer Science
10:00 a.m.	Matthew Luby, Computer Science
10:20 a.m.	Christian Dovel, Computer Science
10:40 a.m.	Tyler Shimchak, Computer Science
11:00 a.m.	Joshua Kaufman, Computer Science

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<b>9:00-10:15 a.m.</b>	<b>Lightning Talk II B</b>	<b>Knott Academic Center</b>
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**Room 320**

9:00 a.m.	Ethan Fiery, Economics
9:20 a.m.	Wayne Carroll III, Economics
9:40 a.m.	Ivan Korpics, Sport Management
10:00 a.m.	Gabrielle Benedictis, Brenda Brodbeck, Alexandra Roblero & Alba Sarria, World Languages & Cultures



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**8:45-10:00 a.m.**

**Panel Presentations I**

**Knott Academic Center**

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**Room 225**

Panel Title: "Plague, Motherhood and Politics: Inspiration for Cultural Expression in the Middle Ages"

Faculty Sponsor: Dr. Charles Strauss, History

Respondent: Dr. Teresa Rupp, History

Panelists: Magdalene Monahan, Chyna Gilmore & Shannon Dunne

**Room 220**

Panel Title: "What was it like to study Rhetoric and Literature at the Mount in the 19th Century?: Evidence from the Mount Archive"

Faculty Sponsor: Dr. Jordan Loveridge, Communication & English

Respondent: Dr. Carl Glover, Communication

Panelists: Jonathan Gilbert, Joseph Furtkevic, Francis Lukban & Shannon Hunt

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**9:30-11:00 a.m.**

**Poster Session I**

**Patriot Hall**

---

Patrick Aquino & Trey McGough, Mathematics  
Kristine Hodgson-Torres & Jose M. Lucero, Psychology  
Stephanie Kennedy, Criminal Justice  
Bret W. Hollandsworth, Criminal Justice  
Nicholas Lavenberg, Economics  
Anthony Kortisses, Economics  
Mary Stratton, Economics  
Sam Stephan, Economics  
John M. Wilson, Economics  
Jackson Wood, Economics  
Katherine Corr, Political Science  
Lyndsey Saunders, Sociology  
Brittany Brier, Sociology  
Chris Gooden, Sociology  
Terrell Washington, Sociology  
Yvelly Cabral, Sociology  
Robert Petrizzo, Sociology  
Rachael Mattio, Sociology  
Jazzmine Alston, Sociology  
Allyson Bahr, Sociology  
Kaitlin Simmons, Sociology  
Jessica Encinas, Sociology  
Kelly Marjarum, Sociology  
Camila Vaca-Pereira, Sociology  
Bridget Kimberly Leonard, Sociology  
Sarah R. Gouin, Sociology  
Zack Costello, Sociology  
Cristal Alvarez-Hernandez, Sociology  
Thomas Reilly, Sociology

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**10:00-11:00 a.m. FIRE Talks II Phillips Library 102**

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10:00 a.m. Dr. Brian Gilchrist, Communication  
10:20 a.m. Dr. Thane Naberhaus, Philosophy  
10:40 a.m. Dr. Jack Dudley, English

---

**10:15-11:30 a.m. Panel Presentations II Knott Academic Center**

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**Room 224**

Panel Title: "Women in Politics – Training Ms. President"  
Faculty Sponsor: Dr. Amanda Beal, Political Science  
Respondent: Dr. Maureen Oakley, Political Science  
Panelists: Catherine Lynch, Taylor Remsburg, Aryana McLeod, Shea Rowell, Rachel Keifer & Dr. Amanda Beal

**Room 225**

Panel Title: "The Emergence of U.S. Power Abroad Over the Long 20th Century"  
Faculty Sponsor & Respondent: Dr. Charles Strauss, History  
Panelists: Alexander Mateo, Paul Macrae & Cameron O'Malley

**Room 321**

Panel Title: "The History, Poetics, and Politics of American Stand-Up Comedy"  
Faculty Sponsor: Dr. David Wehner, English  
Respondent: Dr. Kurt Blaughner, Theatre  
Panelists: Maggie Hoover, Kaitlyn Heintzeman & Miltiadis Papadopoulos

**Room 323**

Panel Title: "Semester of Service"  
Faculty Sponsor & Respondent: Dr. Barbara Marinak, Education  
Panelists: Vincent Rapposelli, Josue Amaya, Annisha Montgomery & Richard Medina

---

**11:30 a.m.-12:30 p.m. Keynote Address Knott Auditorium**

---

Ms. Constance Rice, Esq.  
Title of Talk: "Race, Truth and Your Power in Reconciliation: #WhyBlackfaceStillMatters"

---

**1:00-2:00 p.m. FIRE Talks III President's Dining Room**

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1:00 p.m. Dr. Amanda Beal, Political Science  
1:20 p.m. Dr. Kristopher Kohler & Drew Bonner, Sociology  
1:40 p.m. Dr. Jack Trammell, Sociology

---

**1:00-3:00 p.m. Honors III A Laughlin Auditorium**

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1:00 p.m. Caitlin McCormack, Biology  
1:45 p.m. Joseph Renna, Biology  
2:30 p.m. Rachel Day, Biology

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**1:00-4:30 p.m. Honors III B O'Hara Dining Room**

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1:00 p.m. Isabel Russell, History  
1:45 p.m. Shea Rowell, English & Music  
2:30 p.m. Joseph Furtkevic, Communication  
3:15 p.m. Donna Szajdek, Psychology  
4:00 p.m. Elizabeth Boyle, History

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**1:00-2:30 p.m.**

**Poster Session II**

**Patriot Hall**

---

Taylor Remsburg, Sociology  
Bailey Raymond & Makayla Sutphin, Psychology  
Megan McCaskey, Jessica Lee, Khalil Reid & Allison Wade, Psychology  
Aurora Reed & Erin Gamble, Psychology  
Kristina Winkeler & Lauren Gray, Chemistry  
Julia Baer & Joel Bowman, Chemistry  
Bridget Shepherd & Emily Wood, Psychology  
Thomas Pitts, MaryAnn Grace, Emily Biesecker & Victoria Doing, Psychology  
Liz Bullard, Maria Mack, Rachel Finn & Kayla Hughes, Psychology  
Nicholas Starvaggi & Ethan Pham, Chemistry  
Zena Mohammed, Madison Collins, Shaun Miller & Will Almozard, Psychology  
Joseph Contreras & Mark Plavetic, Mathematics  
Catherine Lynch, Samantha Vanderlipp & Megan Zuvich, Mathematics  
Rebecca Breiner & Hanna Lorenzen, Mathematics  
Natalie Brunner & Abigail Spencer, Mathematics  
Nicole Pinto & Donna Szajdek, Psychology  
Morganne Hendrickson, Brianna Rizzo, Gemma O'Keefe  
& Alyssa Gallagher, Psychology  
Mitchel Geraghty & Ivy McGlaughlin, Psychology  
Aurora Moser-Reed, Ajani Roberts, Casey Smial & Kelly VanDyke, Psychology  
Daniel John Coleman, Chemistry  
Sydni Surowiec & Madison Norris, Psychology  
Gianna Duca & Sandra Granados, Psychology

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**1:00-2:30 p.m.**

***Lighted Corners***

**Phillips Library 102**

---

Alba Sarria, Editor  
Kaitlyn Heintzelman, Prose Editor  
Rachel Donohue, Design & Art Editor  
Breanna DeSimone, Poetry Editor  
Annisha Montgomery, Co-Design & Poetry Editor  
Dr. Tom Bligh, Faculty Advisor

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Samantha Boyd	Melanie Exler	Alexandra Krall
Katie Brittingham	Brittini Garms	Juliette Lawless
Elizabeth Busch	Giovannie Gaston	Maya Marks
Jacob Cherry	Cara Gose	Danielle Plavetic
Donald Coffey	Tyler Hodkensmith	Annalynn Redding
James Courtney	Conor Hoffman	Paige Roberts
Samuel Dainton	Kelsey Horn	Andrew Smigowski
Sarah Dirndorfer	Jazlyn Ibarra	

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**1:30-2:45 p.m.****Panel Presentations III****Knott Academic Center**

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**Room 220**

Panel Title: "Digital Humanities"

Faculty Sponsor: Dr. Elizabeth Strauss, History

Panelists: Matthew McDonald, Sydney Johnson, Patrick Aquino, Nathaniel Bentz, Massa (Olivia) Atsu, Dr. Greg Murry, Dr. Elizabeth Strauss &amp; Mr. T.J. Rainsford

**Room 225**

Panel Title: "National Growing Pains: Policing, Highway Construction and Environmental Protection in America, 1700s-1970s"

Faculty Sponsor: Dr. Charles Strauss, History

Respondent: Dr. Timothy Fritz, History

Panelists: Mark Van Dyke, Jamie Karpency &amp; Hugh Kinsey

**Room 321**

Panel Title: "What Constitutes 'Grit?' from the Fall 2018 West Point Annual Ethics Leadership Conference"

Faculty Sponsor: Professor Dana Sauers, iLEAD

Respondent: Professor Michael Hoover, Education

Panelists: Harry Scherer, Sarah Frouh, Isiah Williamson &amp; Shahanaaz Soumah

**Room 323**

Panel Title: "What is the Role of the Laity in the Church?"

Faculty Sponsor: Dr. Paige Hochschild, Theology

Respondent: Msgr. Michael Heintz, Seminary

Panelists: Tony Bennett, Patrick Collins, Patrick Fitzgerald, Emily Flaherty, Kielce Gussie, Gabrielle Hayes, Kaitlyn Heintzeman, Clare Logue, Erin Sample &amp; Heather Stevenson

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**2:30-4:00 p.m.****VPA Dept. Music Major  
Roundtable****Knott Auditorium**

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Music Majors:

Jasmine Patrick, Shea Rowell, Bryan Dorbert &amp; Tahreem Fayiz

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**2:00-4:00 p.m.****Lightning Talk III A****Phillips Library - Main**

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2:00 p.m.

Zach Roberts, Computer Science

2:20 p.m.

Thien Mai, Computer Science

2:40 p.m.

Marqus I. Chambers, Computer Science

3:00 p.m.

Justin Dennis, Computer Science

3:20 p.m.

Jeremy Paraoan, Computer Science

3:40 p.m.

Gilles Tamukong, Computer Science

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**2:00-4:15 p.m.****Lightning Talk III B****Knott Academic Center**

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**Room 320**

2:00 p.m.

Sean P. Zaleski, Economics

2:20 p.m.

Nathaniel F. Bald, Economics

2:40 p.m.

Alexander Langan, Economics

3:00 p.m.

Carolyn Ciccocioppo, Economics

3:20 p.m.

Rebecca E. Lee, Economics

3:40 p.m.

Hanna Houck, Economics

4:00 p.m.

Scott Owens, Economics

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**3:00-4:30 p.m.**

**Poster Session III**

**Patriot Hall**

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Dhane Schmelyun, Hannah Orland, Kate Burke, Lauren Gray,  
Kayla Kebreau & Emmanuella Osei-Asante, Biochemistry  
Matenyeh Kaba & Thomas Pitts, Psychology  
Jessica Lee, Rebecca Cermak & Victoria Doing, Psychology  
Emely Cruz, Ivy McGlaughlin, Kate McCann & Caroline Colson, Psychology  
Charlotte Elrod & Laura Kingham, Chemistry  
Frances Stump, Kelly Majerowicz, Joseph Renna &  
Thomas Richardson, Biology  
Thomas Dolinar & Chris Gooden, Chemistry  
Natasha Akomeah & Ashley Kegley, Biology  
Patrick Aquino, Data Science  
James Morrie, Natalie Berry & Allison Koontz, Psychology  
Birhan Nega Alemayehu, Sarah Frouh & Emmanuel Kesse, Biology  
Kristine Hodgson-Torres, Psychology  
Nicole Pinto & Keziah Adabrah, Biology  
Veronica Balick & Rachel Keifer, Biology  
Sasha-Gay Williams & Emma Gehringer, Biology  
Sean Kazmierski, Environmental Science  
Malik Kadir, Biology  
Angel Madariaga, Daniel Coleman & Christopher Homick, Biology  
Mitchel Geraghty, Biology  
Nicholas Starvaggi, Chemistry  
Elizabeth O'Hare & Katelyn Comeau, Biology  
Pablo Badia, Chemistry  
Kayla Hughes & Drew Wertz, Psychology

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**3:00-4:30 p.m.**

**Moorings and Tolle Lege**

**Phillips Library 102**

---

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Nicholas Starvaggi  
Jack Vukelich  
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**4:30-5:15 p.m. Honored Faculty Speaker Knott Auditorium**

---

Dr. Patrick Lombardi, Assistant Professor of Biochemistry  
Title of Talk: "Deciphering the Code: How Our Cells Recruit DNA Repair Factors Using the Protein Ubiquitin"

---

**5:40-9:15 p.m. Lightning Talk IV Phillips Library - Main**

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5:40 p.m. Taylor Remsburg & Marie Dickson, Sociology  
6:00 p.m. Grace King, English  
6:20 p.m. Annisha Montgomery, English  
6:40 p.m. Kelley Northam, History  
7:00 p.m. Grace Bovard, Communication  
7:20 p.m. Chachie Tchuenkam, Political Science  
7:40 p.m. Jamie Karpency, Political Science  
8:00 p.m. Gloria Marie DeMoura, Theology  
8:20 p.m. Trisha Nee, Criminal Justice  
8:40 p.m. Le-Roy Battle III, Sociology  
9:00 p.m. Jasmine Patrick, Fine Arts - Music

---

**6:00-8:00 p.m. Honors IV A Laughlin Auditorium**

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6:00 p.m. Samuel Dainton, Environmental Science  
6:45 p.m. Paul Welte, Biology  
7:30 p.m. Valerie Bakly, Biology

---

**6:00-8:00 p.m. Honors IV B O'Hara Dining Room**

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6:00 p.m. Phillip Dudeck, History & Political Science  
6:45 p.m. Emma Blake, Accounting & Business  
7:30 p.m. Kayla Pahl, Sociology

---

**7:30-9:30 p.m. VPA Dept. Theatre Showcase Delaplaine Fine Arts Center**

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## **Friday, April 26, 2019**

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**11:30 a.m.-1:30 p.m. Mosaic Festival Seminary Dining Room**

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**3:30-5:00 p.m. Awards Ceremony Knott Auditorium**

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# Senior Honors Project Abstracts

(in alphabetical order of surname)

## Natasha Akomeah

### "MicroRNA Target Validation in Cervical Cancer Using *C. elegans* as a Model System"

Major: Biochemistry

Mentor: Dr. Michael Turner

Abstract: DNA is the genetic code that determines every single component of a living organism. This research focuses on validating targets of miRNAs involved in cervical cancers using *C. elegans* as a model system.

Session Time: Honors Session II A  
Laughlin 8:00-8:30 a.m.

## Ariana R. Aragón

### "And the Word was Gay: A Look at the Relationship Between the Catholic Church with the LGBT Community Through McLuhan's Hot and Cool Media"

Major: Communication

Mentor: Dr. Brian Gilchrist

Abstract: This paper analyzes the cross-sectionalism between the LGBT community and the Catholic Church and the effect that media has on that relationship.

Session Time: Honors Session I  
O'Hara Dining Room 6:00-6:30 p.m.

## Valerie Bakly

### "The Relationship of the Unfolded Protein Response's XBP1 Transcription Factor with Ebola Virus"

Major: Biology

Mentor: Dr. Katy Dye

Abstract: The Ebola Virus Disease has resulted in >11,325 deaths in West Africa from 2014-2016. We hypothesize that the Ebola virus requires the unfolded protein response to replicate. HUVEC knockout cell line was produced and observations of interference with XBP1 were made to determine if the UPR is essential for Ebola replication.

Session Time: Honors Session IV A  
Laughlin Auditorium 7:30-8:00 p.m.

## Emma Blake

### "To Brexit or Not to Brexit? That is the Question"

Major: Accounting & Business

Mentor: Dr. Mike Barry

Abstract: This paper summarizes the predicted effects that Brexit will have on the United Kingdom's economy. I analyze the implications on business, politics, international relations, and the nature of economic integration. This includes a study of goods and services markets, financial markets, and future relationships between nations.

Session Time: Honors Session IV B  
O'Hara Dining Room 6:45-7:15 p.m.

## Elizabeth Boyle

### "Reconsidering the Landscape of Emancipation in Antebellum America: The Manumission, Kidnapping, and Freedom of Kitty Payne"

Major: History

Mentor: Dr. Timothy Fritz

Abstract: The story of Catherine "Kitty" Payne is, foundationally, a story about one slave's journey to freedom. Unlike other freedom narratives, Payne's battle is with the courts rather than her master as she seeks to affirm her rights as a free person in *Kitty v. Maddox*.

Session Time: Honors Session III B  
O'Hara Dining Room 4:00-4:30 p.m.

## Katelyn Comeau

### "Mechanisms Behind the Wiring of the Touch System: An Exploration of LTMR Development, Growth, and Innervation"

Major: Biochemistry

Mentors: Dr. Dana Ward, with Dr. David Ginty and Dr. Shan Meltzer, Harvard Medical School

Abstract: This project seeks to uncover the mechanisms that guide nervous system development, growth, and innervation by analyzing the patterns LTMR axon projections display as they grow peripherally towards the skin.

Session Time: Honors Session II A  
Laughlin Auditorium 8:45-9:15 a.m.

## **Melody Connell**

### **“Emerging Artists in This Technological Age: How Has Social Media Helped Artists Develop Their Career?”**

*Major: Communication*

*Mentor: Dr. Mary Catherine Kennedy*

Abstract: The use of social media has affected the music industry, and emerging artists are rightly worried about entering into this wild landscape. This paper asks how artists use social media as a tool to avoid being lost in the mix of hundreds of new artists.

**Session Time: Honors Session I  
O’Hara Dining Room 7:30-8:00 p.m.**

## **Samuel Dainton**

### **“Nasty Neighbors: Evaluating the Effects of Garlic Mustard on Nearby Plants”**

*Major: Environmental Science*

*Mentor: Dr. Abby Kula*

Abstract: Garlic mustard (*Alliaria pettiolata*) is an invasive species that is quickly spreading across the United States. To understand what makes it such a successful competitor, I studied how garlic mustard impacts the growth and reproductive potential of the trout lily (*Erythronium americanum*), a native species.

**Session Time: Honors Session IV A  
Laughlin Auditorium 6:00-6:30 p.m.**

## **Rachel Day**

### **“Fungal Control from Calcium Propionate: Testing the Effectiveness of a Food Safe Product as an Anti-Fungal Agent on Various Types of Fungus and Turf Grass”**

*Major: Biology*

*Mentor: Dr. Abby Kula*

Abstract: This research tests the known food-safe product calcium propionate for its anti-fungal properties and its potential to be used commercially in the treatment of various fungal infections in different types of turfgrass. If effective, it could greatly reduce the use of environmentally harmful fungicides.

**Session Time: Honors Session III A  
Laughlin Auditorium 2:30-3:00 p.m.**

## **Phillip Dudeck**

### **“Electoral Systems and Number of Parties: Possibilities for Increasing Party Representation in the United States”**

*Major: History & Political Science*

*Mentor: Dr. Maureen Oakley*

Abstract: This study investigates the effects of electoral systems on the number of parties in presidential states for legislative elections using a t-test and linear regression model. The findings show proportional voting increases the average number of parties.

**Session Time: Honors Session IV B  
O’Hara Dining Room 6:00-6:30 p.m.**

## **Joseph Furtkevic**

### **“Heroic Ethos: From Homer to *The Hobbit*”**

*Major: Communication*

*Mentor: Dr. Jordan Loveridge*

Abstract: This project employs classical and contemporary theories of rhetoric to analyze the ethos developed by two heroic figures: Odysseus from the *Odyssey*, and Bilbo from *The Hobbit*. I examine the protagonists’ rhetoric in three situations: pleas for aid, discourse with opponents, and a speech as victor.

**Session Time: Honors Session III B  
O’Hara Dining Room 2:30-3:00 p.m.**

## **Kielce Gussie**

### **“On God’s Time: An Examination of the Length of Canonization Process in Contemporary Catholicism”**

*Major: Theology*

*Mentor: Dr. Joshua Brown*

Abstract: I ask what factors constitute the length of time for a canonization process and what the consequences of these factors were on Mother Teresa and Pope John Paul II. The writings, technology, and worldly positions of these saints resulted in their short canonization process.

**Session Time: Honors Session I  
O’Hara Dining Room 6:45-7:15 p.m.**



## **Kaitlyn Heintzelman**

### **“Jane’s Road to Calvary: Faith, Religion, and Female Romanticism in *Jane Eyre*”**

*Major: English*

*Mentor: Dr. Sean Lewis*

Abstract: This study focuses on the correlation between Christianity, Romanticism, and feminism in Brontë’s *Jane Eyre*. Jane develops a sincere grasp on the Christian faith, which ultimately allows her to live in a manifestation of God’s presence and find her true purpose.

**Session Time: Honors Session II B**  
O’Hara Dining Room 8:00-8:30 a.m.

## **Sydney Johnson**

### **“Bridging the Gap: The Role of the Israeli Media in Addressing the Confrontation on the Gaza Border in Late 2018”**

*Major: Philosophy*

*Mentor: Dr. Elizabeth Strauss*

Abstract: In November 2018, renewed confrontation between the Israelis and Palestinians on the Gaza Border led to another round of negotiations and media coverage. Utilizing critical discourse analysis and natural language processing, this case study assesses the potential of Israeli news media to shape a path toward lasting peace between Israelis and Palestinians.

**Session Time: Honors Session II B**  
O’Hara Dining Room 10:15-10:45 a.m.

## **Stephanie Kennedy**

### **“The Impact of Extreme Risk Protection Orders on Domestic Violence”**

*Major: Criminal Justice*

*Mentor: Professor Joseph Vince, Jr.*

Abstract: Extreme Risk Protection Orders are a relatively new kind of law implemented by eight states in 2018. One proposed impact of these laws is that they help prevent domestic violence incidents involving firearms. This project analyzes California’s 2014 Extreme Risk Protection Order law to determine what impact it has had on the rate and the use of firearms during domestic violence incidents.

**Session Time: Honors Session I**  
O’Hara Dining Room 8:15-8:45 p.m.

## **Caitlin McCormack**

### **“The Effect of miRNA Regulation of XBP1 Transcription Factor on Ebolavirus Replication”**

*Major: Biology*

*Mentor: Dr. Katy Dye*

Abstract: Viruses such as the Hepatitis C and West Nile viruses have utilized the unfolded protein response (UPR) to upregulate their viral proteins during replication. This project examines whether the UPR is a key contributor in Ebola virus replication by interfering with a normally UPR-inhibiting miRNA, miR-30c-2-3p.

**Session Time: Honors Session III A**  
Laughlin Auditorium 1:00-1:30 p.m.

## **Matthew McKenna**

### **“The Philosophical Telos of a Business”**

*Major: Business & Philosophy*

*Mentor: Dr. Alejandro Canadas*

Abstract: People often accuse modern corporations of many and various unethical practices. I offer what I believe is the most fruitful and exhaustive solution to this problem by examining the philosophical purpose of modern corporations using Aristotelian principles.

**Session Time: Honors Session II B**  
O’Hara Dining Room 9:30-10:00 a.m.

## **Elizabeth O’Hare**

### **“The Effect of Lipocalin-2 on Intestinal Adaptation in Short Bowel Syndrome Following Fecal Transplants”**

*Major: Biochemistry*

*Mentors: Dr. Dana Ward, with Samuel Alaish, M.D., Johns Hopkins Medical Institute*

Abstract: Short bowel syndrome following major bowel resection (SBR) causes high morbidity and mortality in neonates. The protein Lipocalin-2 affects nutrient delivery to intestinal microbiota. In this study, fecal transplants from LCN-2 knockout mice improved intestinal adaptation in germ-free mice.

**Session Time: Honors Session II A**  
Laughlin Auditorium 9:30-10:00 a.m.

## **John Owens**

### **"The Growth of Anti-miRNA 204 Plasmid in *E. coli* and its Transfection into HUVECs"**

*Major: Biochemistry*

*Mentor: Dr. Katy Dye*

Abstract: This project's goal has been to attempt to clone a customized anti-miRNA 204 plasmid in *E. coli* with the goal to transfect HUVECs and evaluate possible dysregulation of the UPR. I discuss techniques for the transformation into *E. coli* and transfection of the cloned plasmid into HUVECs, as will future directions.

**Session Time: Honors Sesion II A**  
**Laughlin Auditorium 10:15-10:45 a.m.**

## **Kayla Pahl**

### **"Life as a Stage: An Exploration of Dramaturgical Theory in Social Media Culture"**

*Major: Sociology*

*Mentor: Dr. Layton Field*

Abstract: Utilizing Ervin Goffman's theory of dramaturgy, this paper aims to explore the presentation of self online. Through qualitative interviews, focused on college aged youth and their usage of social media, this paper expects to find that society lends one to believe that life portrayed online is reality, not a role.

**Session Time: Honors Session IV B**  
**O'Hara Dining Room 7:30-8:00 p.m.**

## **Joseph Renna**

### **"Light-Induced Motor Response of Various Expressions of Channelrhodopsin-2 on Short Term Plasticity in *Caenorhabditis elegans*"**

*Major: Biology*

*Mentor: Dr. Angy Kallarackal*

Abstract: Channelrhodopsin-2, a blue light-activated ion-channel protein, can be specifically expressed in different populations of *C. elegans* neurons and elicit a behavioral response in the worm. Quantifying this behavioral response provides insight into how the different expressions of Channelrhodopsin-2 in *C. elegans* affect short-term plasticity and learning.

**Session Time: Honors Session III A**  
**Laughlin Auditorium 1:45-2:15 p.m.**

## **Shea Rowell**

### **"Art Without Meaning: Parallel Modernism in Twentieth Century Literature & Music"**

*Major: English & Music*

*Mentor: Dr. Mark Carlson & Dr. David Wehner*

Abstract: What is the role of art in a society that some claim is post-truth? This research examines the ways 20th-century music and literature evolved from Romanticism to Modernism and highlights various similarities between the two, especially in their ability and doubts to communicate meaning.

**Session Time: Honors Session III B**  
**O'Hara Dining Room 1:45-2:15 p.m.**

## **Isabel Russell**

### **“The Women Take Charge and the Plebes Shudder’: Co-Education at U.S. Service Academies and the Cultural Revolution of the Seventies”**

*Major: History*

*Mentor: Dr. Charles Strauss*

Abstract: Supporters of accepting women to U.S. service academies from 1976 to 1980 championed gender equality in their rhetoric; however, students retained already held constructs of masculine and feminine during this period of transition while public perception remained suspicious. This project examines the co-education process and the enduring public debate.

**Session Time: Honors Session III B**  
O’Hara Dining Room 1:00-1:30 p.m.

## **Donna Szajdek**

### **“Tale as Old as Time: Music’s Involvement in Contextual Memory”**

*Major: Psychology*

*Mentor: Dr. Jon Slezak*

Abstract: Context-dependent memory is the enhancement of memory when learning and recall environments are identical. The presence/absence of music lyrics was used as the context in the current study. Results indicated consistent environments did not enhance memory. Genre of music, lyrics, or a ceiling effect could have contributed to replication failure.

**Session Time: Honors Session III B**  
O’Hara Dining Room 3:15-3:45 p.m.

## **Roderick Stephen Thomson**

### **“Effects of CAFTA on Political and Satisfaction in Costa Rica, Honduras, and Guatemala”**

*Major: International Studies*

*Mentor: Dr. Amanda Beal*

Abstract: Given recent liberalizing economic trends resulting in a proliferation of regional Free Trade Agreements, I analyze the effects of the Central American Free Trade Agreement (CAFTA) on individuals and in relation to macroeconomic performance and political trends over time.

**Session Time: Honors Session II B**  
O’Hara Dining Room 8:45-9:15 a.m.

## **Paul Welte**

### **“Optimal Foraging Theory, Competition, and Predator Avoidance in Passerine Birds at Mount St. Mary’s University”**

*Major: Biology*

*Mentor: Dr. Rosie Bolen*

Abstract: Optimal foraging theory postulates that the risks and benefits of foraging activities are weighed so that food intake is maximized while risks are minimized. In this project, competition and predator avoidance behaviors in common passerine birds are examined in the context of optimal foraging theory.

**Session Time: Honors Session IV A**  
Laughlin Auditorium 6:45-7:15 p.m.

## **Bryanna Youtzy**

### **“Epistemic Status of Beliefs Based on Testimony in the Age of Social Media”**

*Major: Accounting & Philosophy*

*Mentor: Dr. Scott Coley*

Abstract: This project examines testimony as a source of epistemic justification to understand the impact of social media on testimony’s reliability. Through this, we may be able to understand how social media platforms influence the reception of testimony.

**Session Time: Honors Session II B**  
O’Hara Dining Room 11:00-11:30 a.m.

# SPARC Presentations: FIRE Talks, Student Project Titles & Mentors

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## FIRE Talks I

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**Wednesday, 5:00-6:00 p.m.**  
**President's Dining Room**

**Dr. Emil Berendt**

**"The Housing Bubble: An Application of the Just Price"**

*Economics*

**Dr. Emil Berendt**

**"The Catholic Intellectual Tradition in Economics"**

*Economics*

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**Lightning Talk I, School of Natural Science & Mathematics**

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**Wednesday, 5:40-9:00 p.m.**  
**Phillips Library - Main**

**Emma Gehringer**

**"Notes from the Emergency Department: My Time as a Medical Scribe"**

*Biology*

*Mentor: Dr. Danny Miles*

**Frances Patricia Stump**

**"In vitro and in vivo miRNA 238: Target Validation Study"**

*Biology*

*Mentor: Dr. Michael Turner*

**Elaina Perry**

**"Confronting Gene Therapy: Explications of Genetic Research in the Altering of Humanity"**

*Biochemistry*

*Mentor: Dr. Patrick Lombardi*

**Zach Lawson & Mike Hochstein**

**"The Synthesis and Characterization of CTA-4 and CTA-3,5 through IR and NMR Spectroscopy and Dynamic Light Scattering"**

*Chemistry*

*Mentors: Dr. Patti Kreke & Dr. Danny Miles*

**Christopher Homick**

**"Validating Candidate mRNA Gene Targets of the mRNA mir-124"**

*Biochemistry*

*Mentor: Dr. Michael Turner*

**Gianna Pomykacz & Chardane Logan**

**"Scaling Down the Esterification of Benzoic Acid"**

*Chemistry*

*Mentor: Dr. Patti Kreke*

**Emily Davis**

**"The Synthesis of Propyl m-nitrobenzoate"**

*Chemistry*

*Mentor: Dr. Patti Kreke*

**Scott Lawrence Korte**

**"A Study of Sourness in Beers and its Dependence on pH"**

*Chemistry*

*Mentor: Dr. Garth Patterson*

**Ashley Kegley**

**"Response Efficiencies of Smoke and Thermal Sensors in Various Fire Situations"**

*Chemistry*

*Mentor: Dr. Garth Patterson*

**Erik Menjivar**

**"Photocatalytic Degradation of Furosemide and Identification of Carboxylic Acid-based Derivatives using GC/MS/HS Trap"**

*Environmental Science*

*Mentor: Dr. Katy Dye*

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**Lightning Talk II A, School of  
Natural Science & Mathematics**

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**Thursday, 8:40-11:15 a.m.  
Phillips Library - Main**

**Taylor Carhart & Kristen Akers**

**"Information About Epilepsy"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Joseph Contreras & Patrick Aquino**

**"Pickomino"**

*Mathematics*

*Mentor: Dr. Brian Heinold*

**Bryan Dorbert**

**"Musician's Utilities Program"**

*Computer Science*

*Mentor: Professor Scott Weiss*

**Anthony Drak**

**"Snack Scanner"**

*Computer Science*

*Mentor: Professor Scott Weiss*

**Matthew Luby**

**"MyCafé"**

*Computer Science*

*Mentor: Professor Scott Weiss*

**Christian Dovel**

**"Alumni Engagement Calendar – Android"**

*Computer Science*

*Mentor: Professor Scott Weiss*

**Tyler Shimchak**

**"iOS app for Alumni Reunion Weekend"**

*Computer Science*

*Mentor: Professor Scott Weiss*

**Joshua Kaufman**

**"Konnexion: A Connect Game with  
an Unbeatable AI"**

*Computer Science*

*Mentors: Professor Scott Weiss &  
Dr. Brian Heinold*

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**Lightning Talk II B, Bolte School of  
Business/College of Liberal Arts**

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**Thursday, 9:00-10:15 a.m.  
Knott Academic Center, Room 320**

**Ethan Fiery**

**"Nazis and Their Economics"**

*Economics*

*Mentor: Dr. John Larrivee*

**Wayne Carroll III**

**"Banking in America"**

*Economics*

*Mentor: Dr. John Larrivee*

**Ivan Korpics**

**"Youth Sport: Does It Really Help the  
Development of a Child?"**

*Sport Management*

*Mentor: Dr. Tim Wolfe*

**Gabrielle Benedictis, Brenda  
Brodbeck, Alexandra Roblero &  
Alba Sarria**

**"Las Lavenderas"**

*World Languages & Cultures*

*Mentor: Dr. Andrea Solis*

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**Poster Session I**

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**Thursday, 9:30-11:00 a.m.  
Patriot Hall**

**Patrick Aquino & Trey McGough**

**"Ticket to Using Graph Theory on  
a Board Game"**

*Mathematics*

*Mentor: Dr. Jonelle Hook*

**Kristine Hodgson-Torres &  
Jose M. Lucero**

**"Neurodiversity: Cerebral Palsy"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Stephanie Kennedy**

**“The Impact of Extreme Risk Protection Orders on Domestic Violence”**

*Criminal Justice*

*Mentor: Dr. Layton Field*

**Bret W. Hollandsworth**

**“Growing Tensions”**

*Criminal Justice*

*Mentor: Dr. Layton Field*

**Nicholas Lavenberg**

**“The Historical Roll of Civil Society in Shaping Human Culture”**

*Economics*

*Mentor: Dr. John Larrivee*

**Anthony Kortisses**

**“The Flawed Nature of Fractional Reserve Banking”**

*Economics*

*Mentor: Dr. John Larrivee*

**Mary Stratton**

**“Eugenics and its Effects on Economic Structure”**

*Economics*

*Mentor: Dr. John Larrivee*

**Sam Stephan**

**“The Impact of Reductionist Views of Human Nature on Economic and Social Theory of the Late 1800s and Early 1900s”**

*Economics*

*Mentor: Dr. John Larrivee*

**John M. Wilson**

**“The Influences of Economics on Social Crises”**

*Economics*

*Mentor: Dr. John Larrivee*

**Jackson Wood**

**“The Expectations of a Socialist Utopia”**

*Economics*

*Mentor: Dr. John Larrivee*

**Katherine Corr**

**“Does One’s Race Impact their Level of Confidence in Congress?”**

*Political Science*

*Mentor: Dr. Maureen Oakley*

**Lyndsey Saunders**

**“A District of Discrimination: The Educational Effects of Historical Redlining in Baltimore”**

*Sociology*

*Mentor: Dr. Layton Field*

**Brittany Brier**

**“What School Type is Better? Graduation Rates of Black Students at PWIs and HBCUs”**

*Sociology*

*Mentor: Dr. Layton Field*

**Chris Gooden**

**“Education’s Effect on Students of Color”**

*Sociology*

*Mentor: Dr. Layton Field*

**Yvelly Cabral**

**“Socioeconomic Status Impact on High School Graduation Rates”**

*Sociology*

*Mentor: Dr. Layton Field*

**Terrell Washington**

**“Intimate Partner Violence Statistics: Heterosexual Communities v. LGBTQ Communities”**

*Sociology*

*Mentor: Dr. Layton Field*

**Robert Petrizzo**

**“Relation between Tattoos and Delinquent Behavior”**

*Sociology*

*Mentor: Dr. Layton Field*

**Rachael Mattio**

**"The Presence of Substance Abuse in Relationships with Intimate Partner Violence"**

*Sociology*

*Mentor: Dr. Layton Field*

**Jazzmine Alston**

**"Does living in a Violent Urban Neighborhood Make Individuals More Susceptible to Experiencing PTSD Symptoms?"**

*Sociology*

*Mentors: Dr. Layton Field & Dr. Denise Obinna*

**Allyson Bahr**

**"Violence against Native Women Compared to Non-Native Women"**

*Sociology*

*Mentor: Dr. Denise Obinna*

**Kaitlin Simmons**

**"The Seton Center"**

*Sociology*

*Mentor: Dr. Layton Field*

**Jessica Encinas**

**"Examining Aggression in Children's Cartoons"**

*Sociology*

*Mentor: Dr. Layton Field*

**Kelly Marjarum**

**"Impact of Cochlear Implants on the Deaf Community"**

*Sociology*

*Mentor: Dr. Layton Field*

**Camila Vaca-Pereira**

**"Is College Attainable for All?"**

*Sociology*

*Mentor: Dr. Layton Field*

**Bridget Kimberly Leonard**

**"The Struggle of Motherhood with the Burden of Mistreatment"**

*Sociology*

*Mentor: Dr. Layton Field*

**Sarah R. Gouin**

**"Outlooks on Abortion Based on Gender, Race and Religion"**

*Sociology*

*Mentor: Dr. Layton Field*

**Zack Costello**

**"Gun Regulations vs. Violent Crime Rate"**

*Sociology*

*Mentor: Dr. Layton Field*

**Cristal Alvarez-Hernandez**

**"What Does Culture Have to Do With It?"**

*Sociology*

*Mentor: Dr. Layton Field*

**Thomas Reilly**

**"Saudi Arabia: A Human Rights Debacle"**

*Sociology*

*Mentor: Dr. Layton Field*

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**FIRE Talks II**

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**Thursday, 10:00-11:00 a.m.  
Phillips Library 102**

**Dr. Brian Gilchrist**

**"Technology Mediating Dasein and Seyn: Martin Heidegger's *Black Notebooks* as Media Ecology and Philosophy of Communication"**

*Communication*

**Dr. Thane Naberhaus**

**"The Case Against Reality"**

*Philosophy*

**Dr. Jack Dudley**

**"American Horror Films as Social Critique: Capitalism, Race & Nation"**

*English*

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## FIRE Talks III

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**Thursday, 1:00-2:00 p.m.**  
**President's Dining Room**

**Dr. Amanda Beal**

**"Breeding Populism: The Rise and Spread of Populism in Europe"**

*Political Science*

**Dr. Kristopher Kohler & Drew Bonner**

**"Taking a Stand by Taking a Knee: Black Lives Matter, the National Anthem and Activist Trajectories of Protesting Athletes"**

*Sociology*

**Dr. Jack Trammell**

**"Disability in the Ancient World: New Scholarship Examines a Timeless Human Experience"**

*Sociology*

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## Poster Session II

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**Thursday, 1:00-2:30 p.m.**  
**Patriot Hall**

**Taylor Remsburg**

**"I'm Not a Feminist; I'm Something Else"**

*Sociology*

*Mentor: Dr. Layton Field*

**Bailey Raymond & Makayla Sutphin**

**"Tourette's Syndrome: An inside Look into a Misunderstood World"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Megan McCaskey, Jessica Lee, Khalil Reid & Allison Wade**

**"Does Pavlovian Conditioning Procedure Influence Condition Place Preference in Rats?"**

*Psychology*

*Mentor: Dr. Jon Slezak*

**Aurora Moser-Reed & Erin Gamble**  
**"Klinefelter and You"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Kristina Winkeler & Lauren Gray**

**"Synthesis of Tetraphenylporphin"**

*Chemistry*

*Mentor: Dr. Patti Kreke*

**Julia Baer & Joel Bowman**

**"Cinnamon, Spice, and Everything Nice: Synthesis of trans-E-Cinnamaldehyde from Aldol Condensation"**

*Chemistry*

*Mentor: Dr. Patti Kreke*

**Bridget Shepherd & Emily Wood**

**"Effects of Fetal Alcohol Syndrome on Executive Functioning and Mental Health"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Thomas Pitts, MaryAnn Grace, Emily Biesecker & Victoria Doing**

**"Withdrawal Effects of Ethanol on *C. elegans*' Thrashing Behavior"**

*Psychology*

*Mentor: Dr. Angy Kallarackal*

**Liz Bullard, Maria Mack,**

**Rachel Finn & Kayla Hughes**

**"*C. elegans*, Nicotine, and Locomotion"**

*Psychology*

*Mentor: Dr. Angy Kallarackal*



**Nicholas Starvaggi & Ethan Pham**  
"Running Tylenol out of Business: Synthesis  
& Purification of Acetaminophen"

*Chemistry*

*Mentor: Dr. Patti Kreke*

**Zena Mohammed, Madison Collins,  
Shaun Miller & Will Almozard**

"The Effect of Psychoactive Drug (Ethanol)  
on *C.elegans*' Behavior"

*Psychology*

*Mentor: Dr. Angy Kallarackal*

**Joseph Contreras & Mark Plavetic**

"Instant Insanity"

*Mathematics*

*Mentor: Dr. Jonelle Hook*

**Catherine Lynch,  
Samantha Vanderlipp &  
Megan Zuvich**

"Minimal Coprime Labelings of  
Nonisomorphic Graphs"

*Mathematics*

*Mentor: Dr. Jonelle Hook*

**Rebecca Breiner & Hanna Lorenzen**

"Vertex Coloring"

*Mathematics*

*Mentor: Dr. Jonelle Hook*

**Natalie Brunner & Abigail Spencer**

"Check-ing Out the Shortest Path"

*Mathematics*

*Mentor: Dr. Jonelle Hook*

**Nicole Pinto & Donna Szajdek**

"Fragile X Syndrome: What Is It?"

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Morganne Hendrickson,  
Brianna Rizzo, Gemma O'Keefe &  
Alyssa Gallagher**

"Comparing Simultaneous and Backward  
Conditioning of Short-Term Pavlovian  
Conditioning in Male Sprague Dawley Rats"

*Psychology*

*Mentor: Dr. Jon Slezak*

**Mitchel Geraghty & Ivy McGlaughlin**  
"Chromosome Deletion Syndrome"

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Aurora Moser-Reed, Ajani Roberts,  
Casey Smial & Kelly VanDyke**

"Long Term Learning: Is Backward or  
Simultaneous Conditioning more Impactful?"

*Psychology*

*Mentor: Dr. Jon Slezak*

**Daniel John Coleman**  
"Manufacturing of 3D Printers"

*Chemistry*

*Mentor: Dr. Garth Patterson*

**Sydni Surowiec & Madison Norris**

"ADHD Myths and Truths"

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Gianna Duca & Sandra Granados**

"Treacher Collins Syndrome"

*Psychology*

*Mentor: Dr. Caitlin Faas*

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**Lightning Talk III A, School of  
Natural Science & Mathematics**

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**Thursday, 2:00-4:00 p.m.  
Phillips Library - Main**

**Zach Roberts**

**"Dose Control: Android Application"**  
*Computer Science*  
*Mentor: Professor Scott Weiss*

**Thien Mai**

**"Voting Web Application"**  
*Computer Science*  
*Mentor: Professor Scott Weiss*

**Marqus I. Chambers**

**"Landlord Tenant Intercommunication"**  
*Computer Science*  
*Mentor: Professor Scott Weiss*

**Justin Dennis**

**"Make it Better: An RPG Game"**  
*Computer Science*  
*Mentor: Professor Scott Weiss*

**Jeremy Paraoan**

**"Your Guide to Victory: Your TCG Guide"**  
*Computer Science*  
*Mentor: Professor Scott Weiss*

**Gilles Tamukong**

**"WiFi Channel Planner"**  
*Computer Science*  
*Mentor: Professor Scott Weiss*

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**Lightning Talk III B, Bolte School  
of Business**

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**Thursday, 2:00-4:15  
Knott Academic Center, Room 320**

**Sean P. Zaleski**

**"The Miracle of the Cistercians"**  
*Economics*  
*Mentor: Dr. John Larrivee*

**Nathaniel F. Bald**

**"Designer Society: How the Perfect  
Combination of Ideas and Conditions Led to  
Eugenic Economic and Social Policies"**  
*Economics*  
*Mentor: Dr. John Larrivee*

**Alexander Langan**

**"The Impact of Colonial Practices on  
Institutional and Economic Development"**  
*Economics*  
*Mentor: Dr. John Larrivee*

**Carolyn Ciccocioppo**

**"Hostility to the Family in the Thought  
of Marx and Engels and its Influence on  
Communist Policy"**  
*Economics*  
*Mentor: Dr. John Larrivee*

**Rebecca E. Lee**

**"Material Well-Being Trends in the 20th  
Century"**  
*Economics*  
*Mentor: Dr. John Larrivee*

**Hanna Houck**

**"Oppression in Communist Regimes: The  
Cuban Experience"**  
*Economics*  
*Mentor: Dr. John Larrivee*

**Scott Owens**

**"Moral Corrosion of Communism"**  
*Economics*  
*Mentor: Dr. John Larrivee*

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Poster Session III

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**Thursday 3:00-4:30 p.m.**  
**Patriot Hall**

**Dhane Schmelyun, Hannah Orland,  
Kate Burke, Lauren Gray,  
Kayla Kebreau &  
Emmanuella Osei-Asante**

**"Determining the Structural Basis for  
Recruitment of the ALKBH3-ASCC Repair  
Complex to Sites of DNA Damage"**

*Biochemistry*

*Mentor: Dr. Patrick Lombardi*

**Matenyeh Kaba & Thomas Pitts**

**"Dementia of the Alzheimer's Type: What  
Today's Technology has Brought to Light"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Jessica Lee, Rebecca Cermak &  
Victoria Doing**

**"Prader-Willi's Syndrome"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Emely Cruz, Ivy McGlaughlin,  
Kate McCann & Caroline Colson**

**"Locomotor Behavior in *C. elegans* After  
Exposure to Nicotine"**

*Psychology*

*Mentor: Dr. Angy Kallarackal*

**Charlotte Elrod & Laura Kingham**

**"Influence of Reflux Time on the Synthesis  
of Banana Oil"**

*Chemistry*

*Mentor: Dr. Patti Kreke*

**Frances Stump, Kelly Majerowicz,  
Joseph Renna & Thomas Richardson**

**"Determination of the Aggressiveness of the  
HCT 116 Cancer Cell Line"**

*Biology*

*Mentor: Dr. Dana Ward*

**Thomas Dolinar & Chris Gooden**

**"Effect of Salicylic Acid in Aspirin Synthesis"**

*Chemistry*

*Mentor: Dr. Patti Kreke*

**Natasha Akomeah & Ashley Kegley**  
**"MDA-MB-231: The Impact of Triple  
Negativity"**

*Biology*

*Mentor: Dr. Dana Ward*

**Patrick Aquino**

**"Image Processing on Cancer Detection"**

*Data Science*

*Mentor: Professor Rebecca Portier*

**James Morris, Natalie Berry &  
Allison Koontz**

**"Short-Term Pavlovian Conditioning Using  
Place Preference of Rats"**

*Psychology*

*Mentor: Dr. Jon Slezak*

**Birhan Nega Alemayehu,  
Sarah Frouh & Emmanuel Kesse**

**"Analysis of Ovarian Adenocarcinoma  
through Testing of Cell Proliferation, Mitotic  
Index, Cell Growth and Chemo Response of  
OVCAR3 Cell Line"**

*Biology*

*Mentor: Dr. Dana Ward*

**Kayla Hughes & Drew Wertz**

**"What does it Mean to have Down Syndrome?"**

*Psychology*

*Mentor: Dr. Caitlin Faas*

**Kristine Hodgson-Torres**

**"Effects of Cortisol on Associative Memory  
in *C. elegans*"**

*Psychology*

*Mentor: Dr. Angy Kallarackal*

**Nicole Pinto & Keziah Adabrah**

**"T47D Human Breast Tumor"**

*Biology*

*Mentor: Dr. Dana Ward*

**Veronica Balick & Rachel Keifer**  
"Comparison of Cancer Cell Lines to Healthy Tissue Reveals Severity of the Cancer"

*Biology*

*Mentor: Dr. Dana Ward*

**Sasha-Gay Williams & Emma Gehringer**

"The Cell Line PC3"

*Biology*

*Mentor: Dr. Dana Ward*

**Sean Kazmierski**

"Training and Preparing to Become a Seasonal Park Ranger at Cunningham Falls State Park"

*Environmental Science*

*Mentor: Dr. Abby Kula*

**Malik Kadir**

"Testing Calcium Propionate (CaP) Efficiency as an Anti-fungal Agent on Turf Grass Phytopathogens"

*Biology*

*Mentor: Dr. Christine McCauslin*

**Angel Madariaga, Daniel Coleman & Christopher Homick**

"Examination of MDA-MB-435 Cancer Cells"

*Biology*

*Mentor: Dr. Dana Ward*

**Mitchel Geraghty**

"Developing Fitness Training Routines: Special Olympics Maryland"

*Biology*

*Mentor: Dr. Christine McCauslin*

**Nicholas Starvaggi**

"Ligand Modification of Iridium (III) Complexes towards Solar Energy Conversion Applications"

*Chemistry*

*Mentor: Dr. Isaac Mills*

**Elizabeth O'Hare & Katelyn Comeau**  
"Analysis of MCF-7 Breast Cancer Epithelial Cells in Culture"

*Biology*

*Mentor: Dr. Dana Ward*

**Pablo Badia**

"More Energy for Less Time"

*Chemistry*

*Mentor: Dr. Danny Miles*

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**Lightning Talk IV,**  
**College of Liberal Arts**

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**Thursday, 5:40-9:15 p.m.**  
**Phillips Library - Main**

**Taylor Remsburg & Marie Dickson**

"The Head Tutor Program"

*Sociology*

*Mentor: Ms. Kristin Sites*

**Grace King**

"Speaking Out Against Oppression: Comparing the Voices of George Lamming and Meek Mill"

*English*

*Mentor: Dr. Indrani Mitra*

**Annisha Montgomery**

"The Power of Poetry"

*English*

*Mentor: Dr. Sarah Scott*

**Kelley Northam**

"The First Blast Against the Writings of John Knox: An Investigation of Knox's Forms of Argumentation Against Female Monarchy"

*History*

*Mentor: Dr. Jamie Gianoutsos*

### **Grace Bovard**

**"1 in 3: An Analysis of Sexual Assault Awareness on Mount St. Mary's University's Campus"**

*Communication*

*Mentor: Dr. Mary Catherine Kennedy*

### **Chachie Tchuenkam**

**"A Quantitative Analysis of the Relationship of Abortion Restrictions 2010 and Abortion Rates (Rate of Occurrence) 2013"**

*Political Science*

*Mentor: Dr. Maureen Oakley*

### **Jamie Karpency**

**"Heritage or Hate?: The Symbolism of the Confederate Flag and Racially-Charged Politics"**

*Political Science*

*Mentor: Dr. Maureen Oakley*

### **Gloria Marie DeMoura**

**"The Personalistic Psychology of St. John Paul II"**

*Theology*

*Mentor: Dr. Paige Hochschild*

### **Trisha Nee**

**"Should Pharmaceutical Companies and their Management along with Conspirators be held Liable, Criminally and Civilly, for the Current Opioid Epidemic in the United States?"**

*Criminal Justice*

*Mentor: Professor Joseph Vince*

### **Le-Roy Battle III**

**"Do Mount Students Understand Race?: The Racial Identity Development of Mount Students"**

*Sociology*

*Mentor: Dr. Layton Field*

### **Jasmine Patrick**

**"Representation and Racism in Opera"**

*Fine Arts – Music*

*Mentor: Dr. Andrew Rosenfeld*

**Abstracts for Lightning Talks, Panel Discussions, Posters & FIRE Talks are available online. Visit [msmary.edu/SPARC](http://msmary.edu/SPARC) for a direct link.**

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# Notes

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