# 14TH ANNUAL

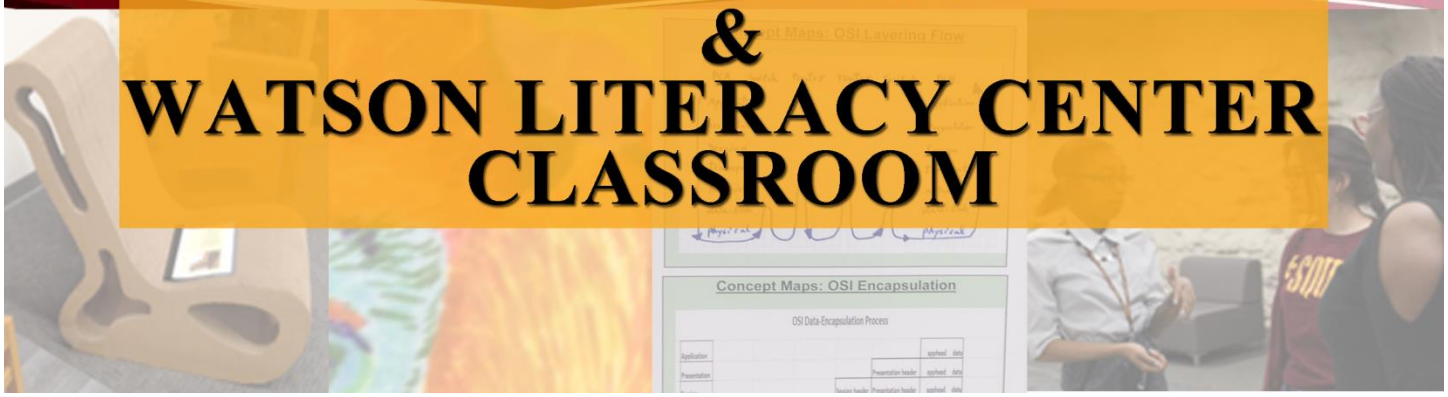
## PARK UNIVERSITY

# Student Research and Creative Arts Symposium

HONORS ACADEMY
PARK UNIVERSITY

## APRIL 22-23, 2019

## PARK AVENUE & WATSON LITERACY CENTER CLASSROOM



PARK UNIVERSITY SM

# UNDERGROUND

## DIRECTORY

A- Park Avenue

B- Watson Literacy Center

C- AP380

# Schedule of Events

| Date | Event | Location | Chair |
|---|---|---|---|
| Monday – April 22 | | | |
| 9:15–11:30 | Scientific Oral Presentations | Watson Literacy Classroom | Dr. Alex Silvius |
| 9:30–12:00 | Visual Art Presentations | Park Avenue | |
| 9:30–12:00 | Graphic Design Presentations | Park Avenue | |
| 1:00–3:30 | Interior Design Presentations | Park Avenue | |
| 1:30–3:45 | Student Oral Presentations | Watson Literacy Classroom | Dr. Patty Ryberg |
| Tuesday – April 23 | | | |
| 9:30–12:00 | Poster Presentations | Park Avenue | |
| 1:00 – 2:15 | America's Long-Wars in Context Panel | Watson Literacy Classroom | Dr. Jack MacLennan |
| 2:00 – 4:30 | Honors Academy Presentations | McCoy Meetin' House | Dr. Patty Ryberg |
| 2:30–3:30 | The Rise of China from Different Perspectives Panel | Watson Literacy Classroom | Amb. (Ret). Eunice Reddick |

**MONDAY APRIL 22**
**9:15–11:45**
**SCIENTIFIC ORAL PRESENTATIONS**
**WATSON LITERACY CENTER CLASSROOM**

## 9:15 Impact of Artificial Intelligence in the Health Care Industry

Nikki Dang, Senior – Biology
Artificial intelligence is increasing rapidly and is changing our society.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

## 9:30 Pathogenesis of Vitiligo: A Brief Review of Current Literature

Danna Gomes, Senior – Chemistry
Vitiligo is a rare disorder with complex etiology.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

## 9:45 Ebola virus sequelae in Liberia

Laurence Akakpo, Senior – Biology
Sequelae symptoms found in survivors of Ebola vs. close contacts symptoms with no Ebola history
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

## 10:00 Cancer Therapy: A Case for an Animal-Based Ketogenic Diet.

Brandon Koster, Senior – Biology
Removing plant foods and plant-derived produces like seed oils and supplements from the diet, while focusing on animal-based foods, including muscle meat and organ meats, shifts body metabolism and positively impacts gut permeability, resulting in an environment that slows cancer growth and proliferation by maintaining a state of ketosis and decreasing gut-related issues that impact disease progression.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

## 10:15 The Effects Deficiencies within Hemostasis on Clotting

Lauren Birkeness, Senior – Biology
This presentation will review the possible mutations and deficiencies of clotting factors during platelet plug formation thus preventing coagulation to occur during hemostasis.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

## 10:30 Medical Advances in Stem Cell Research

Sabrina Morris, Junior – Biology
The current and future medical advances that can be made using stem cell research.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

## 10:45 Toward the synthesis of 2,4,6-trimethyl-1,3,5-benzenetriacetic acid.

Logan Trowbridge, Senior – Chemistry
Work toward the synthesis of a human D2 dopamine receptor mimic
*Mentor: Donna Jean, Assoc. Professor of Chemistry*

## 11:00 Contaminant Affecting local water

Elizabeth Rubio, Senior – Biology
Contaminants enter the surrounding groundwater which affects the growth of plants and pollute the drinking water that animals and humans use daily.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

## 11:15 Solar Energy

Marcus Sinlak, Senior – Biology
I'll be talking about solar energy.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

**MONDAY APRIL 22**
**9:30 – 12:00**
**VISUAL ART PRESENTATIONS**
**PARK AVENUE**

## Artistic Development of the Past Year

Elisabeth Fleischmann, Senior - Biology & Fine Art
A selection of artistic works from the past year, in varying mediums and styles.
*Mentor: Professor Andrea Lee, Asst. Professor of Art*

## Expressions

Madelyne Hartleroad, Junior – English
A showcase of artistic experiments and experiences.
*Mentor: Professor Lynn Richardson-Ludwigs, Inst. of Art*

## Dabblings of an Artist

Sadie Johnson, Junior – Fine Art
From handspun yarn to black and white photography, I present to you the things that Park's professors have taught me during my time here.
*Mentor: Professor Christopher Lowrance, Inst. of Art*

## Giraffe: A study of shape

Tracy Rogers, Senior – Interior Design
This is a wire sculpture that explores the element of shape.
*Mentor: Lynn Richardson-Ludwigs, Inst. of Art*

## Waterfall

Tracy Rogers, Senior – Interior Design
This piece is a study of a 3 dimensional design, and is a waterfall cut from the pages of a book.
*Mentor: Lynn Richardson-Ludwigs, Inst. of Art*

## Balancing
Tracey Rogers, Senior – Interior Design
Sometimes we attempt to balance the fragile existence of who we are, while the weight of life and obligations seems to pull us to the very edge of destruction.
*Mentor: Christopher Lowrance, Inst. of Art*

## Monsters of Metal
Courtney Ross, Sophomore – Fine Arts
A combination of several 70 – 80's hair metal fashion and brand advertisements with ancient Roman and Greek mythology.
*Mentor: Andrea Lee, Asst. Professor of Art*

## Suicide Prevention: Saving the Youth
Faith Wiggans, Junior, Nursing
Power point presentation on Suicide Prevention.
*Mentor: Kathy Jackson, Asst. Professor of Nursing*

**MONDAY APRIL 22**
**9:30 – 12:00**
**GRAPHIC DESIGN PRESENTATIONS**
**PARK AVENUE**

## The Magical & Macabre
Clara Elena Zarate, Junior – Graphic Design
A series of works created while experimenting with traditional and digital mediums that depict a variety of subject matters.
*Mentor: Jeff Smith, Asst. Professor of Graphic Design*

## York travel campaign
Lexus Brown, Senior, Graphic Design
It's a travel campaign promoting the city of York, UK.
*Mentor: Jeff Smith, Asst. Professor of Graphic Design*

## Oulu Travel Campaign
Lindsay Halter, Senior, Graphic Design
A mock full scale travel campaign to Oulu, Finland, designed and crafted by myself.
*Mentor: Jeff Smith, Asst. Professor of Graphic Design*

## Kyoto Travel Campaign
Colin D. McMahon, Senior, Graphic Design
A travel campaign advertising Kyoto, Japan.
*Mentor: Jeff Smith, Asst. Professor of Graphic Design*

## Santorini Travel Campaign

Kamryn Rusbarsky, Senior, Graphic Design
A senior level project that is a promotion for a tourist destination. The project includes the display for Santorini, Greece with information on the destination while having an eye catching design.
*Mentor: Jeff Smith, Asst. Professor of Graphic Design*

**MONDAY APRIL 22**
**1:00–3:30**
**INTERIOR DESIGN**
**PARK AVENUE**

## Sports Design

Brandon Corbin, Senior – Interior Design
A club zone to an NFL Stadium that amplifies the fan experience.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## Interior Design Senior Project: Sizzle Grille

Grace DeYoung Daniels, Senior – Interior Design
An interior design capstone project of an upscale steak and seafood restaurant in the Kansas City area.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## Rose Residence

Amy Famen, Senior – Interior Design
The valleys and mountains coated in the colors of autumn was the inspiration for the space; the home creates relaxing space that brings the outdoors indoors.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## Grace Devine Worship Center

Jennifer Jenson, Senior – Interior Design
Biophilic design connects nature and humans within the designed environment.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## Smörg

Regina Emad Kheir, Senior – Interior Design
A representation of the effects of lighting and ambiance on experience and usability of a space.
*Mentor: Roaxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## UnI Chair

Tracy Rogers, Senior – Interior Design
The UnI chair, standing for "You and I," is designed as a shared sitting experience for an adult and/or child, with one side an adult lounge chair a child can climb on with you, and the other a child size seat and climbing/play area.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## Copper Tree by the Sea

Tracy Rogers, Senior – Interior Design
A comprehensive view of a Hospice House Design, complete with research, floor plan, perspectives, elevations and materials.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## The Octave Hotel Argyle

Errin Sharp, Senior – Interior Design
The adaptive re-use of a historic property from an office building to a high end hotel and restaurant.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## ARBOUR Restaurant

Camilla Willoughby, Senior – Interior Design
The significance of this design is to utilize a sustainable design philosophy that encourages decisions at each phase of the design process reducing negative impacts on the environment and the health of the occupants, without compromising the bottom line. This project integrates a holistic approach that encourages compromise and tradeoffs by positively impacting all phases of a building's life-cycle, including design, construction, and operation.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

**MONDAY APRIL 22**
**1:30–3:45**
**ORAL PRESENTATIONS**
**WATSON LITERACY CENTER CLASSROOM**

## 1:30 Innovation and Emerging Technology in the Public Sector

James Zachary Jarrard, Masters Program – Information Systems & Business Analytics
This paper will examine trends in innovation and technology in government.
*Mentor: Susan Keim, Asst. Professor of Public Administration*

## 1:45 Gamifying Government

James Zachary Jarrard, Masters Program – Information Systems & Business Analytics
Dr. Susan Keim, Assistant Professor of Public Administration
This presentation is going to explore gamification in the public sector and transferable skills.

## 2:00 Find Your Future

Emilie Heston, Senior – Multimedia Journalism and Public Relations
Promotional marketing campaign for Park University.
*Mentor: Kristin Shaw, Lecturer in Communication, Journalism, and Public Affairs*

## 2:15 Translations

Madelyne Hartleroad, Junior – English
A poem about untranslatable words that describe nature.
*Mentor: Glenn Lester, Asst. Professor of English*

## 2:30 Pre-exposure Improves Connections

Erica Moore, Senior – English
Can the pre-exposure of lesson materials help writers make better connections to writing prompts?
*Mentor: Glenn Lester, Asst. Professor of English*

## 2:45 China Through the Ages

Henry Franklin, Junior – History
An analysis of Chinese history and how it influences their interactions with the outside world.
*Mentor: Jack MacLennan, Asst. Professor of Political Science*

## 3:00 vPark: Cybersecurity Labs in the Cloud

Calvin McElroy, Senior – Information and Computer Science
Jacob Addison, Senior – Information and Computer Science
Testing GENI's shared academic infrastructure to teach cybersecurity in a secure lab environment.
*Mentor: Yongzhi Wang, Asst. Professor of Computer Science*

## 3:15 Space Planning for a Hospice Environment

Tracy Rogers, Senior – Interior Design
This research paper explores the hospice philosophy, the complexity of the building space, the ambiance of space, as well as space planning and adjacency for hospice house environment.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

## 3:30 Impacts of Restaurant Seating on Customer Satisfaction

Grace DeYoung Daniels, Senior – Interior Design
A summary of a research paper exploring the impacts of restaurant seating design on customer satisfaction.
*Mentor: Roxann Sherrodd, Asst. Professor Art, Design, and Interdisciplinary*

**TUESDAY APRIL 23**
**9:30 – 12:00**
**POSTER PRESENTATIONS**
**PARK AVENUE**

## Virtual Reality Exposure Therapy

Jessie Arms, Masters Program – Social Work
My research project entails an educational presentation to social workers at the Dwight D. Eisenhower VA Medical Center to determine if they would implement the presented therapy into the practice with veterans.
*Mentor: Geri Dickey, Asst. Professor of Social Work*

## The Love Life Bag Program

Abby Marder, Masters Program – Social Work
The Love Life Bag Program is a condom distribution program within a HUD family housing community geared towards reducing stigma around condoms and condom use.
*Mentor: Geri Dickey, Asst. Professor of Social Work*

## Alexa, Play the Future: A Three-Sector View

James Zachary Jarrard, Masters Program – Information Systems & Business Analytics
This poster will examine how Amazon Alexa is used in the public, private, and nonprofit sectors.
*Mentor: Susan Keim, Asst. Professor of Public Administration*

## Statistical Analysis of Improved Student Performance Using Adaptive Learning in Chemistry

Kaitlyn Branstetter, Senior – Chemistry
Standardized exam scores for students in two years of CH105 were compared to time and mastery data within an adaptive learning program. Trends for effectiveness of the program on student learning outcomes will be presented.
*Mentor: Donna Jean, Assoc. Professor of Chemistry*

## Investigating Interferences Between Enamel Paints and Luminol in a Forensics Science Setting.

Adrianna McMullen, Senior – Chemistry
This research is the continuation of an independent honors research project focusing on the interference between enamel based paints and luminol causing false positives.
*Mentor: Donna Jean, Assoc. Professor of Chemistry*

## Straightening Identities for Twisted Multiloop Algebras

Montana Miller, Senior – Mathematics
We have formulated identities for reordering the products of the non-commutative elements in some twisted multiloop algebras.
*Mentor: Samuel Chamberlin, Assoc. Professor of Mathematics*

## Trees: A Natural Resource

Lyndsey Fowks, Senior – Interdisciplinary Studies
This project was created to synthesize information on the usability and necessity trees, forests, and plantations are to humans and the sustainability of their manufacturing.
*Mentor: David Fox, Inst. of Geography*

## Groundwater Depletion

Jacqueline Perry, Sophomore – Interdisciplinary Studies
My presentation will be about groundwater depletion and the negative affects it has on humans and the environment.
*Mentor: David Fox, Inst. of Geography*

## Commercial Honey Bees, A Resource

Steven Payne, Senior – Geography
Honey bees are a two-pronged human resource, being utilized for the pollination of commercial crops and providing several valuable commodities directly (honey, nectar, wax), but the challenges they face as a species not only have economic impacts for humans but underline environmental issues that threaten all invertebrate pollinators.
*Mentor: David Fox, Inst. of Geography*

## Smarter than Meth

Amanda Edwards, Senior – Nursing
Methamphetamine education to increase awareness, treatment, and prevention of this huge problem within our society.
*Mentor: Kathy Jackson, Asst. Professor of Nursing*

## Computer Networking Internship at Team Logic IT

Jonah Altenburg, Senior – Computer Science/Networking
Semester long internship at a local IT outsourcing firm.
*Mentor: Wen Hsin, Professor of Computer Science*

## Robot Automation in Agriculture- Technology

Olivia Mark, Junior – Computer Science
An exploration into automation engineering with Robot Framework at agriculture-technology company, Farmobile.
*Mentor: Wen Hsin, Professor of Computer Science*

**TUESDAY APRIL 24**
**1:00 – 2:15**
**AMERICA'S LONG-WARS IN CONTEXT PANEL**
**WATSON LITERACY CENTER CLASSROOM**

Presented by the Department of Political Science

This panel of faculty from institutions around Kansas City will discuss US military involvement since 9/11 from their various research perspectives.

Discussant: **Dr. Jack Adam MacLennan**
Assistant Professor of Political Science, Department of History, Political Science, and Interdisciplinary Studies, Park University

**Dr. Brittnee A. Carter**
Assistant Professor, Department of Political Science, University of Kansas

**Dr. Rebecca Best**
Assistant Professor, Department of Political Science, University of Missouri – Kansas City

**Dr. Fletcher Cox**
Assistant Professor of Political Science, Department of Political Science, William Jewell College

**Dr. Luck Campbell**
Assistant Professor of Political Science, Department of Humanities and Social Sciences, Northwest Missouri State University

**TUESDAY APRIL 23**
**2:00 – 4:30**
**HONORS ACADEMY PRESENTATIONS**
**M$^{C}$COY MEETIN' HOUSE**

## 2:00 Building a Brand

Mallory Hughson, Senior – Graphic Design & Business Administration/Marketing
My presentation will give an in-depth look into how principles of both Marketing and Design work together to contribute to the building of a brand.
*Mentor: Jeff Smith, Asst. Professor of Graphic Design*

## 2: 15 The Ability and Uses on an Arduino Rover to Navigate and Map Limited Pathways

Christian Leonard, Senior – Mathematics
Using an Arduino microcontroller, this project aims to create an Arduino Rover-style car that can be remotely controlled and navigated through spaces and pathways people may not be able to go. Through the use of ultrasonic sensors, the goal of the Arduino Rover is to maneuver an enclosed maze based off the readings from onboard sensors, then using that information, draw a map of the maze on the user's computer.
*Mentor: Alexander Silvius, Assoc. Professor of Physics*

**2:30 Straightening Identities In Twisted Multiloop Algebras**

Daniel Davidson, Senior – Mathematics

Our research lies in Lie algebra, specifically twisted multiloop algebras; we have developed formulas for straightening some products in these algebras.

*Mentor: Samuel Chamberlin, Assoc. Professor of Mathematics*

**2: 45 From Discrete Dissections to Artistic Animations: The Evolution of Medical Illustration alongside Medicine**

Elisabeth Fleischmann, Senior – Biology & Fine Art

This project examines the development of anatomical illustration and medicine from the Renaissance until present day, including accompanying artistic works and studies.

*Mentor: Andrea Lee, Asst. Professor of Art*

**3:00 Violin Works of the Boston Six**

Jessica Tandy, Senior – Violin Performance

A study of the musical style and contributions of late nineteenth-century New England composers.

*Mentor: Steven McDonald, Director of Orchestral Activities*

**3:15 Inquiry-Based Learning**

Kenna Monthei, Senior – Secondary Education – Biology

Throughout this presentation, I will describe the effectiveness and practicality of inquiry-based learning in the high school classroom.

*Mentor: Linda Seybert, Assoc. Professor of Education*

**3:30 Management In Diversity**

Kyndal Reents, Senior – International Business

Research exploring the best form of management for a diverse world and workforce.

*Mentor: Silvia Byer, Professor of Modern Languages*

**3:45 An Exploration of Racial Misconceptions within Video Advertising at Major Public American Universities**

Ginna Verhoff, Senior – Sociology

This study explores the existence of racial misconceptions in video advertising of major public American universities to determine whether they contribute to the perpetuation or eradication of racial inequality.

*Mentor: Monica Brannon, Asst. Professor of Sociology*

**4:00 An exploration of the effectiveness of the sustainable movement at the University of Canterbury**

Lyndsey Fowks, Senior – Interdisciplinary Studies

This research project was conducted via qualitative interviews to understand how the university-funded sustainable movement impacted individuals at the University of Canterbury in Christchurch, New Zealand.

*Mentor: Rusty Norris, Inst. of Communication*

**4:15 TBD**

Emily Raffety, Senior – Social Work

*Mentor: Eugene Matthews, Assoc. Professor of Criminal Justice*

**TUESDAY APRIL 24**
**2:30–3:30**
**THE RISE OF CHINA FROM DIFFERENT PERSPECTIVES PANEL**
**WATSON LITERACY CENTER CLASSROOM**

What does the rise of China mean for global order and American foreign policy? This collection of papers from students at Park University explore the various ways in which the rise of China will influence world politics in the future.

**Discussant: Amb. (Ret). Eunice Reddick**
2019 DACOR Visiting Professor of Diplomacy, Command and General Staff College, Fort Leavenworth, KS

Panel:

## Don't Panic! Realism and China
Thomas Vadbunker, Senior - History

## Elastic Liberalism: The Limits of China's Rise
Gregory Melham, Senior – Political Science

## China: Lessons from Past Empires
Madison Manley, Junior – History

## Military Spending in China: Should We Be Worried?
Jaden Box, Junior – Public Administration

# *2019 Symposium*

Sponsored by the Park University Honors Academy

College of Liberal Arts and Sciences: James Pasley, Dean
Patricia Ryberg, Director
Assisted by
Glenda Holder

*We would like to thank the Park University students, faculty, and staff who participated to make this even possible*

*8700 NW River Park Drive * Parkville, MO 6415 * patricia.ryberg@park.edu*