



Indiana University of Pennsylvania

IUP Scholars Forum

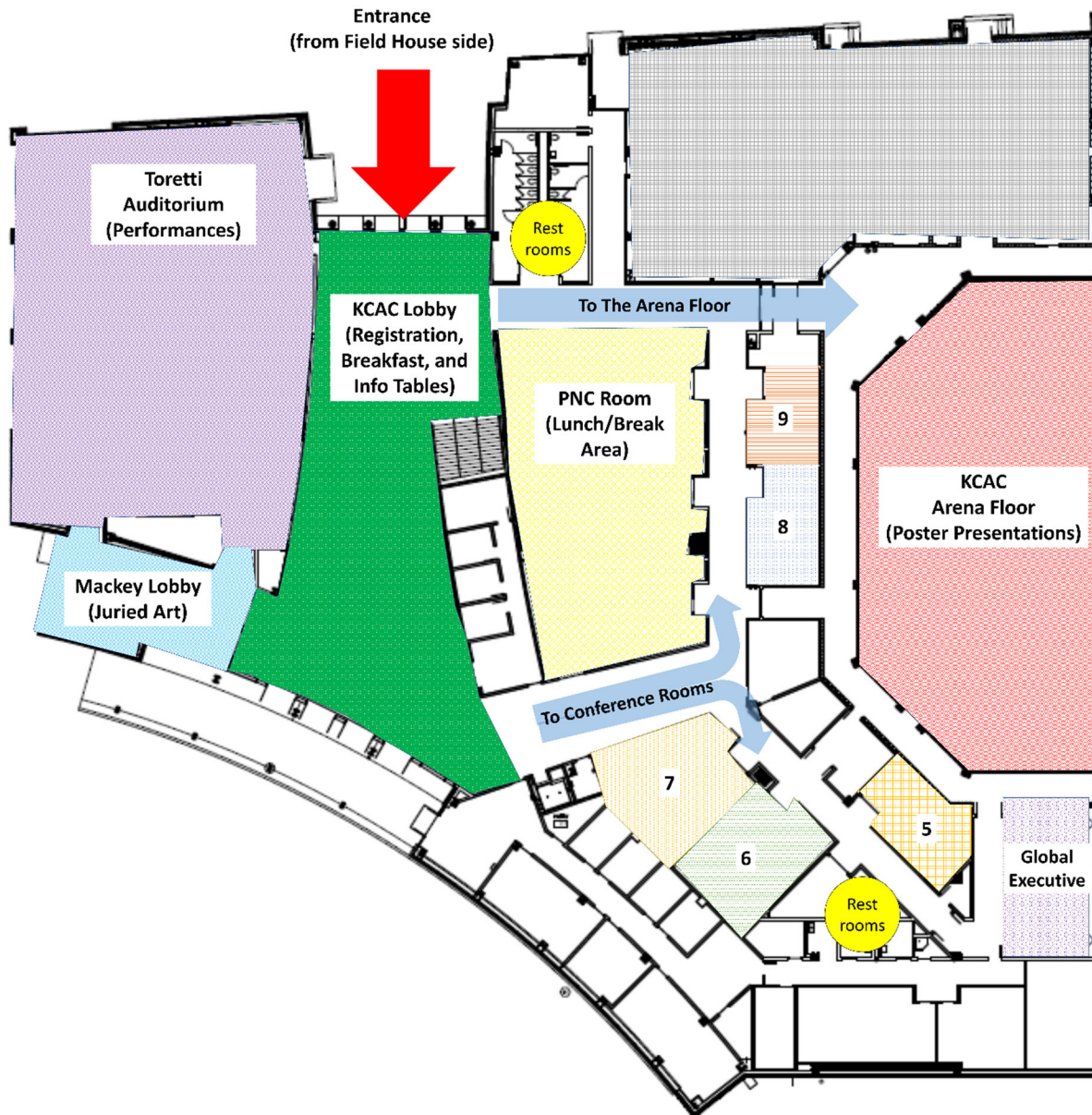
Wednesday, April 5, 2023

PROGRAM



IUP Scholars Forum

Kovalchick Convention and Athletic Complex



The PNC Room is open from 8:00 -11:00 AM as a break room, and from 11:00 AM to 1:00 PM with lunch.

Eighteenth Annual IUP Scholars Forum

Sponsored by
School of Graduate Studies and Research

Program at a Glance

8:00 AM - 9:00 AM	Registration KCAC Lobby Atrium
9:00 AM – 10:00 AM	Business Case Studies Global Executive Room
9:00 AM - 1:00 PM	Juried Art Exhibit Mackey Lobby
9:00 AM – 1:00 PM	Performances Toretti Auditorium
9:00 AM - 1:00 PM	Poster Presentations KCAC Arena Floor
10:00 AM – 12:00 PM	Concurrent Podium Presentations Sessions <ul style="list-style-type: none">• A <i>Biological & Env. Planning</i> Conference Room 6• B <i>Finance and Economics, Part I</i> Conference Room 7• C <i>Redevelopment & Rehabilitation</i> Conference Room 8• D <i>Social Media and Psychology</i> Conference Room 9
11:00 AM – 1:00 PM	Concurrent Podium Presentations Sessions <ul style="list-style-type: none">• E <i>Finance and Economics, Part II</i> Conference Room 5• F <i>Humanities and Social Sciences</i> Conference Room 8• G <i>Health and Safety Science</i> Conference Room 9
11:30 AM - 1:00 PM	Lunch PNC Conference Room
1:30 PM – 2:30 PM	Three Minute Thesis Toretti Auditorium

Special Thanks to:

- ❖ Scholars Forum Planning Committee
- ❖ School of Graduate Studies and Research
- ❖ Jones White Writing Center
- ❖ Scholars Forum Judges
- ❖ IUP Research Institute
- ❖ Office of Undergraduate Research
- ❖ Applied Research Lab
- ❖ Cook Honors College
- ❖ Volunteers and Moderators

Award Sponsors:

- ❖ Academic Deans
- ❖ Jones White Writing Center
- ❖ Applied Research Laboratory
- ❖ S-COAM
- ❖ IUP Research Institute
- ❖ Sigma Xi
- ❖ IUP Libraries

Scholars Forum Planning Committee:

- ❖ C Clewell ❖ C Denison ❖ B Siegel Finer ❖ B Jackson ❖ S Massey ❖ N Muchtar
- ❖ SA Maicaneanu ❖ A Palmiotto ❖ Y Sissoko ❖ J Villemain ❖ J Warnock ❖ L Yan ❖

2023 Judges:

- ❖ A Adams ❖ J Barnes ❖ S Bharathan ❖ J Benhart ❖ K Bohl ❖ KR Cercone ❖ W Chadwick ❖ Z Cheever ❖ C Clewell ❖ C Connelly ❖ J Cooper ❖ N Deardorff ❖ C Denison ❖ S Dusack ❖ T Edwards ❖ T Eisenhower ❖ B Ford ❖ R Fox ❖ B Siegel Finer ❖ T Fries ❖ S Ghosh ❖ L Hao ❖ P Hawkins ❖ J Heisler ❖ PY Hsiao ❖ A Jain ❖ D Janetski ❖ J Jozefowicz ❖ S Jozefowicz ❖ L Kupchella ❖ J Levey ❖ E Little ❖ S Liu ❖ U Lowery ❖ SC Lu ❖ SA Maicaneanu ❖ LS Marin ❖ JSB Mehus ❖ S Miller ❖ W Minnick ❖ C Moyer ❖ N Muchtar ❖ C Navaratna ❖ P Nealen ❖ L Newell ❖ V Ortiz ❖ N Pipkin-Hutchinson ❖ J Roberts ❖ M Robinson ❖ T Runge ❖ D Sherwood-Smith ❖ Y Sissoko ❖ Z Stiegler ❖ L Sugisaki ❖ N Tayem ❖ T Thompson ❖ J Townsend ❖ H Travis ❖ C Vaccaro ❖ J Villemain ❖ J Warnock ❖ S Wheeler ❖ D Widzowski ❖ O Yacoub ❖ L Yan ❖ M Zambrano-Paff ❖ A Zhou ❖ M Zreiqat ❖ N Zuraikat ❖

2023 Volunteers and Moderators:

- ❖ M Cloutier ❖ C Connelly ❖ D Hammond ❖ A Kuzneski ❖ U Lowery ❖ K McCormick ❖ K McKeaver ❖ D Minser ❖ J Pensyl ❖ B Pullin ❖ E Restaine ❖ C Smeltzer ❖ A Trimble ❖ M Valyo ❖ K Vigue

BUSINESS CASE STUDY SHOWCASE

Global Executive Room

This showcase includes students from the Eberly School of Business as they pitch solutions to business case studies. Organizer: Yaya Sissoko.

Pres #	Business Case Title	Team Member(s)	Faculty Mentor
BCS-01	The Impact of Secured Overnight Financial Rate (SOFR) in replacing the London Interbank Offered Rate (LIBOR) as an international benchmark for borrowing or lending rate.	James Walubengo Mukaisi	Yaya Sissoko

PERFORMANCES

Toretti Auditorium

This session features performances created by a select group of students. The performances are reviewed by faculty members and represent performances from theatre, music, and more. Session Organizers: Christine Clewell and Craig Denison

Pres #	Title	Performer	Faculty Mentor
K-01	TBD	TBD	TBD
K-02	TBD	TBD	TBD
K-03	TBD	TBD	TBD

JURIED ART EXHIBITION
Mackey Lobby

*This exhibition features artworks created by a select group of students. The artworks are juried by faculty members and represent the breadth of studio research conducted during the 2022/2023 academic year.
 Exhibit Organizer: Sharon Massey*

Pres #	Title	Artist	Faculty Mentor
J-01	The Culture of Recovery at Spiritlife	Alexis Bence	Ivan Fortushniak
J-02	Unusual Trophy	Bryar Bieda	Jeremy Waltman
J-03	Fridge and Stove Salt and Pepper Shakers	Caitlyn Boggs	Sharon Massey
J-04	Circle of Life	Caitlyn Boggs	Sharon Massey
J-05	Food is Life	Caitlyn Boggs	Nathan Heuer
J-06	Pear in Bowl	Sandra Buerklin	Sean Derry
J-07	Green Tea	Sandra Buerklin	Sean Derry
J-08	It's Closing Time	Sandra Buerklin	Sean Derry
J-09	Champlevé Salt and Pepper Shakers	Rose Burger	Sharon Massey
J-10	Hummingbird Cloisonné Compact	Rose Burger	Sharon Massey
J-11	3 Silver Cloisonné Bird Rings	Rose Burger	Sharon Massey
J-12	Suit Shakers	Paige Johnson	Sharon Massey
J-13	Toi et Moi Ring	Paige Johnson	Sharon Massey
J-14	Snowflake Earrings	Paige Johnson	Sharon Massey
J-15	Human Potential: Communication & Collaboration	Iris Kauffman	Ivan Fortushniak
J-16	Baby Tooth	Em McAninch	Sharon Massey
J-17	Metal Vision	Em McAninch	Sharon Massey
J-18	IUP Library Mural Proposal	Adrian Salotti	Ivan Fortushniak
J-19	Art and Health	Juliana Shaffer	Ivan Fortushniak
J-20	Mural Painting: Kopchick Hall	Dalton Young	Ivan Fortushniak

Oral Presentation Schedule

Time	Conference Room 6	Conference Room 7	Conference Room 8	Conference Room 9
	<i>Session A: Biology and Environmental Planning</i>	<i>Session B: Finance & Economics, Part I</i>	<i>Session C: Redevelopment and Rehabilitation</i>	<i>Session D: Social Media and Psychology</i>
10:00–10:20a	A1. Expression of wnt4a and fzd9b in zebrafish during kidney development	B1. The Determinants of Poverty in Rural and Urban Pennsylvania Counties	C1. Displacement and Gentrification: Challenges of Urban Redevelopment in providing Affordable Housing in US communities	D1. Understanding Facebook Crisis Communication in the Context of Dialogic Theory of Public Relations: A Case Study of Twitter Ban in Nigeria
10:20-10:40a	A2. Evaluation of newly generated LRP1 antibodies in different cell types: THP1 cancer cell line, human and mouse immune cells	B2. Gender-Based Wage Gap in Professional Athletes	C2. Reputation Rehabilitation in the Midst of a Diplomatic Crisis - A Case Study of the Impasse Between Ghana and Sierra Leone	D2. How Facebook Leverages Data
10:40-11:00a	<i>Break</i>	<i>Break</i>	<i>Break</i>	<i>Break</i>
11:00-11:20a	A3. It's a Hairy Situation: Optimizing Hair Sample Methods for Lagomorph Conservation	B3. The Effect of Demographic, Socioeconomic, and Other Influences on State DUI Rates	<i>Session F1</i>	D3. Social Media Use in Early Adulthood and the Impact of Past Parental Mediation Practices
11:20–11:40a	A4. Analyzing the relationship between invasive Knotweeds and Urban Stream Syndrome in Indiana, PA	B4. The Relationship Between Economic Factors and Annual Percentage Change in Gross Domestic Product of Developing Nations	<i>Session F2</i>	D4. Examining Forgiveness and Reconciliation Among Estranged Adult Children
11:40a–12:00p	<i>Break</i>	<i>Break</i>	<i>Break</i>	<i>Break</i>

Oral Presentation Schedule

Time	Conference Room 5	Conference Room 8	Conference Room 9
	Session E: Finance & Economics, Part II	Session F: Humanities and Social Sciences	Session G: Health and Safety Science
11:00–11:20a	E1. Data Breaches and Cybersecurity in Financial Institutions	F1. The Frustrated Revolutionary: Wang Jingwei, the Keys to Power in Republican China, and the Limits of Revolution	<i>Session D3</i>
11:20–11:40a	E2. Impact of Artificial Intelligence in Finance	F2. Modern Theism: An Investigation Into the Existence of a Universal Creator Entity, Moral Laws, and the Consequences of the Existence of Such Things	<i>Session D4</i>
11:40a–12:00p	<i>Break</i>	<i>Break</i>	<i>Break</i>
12:00–12:20p	E3. Determinants of Motor Vehicle Deaths	F3. Evaluating Moral Reasoning and the Efficacy of Ethics Courses Among Criminology Majors	G1. How incentive spirometry techniques are being instructed among healthcare professionals
12:20–12:40p	E4. Rail Traffic of Motor Vehicles and Parts as Promoter of Change in U.S. Gross Domestic Product	F4. Indigenous Occupation Strategies in Eastern Pennsylvania: An Exploration of Changing Subsistence and Technological Practices in Watershed 03A	G2. Assessment of slip, trip and fall (STF) potential on construction work surfaces using wearable technology and construction worker focus groups
12:40–1:00p	<i>Break</i>	<i>Break</i>	<i>Break</i>

Oral Presentation Sessions

SESSION A: Biological and Environmental Planning

10:00am–12:00pm, Conference Room 6

Moderator: Elena Restaine

Time	Presentation	Author(s)	Faculty Mentor
*A1. 10:00–10:20	Expression of wnt4a and fzd9b in zebrafish during kidney development.	Emma Fetchko	<i>Cuong Diep (Biology)</i>
A2. 10:20–10:40	Evaluation of newly generated LRP1 antibodies in different cell types: THP1 cancer cell line, human and mouse immune cells.	Scott Semelsberger	<i>Cuong Diep (Biology) Jeffrey Mollrem (MD Anderson Cancer Center)</i>
10:40–11:00	<i>Break</i>		
*A3. 11:00–11:20	It's a Hairy Situation: Optimizing Hair Sample Methods for Lagomorph Conservation.	April Flowers	<i>Sarah Emel (Biology)</i>
A4. 11:20–11:40	Analyzing the relationship between invasive Knotweeds and Urban Stream Syndrome in Indiana, PA.	Isaac Thompson	<i>Sudeshna Ghosh (GGEP)</i>
11:40–12:00	<i>Break</i>		

SESSION B: Finance and Economics, Part I

10:00am–12:00pm, Conference Room 7

Moderator: Dasha Hammond

Time	Presentation	Author(s)	Faculty Mentor
B1. 10:00–10:20	The Determinants of Poverty in Rural and Urban Pennsylvania Counties.	Angelique Alcantara	<i>James Jozefowicz (Finance & Economics)</i>
B2. 10:20–10:40	Gender-Based Wage Gap in Professional Athletes.	Erin McGrath, Emily Elliott	<i>James Jozefowicz (Finance & Economics)</i>
10:40–11:00	<i>Break</i>		
B3. 11:00–11:20	The Effect of Demographic, Socioeconomic, and Other Influences on State DUI Rates.	Alyssa Carne, Alex Tseng	<i>James Jozefowicz (Finance & Economics)</i>
B4. 11:20–11:40	The Relationship Between Economic Factors and Annual Percentage Change in Gross Domestic Product of Developing Nations.	Jorge Luna Lopez	<i>James Jozefowicz (Finance & Economics)</i>
11:40–12:00	<i>Break</i>		

**Women in STEM presentation*

SESSION C: Redevelopment and Rehabilitation
10:00–11:00am, Conference Room 8
Moderator: Katie McCormick

Time	Presentation	Author(s)	Faculty Mentor
C1. 10:00–10:20	Displacement and Gentrification: Challenges of Urban Redevelopment in providing Affordable Housing in US communities.	Trajan Jones	<i>Sudeshna Ghosh (GGEP)</i>
C2. 10:20–10:40	Reputation Rehabilitation in the Midst of a Diplomatic Crisis - A Case Study. of the Impasse Between Ghana and Sierra Leone	Kwabena Gyasi	<i>Nurhaya Muchtar (Communications Media)</i>
10:40–11:00	<i>Break</i>		

SESSION D: Social Media and Psychology
10:00am–12:00pm, Conference Room 9
Moderator: Andrew Kuzneski

Time	Presentation	Author(s)	Faculty Mentor
D1. 10:00–10:20	Understanding Facebook Crisis Communication in the Context of Dialogic Theory of Public Relations: A Case Study of Twitter Ban in Nigeria.	Nafisah Ahmad Sulaiman	<i>Nurhaya Muchtar (Communications Media)</i>
D2. 10:20–10:40	How Facebook Leverages Data.	Levi Donaldson	<i>Nurhaya Muchtar (Communications Media)</i>
10:40–11:00	<i>Break</i>		
D3. 11:00–11:20	Social Media Use in Early Adulthood and the Impact of Past Parental Mediation Practices.	Meghna Babu, Julie Bullock	<i>Lisa Newell (Psychology)</i>
*D4. 11:20–11:40	Examining Forgiveness and Reconciliation Among Estranged Adult Children.	Christina Horst	<i>Tara Johnson (Psychology)</i>
11:40–12:00	<i>Break</i>		

**Women in STEM presentation*

SESSION E: Finance and Economics, Part II
11:00am–1:00pm, Conference Room 5
Moderator: Brynlee Pullin

Time	Presentation	Author(s)	Faculty Mentor
E1. 11:00–11:20	Data Breaches and Cybersecurity in Financial Institutions.	Taylor Friedman	<i>Yaya Sissoko (Finance and Economics)</i>
E2. 11:20–11:40	Impact of Artificial Intelligence in Finance.	Babere Marwa	<i>Yaya Sissoko (Finance and Economics)</i>
11:40–12:00	<i>Break</i>		
E3. 12:00–12:20	Determinants of Motor Vehicle Deaths.	Evan Orr, Felix Marquez	<i>James Jozefowicz (Finance and Economics)</i>
E4. 12:20–12:40	Rail Traffic of Motor Vehicles and Parts as a Promoter of Change in U.S. Gross Domestic Product.	Matthew Gulyas, Jason Davis	<i>James Jozefowicz (Finance and Economics)</i>
12:40–1:00	<i>Break</i>		

SESSION F: Humanities and Social Sciences
11:00am–1:00pm, Conference Room 8
Moderator: Abby Trimble

Time	Presentation	Author(s)	Faculty Mentor
F1. 11:00–11:20	The Frustrated Revolutionary: Wang Jingwei, the Keys to Power in Republican China, and the Limits of Revolution.	Samuel Bigham	<i>Alan Baumler (History)</i>
F2. 11:20–11:40	Modern Theism: An Investigation Into the Existence of a Universal Creator Entity, Moral Laws, and the Consequences of the Existence of Such Things.	Wyatt Skaugen	<i>Michael Schwartz (Theatre, Dance, and Performance)</i>
11:40–12:00	<i>Break</i>		
F3. 12:00–12:20	Evaluating Moral Reasoning and the Efficacy of Ethics Courses Among Criminology Majors.	Alessa Juarez, Shannon Phaneuf, Sadie Miller	<i>Shannon Phaneuf (Criminology and Criminal Justice)</i>
*F4. 12:20–12:40	Indigenous Occupation Strategies in Eastern Pennsylvania: An Exploration of Changing Subsistence and Technological Practices in Watershed 03A.	Sonja Rossi-Williams	<i>Benjamin Ford (Anthropology)</i>
12:40–1:00	<i>Break</i>		

*Women in STEM presentation

SESSION G: Health and Safety Science
11:00am–1:00pm, Conference Room 9
Moderator: Jaida Pensyl

Time	Presentation	Author(s)	Faculty Mentor
*G1. 11:00–11:20	How incentive spirometry techniques are being instructed among healthcare professionals.	Cameron Sivels, Arisia Davis, Emma Williams	<i>Jack Albert (Nursing and Allied Health Professions)</i>
*G2. 11:20–11:40	Assessment of slip, trip and fall (STF) potential on construction work surfaces using wearable technology and construction worker focus groups.	Bobie Sue Clawson	<i>Wanda Minnick (Safety Science)</i>
11:40–12:00	<i>Break</i>		

**Women in STEM presentation*

Poster Presentation Sessions

KCAC Arena Floor
9:00am–1:00pm

SESSION: Humanities and Social Sciences

Pres.	Title	Author(s)	Faculty Mentor
P01.	The Ethics of Asimov: Philosophy of Robots.	Koan Weinstein	<i>Leo Yan (Philosophy and Religious Studies)</i>
P02.	Jael and Judith: The polarization of the Most Blessed of Women.	Jesse Gowin	<i>Alison Downie (Philosophy and Religious Studies)</i>
*P03.	Paranormal Appalachia: A study of the supernatural of Indiana County.	Amanda Zaner, Jesse Gowin, Rania Rashid, Brittney Williams-Smith	<i>Amanda Poole (Anthropology)</i>
*P04.	All Land is Sacred Land.	Victoria Albert	<i>Abigail Adams (Anthropology)</i>

SESSION: Social Media and Psychology

Pres.	Title	Author(s)	Faculty Mentor
P05.	Testing the Mediating Effect of School Attachment on the Relationship between Physical and Psychological health: Does the Gender matter?	Lamia Galal	<i>Daniel Heckert (Sociology)</i>
*P06.	On Your Best Friends List?	Mariah Mahosky, Madilyn Haragos, Meghna Babu	<i>Lisa Newell (Psychology)</i>
*P07.	Cognitive Ability and Perceptions.	Hannah Burtner, Danielle Manning, Claira Jordan, Jacob Drexler	<i>Mark Palumbo (Psychology)</i>
*P08.	Perceptions and Cognitive Ability.	Riley Morrison, Hannah Culp, Emma Romberger, Sophia Redmond	<i>Mark Palumbo (Psychology)</i>
P09.	Social Media Users' Perceptions of the Facebook Outage: A Case Study.	Youssef Yakoub	<i>Nurhaya Muchtar (Communications Media)</i>
P10.	The Tide Pod Challenge.	Mackenzie Mead	<i>Nurhaya Muchtar (Communications Media)</i>

*Women in STEM presentation

SESSION: Sociopolitical and Human Rights Inquiries

Pres.	Title	Author(s)	Faculty Mentor
*P11.	Are our Genes Leaving us With a Higher Risk to Developing a Mental Disorder?	Kayley Palmer	<i>Kristi Storti (Kinesiology, Health, and Sport Science)</i>
P12.	How Counseling Discourse Constructs Substance Use Disorder.	Brian Nuckols, Abigail Campbell, Casey Sharek	-
P13.	Generation 'V': Mapping Coronavirus Related Issues and Factors in Pennsylvania.	Jesse Gowin	<i>Abigail Adams (Anthropology) Christopher Schaney (GGEP)</i>
P14.	Policing COVID-19 in Rural Pennsylvania: A Mixed-Methods Exploration of Law Enforcement Experiences.	Vanessa Gutierrez	<i>Daniel Lee (Criminology and Criminal Justice)</i>
P15.	Examining the Moderating Effect of Law Enforcement Agency Type on Body-Worn Camera Assignment.	Jenna Sorensen	<i>Sadie Miller (Criminology and Criminal Justice)</i>
P16.	Comparison of County Level Assaults and Issuance of Protection From Abuse Orders in Pennsylvania.	Owen Zablocki	<i>Christian Vaccaro (Sociology)</i>
*P17.	Campus Equality: The IUP Campus Culture of Sexual Violence, Safety, and Risk.	Callie Bland	<i>Abigail Adams (Anthropology)</i>
P18.	Mapping Sowell's Conflict of Visions: A Framework for Understanding Political Partisanship.	Shane Monteleone	<i>Leo Yan (Philosophy and Religious Studies)</i>
P19.	The Not So Glorious Gold: How international sports competitions failed to showcase human rights abuses.	Ann Gamble	<i>Terilyn Huntington (Political Science)</i>

**Women in STEM presentation*

SESSION: Applied Mathematics and Finances

Pres.	Title	Author(s)	Faculty Mentor
P20.	An Analysis of the Sensitivity of Stock Market Returns to the Release of Macroeconomic Data.	Dominic Rocco, Blake Edwards, Kaitlin Eichenlaub, Matthew Levenson, Ronald Fleck	<i>Todd Potts (Finance and Economics)</i>
P21.	Descriptive Analysis of Key Variables for Sub-County Distribution of PCCD Funds.	Angel Alcantara	<i>Brandon Vick (Finance and Economics)</i>
P22.	Mathematical Optimization of Sports Betting and Fantasy Football.	Evan Orr, Alan Davis	<i>Daniel Burkett (Mathematical and Computer Sciences)</i>
*P23.	How Medical Malpractice affects Health Insurance Rates.	Alyssa Carne, Aminah Herbert	<i>Daniel Burkett (Mathematical and Computer Sciences)</i>
P24.	Autonomous Risk Mitigation for Zero-Trust Architectures.	Jared Giesen	<i>Waleed Farag (Mathematical and Computer Sciences)</i>
*P25.	Ideal Traffic Patterns for Indiana's S 7th Street Seven-Way Intersection.	Toby Trotta, Sinti Sasai, Akinbusola Olushola, Alan Davis, Morgan Buterbaugh	<i>Frederick Adkins (Mathematical and Computer Sciences)</i>
*P26.	Development of IoT Test Bed to Assess IoT Security Using Machine Learning.	Drew Rado, Maria Balega, Zaryn Good,	<i>Waleed Farag (Mathematical and Computer Sciences)</i>

SESSION: Safety Sciences

Pres.	Title	Author(s)	Faculty Mentor
P27.	Assessing how various media and appeal types influence college students' perceptions of pedestrian safety messages within a behavioral health model framework.	Michael Adamczyk, Wanda Minnick, Tracey Cekada	<i>Wanda Minnick (Safety Science)</i>
*P28.	Associations between risk safety perceptions and safety climate among steel manufacturing workers.	Gabriella Green, Chloe Croft	<i>Luz Stella Marin</i>
*P29.	Workplace Hazard Recognition among Steel Manufacturing Workers.	Sydney Sheredy, Brandon Wiggin.	<i>Majed Zreiqat (Safety Science)</i>

*Women in STEM presentation

SESSION: Student Success and Teaching Strategies

Pres.	Title	Author(s)	Faculty Mentor
*P30.	The Effects of Classroom Environment on Student Learning Outcomes.	Allison Bergeron	<i>Kenneth Coles (GGEP)</i>
P31.	Varying Class Size and Student Success.	Joellen Nelson	<i>Kenneth Coles (GGEP)</i>
*P32.	Does electronic vs. paper test impact students scores?	Mckenna Hoyman	<i>Holly Travis (Biology)</i>
P33.	Electronic Submission in a Classroom Setting: Innovative or Counterproductive?	Alexander Busato	<i>Holly Travis (Biology)</i>
*P34.	The Effects on Student Achievement with Direct Instruction vs Laboratory Instruction.	Alexis Zaragoza	<i>Colin Ashe (CBPE)</i>

SESSION: Chemistry, Biochemistry, Physics, and Engineering

Pres.	Title	Author(s)	Faculty Mentor
*P35.	Exploring the Effects of Amino Acid Mutations on the Activity of Small Laccase from <i>Streptomyces coelicolor</i> . Comparative Analysis by Three Student Groups.	Ian Perras, David McLean, Brandon Faber, Philip Colen, Ariana Assi, T'Oymbae Eddings	<i>Sudipta Majumdar (CBPE)</i>
P36.	Designing, Testing, and Applications of Simple Flow Reactors.	Andrew Moyer	<i>Justin Fair (CBPE)</i>
*P37.	Expression and Purification of the Phospho-Mimic Mutant Protein of the Srs2 Helicase C-Terminal Domain.	T'oymbae Eddings	<i>Jana Villemain (CBPE)</i>
*P38.	Protein-protein interaction; Detection of Rad51 and Srs2 C-terminal domain with ELISA assay.	Ariana Assi	<i>Jana Villemain (CBPE)</i>
P39.	Using fluorescent nanoantennas to determine the functions of proteins in their transient state.	Imani Murdock-Laws	<i>Justin Fair (CBPE)</i>
P40.	Oxidation of Hydrazones Using Bobbitt's Salt to Form Reactive Carbene Intermediate.	Ethan Sanchez, Justin Fair	<i>Justin Fair (CBPE)</i>
*P41.	Semi-Continuous Suzuki Cross-Coupling Utilizing Heterogenous Catalyst Palladium on Carbon in a High-Pressure Liquid Chromatography Column.	Rachel Nesgoda, Brandon Faber	<i>Carl Lebond (CBPE)</i>
P42.	Studies Approaching the Lower Critical Dimension of the Spin Glass State.	David Lane	<i>Gregory Kenning (CBPE)</i>
P43.	Arrhenius Sensor - Co/Sb Thin Films Under a SEM.	Ryan Brake	<i>Gregory Kenning (CBPE)</i>
*P44.	The Chemical Formulation of Hair dye and it's risk of Bladder Cancer.	Sierra Leonard	<i>Justin Fair (CBPE)</i>
P45.	Analysis and Quantification of Organic Compounds in Spirits from local Distilleries.	Ian Perras	<i>Nathan McElroy (CBPE)</i>
*P46.	Prevalence of Antimicrobial Resistance Genes in IUP campus and surrounding areas.	Taylei Boring	<i>Sudipta Majumdar (CBPE)</i>
P47.	Tracing South Mountain Metarhyolite Artifacts to their Potential Provenance.	Ethan Addicott	<i>Charles Lake (CBPE)</i>

SESSION: Applied Archaeology

Pres.	Title	Author(s)	Faculty Mentor
P48.	Newport Socioeconomics.	Matthew Clark	<i>Benjamin Ford (Anthropology)</i>
*P49.	An Archaeological Study of Structures of the Nineteenth Century.	Amanda Telep	<i>Benjamin Ford (Anthropology)</i>
*P50.	Investigating Village Organization at the Squirrel Hill site (36WM0035).	Shannon Boyne	<i>Lara Homsey-Messer (Anthropology)</i>
*P51.	Using Ceramic Analysis to Reevaluate Competing Hypotheses of McFate and Monongahela Amalgamation at the Squirrel Hill (36WM35) Archaeological Site.	Bridget Roddy	<i>Lara Homsey-Messer (Anthropology)</i>
P52.	Consumption Has A Cost: Using Ceramics to Compare Socio-Economic Variability Within and Between Flood Control-Affected Communities.	Lucien Nicosia	<i>Benjamin Ford (Anthropology)</i>
P53.	Barree Forge: A Pennsylvania Town.	Arthur Townend	<i>William Chadwick (Anthropology)</i>
P54.	Lead Composition Patterning using X-Ray Fluorescence to Analyze 18th-Century Musket Balls from Fort Necessity.	Jacob Ulmer	<i>Benjamin Ford (Anthropology)</i>
*P55.	A Geophysical Survey of a Plantation Site in Baltimore County, MD.	Mikala Hardie	<i>William Chadwick (Anthropology)</i>
P56.	Shipwrecks of the Lake Erie Quadrangle.	Patrick Spollen	<i>Benjamin Ford (Anthropology)</i>
P57.	Faunal Analysis of the Pockoy Island Shell Rings.	Zachary Meskin	<i>Andrea Palmiotto (Anthropology)</i>
*P58.	A Spatial Analysis of Faunal Remains at the Pockoy Shell Rings.	Cassidy Tech	<i>Andrea Palmiotto (Anthropology)</i>

SESSION: Geology, Geography, and Environmental Planning

Pres.	Title	Author(s)	Faculty Mentor
P59.	Acid Mine Drainage and Stream Health: Assessing the Effects of AMD on Natural Erosional Processes in Indiana County, PA.	Nathan Wissinger	<i>Kevin Patrick (GGEP)</i>
*P60.	Caldor Wildfire Case Study.	Alena Deily	<i>Christopher Schaney (GGEP)</i>
*P61.	Effects of Wildlife-Vehicle Collisions and Mitigation Strategies.	Alena Deily	<i>Sudeshna Ghosh (GGEP)</i>
*P62.	Geospatial Intelligence Analysis of San Francisco, CA Earthquake Hazards.	Megan Wood	<i>John Benhart (GGEP)</i>
P63.	Geospatial Intelligence Analysis of Sea Level Rise, Intense Storm Occurrence, and Population Vulnerability in New York City.	Alexander Riccardi	<i>John Benhart (GGEP)</i>
P64.	Revitalization in American Cities: Lessons from Atlanta Beltline project in Atlanta, GA.	Nathan Clair	<i>Sudeshna Ghosh (GGEP)</i>
*P65.	Zoning Challenges in the US: Evolution of Traditional Zoning and ways to Reform Zoning.	Kegan Stiles	<i>Sudeshna Ghosh (GGEP)</i>

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P66.	The contrast of New York City and Post-War Germany Housing Policy to compare Demand-Side and Supply-Side Housing Policy for Lower Housing Prices.	Scott Yackuboskey	<i>Sudeshna Ghosh (GGEP)</i>
P67.	Abrahamic Religions in the Development of European Political Boundaries.	Jesse Gowin	<i>Gail Sechrist (GGEP)</i>
P68.	Analysis of the conformation of Rank-Size Rule according to Wallerstein's World-System Theory.	Jesse Gowin	<i>Kevin Patrick (GGEP)</i>
*P69.	Changing Stretching Directions in the Eastern Central Range of Taiwan: A Record of Subduction and Exhumation Kinematics from a Seafloor Section.	Morgan Spatz, Jonathan Lewis	<i>Jonathan Lewis (GGEP)</i>
P70.	Siberian Permafrost Degradation: Analyzing the Batagaika Crater and adjacent landscape using remote sensing.	Isaac Thompson	<i>Christopher Schaney (GGEP)</i>
P71.	Jurassic Phenomena of the Cleveland-Lloyd Dinosaur Quarry, Upper Jurassic Morrison Formation, Utah.	Adam Mancini	<i>Jonathan Warnock (GGEP)</i>
P72.	Understanding the Past Environment of Cleveland-Lloyd and surrounding Jurassic National Monument.	Eric Buzzelli	<i>Jonathan Warnock (GGEP)</i>
P73.	Paleoenvironmental Stratigraphic Reconstruction and Control on the Distribution of the Lower Keyser Formation of Central Pennsylvania.	Joshua Colasante	<i>Jonathan Warnock (GGEP)</i>
*P74.	Spatial Database to Support the Development of Confluence Discovery Park.	Nathan Clair, Lily Palfrey	<i>John Benhart (GGEP)</i>
*P75.	Spatial Analysis of Flood Hazard in a Western Pennsylvania Watershed -- Crooked Creek Watershed.	Morgan Hoover, Joshua Merichko	<i>John Benhart (GGEP)</i>
P76.	Enhanced Analysis of the Water Budget for Marsh Run Watershed.	Lucas Hoffner	<i>Katherine Farnsworth (GGEP)</i>
P77.	GIS-based Optimal Route Selection for Oil And Gas Pipelines: An Exploratory Approach.	Jacob Krinock	<i>John Benhart (GGEP)</i>
*P78.	Development of a Ghost Town Trail Spatial Database to Assist in Mapping and Economic Impact Analysis.	Colton Duke, Sierra Farrington, Solon Proctor	<i>John Benhart (GGEP)</i>
*P79.	Using GIS to Reconstruct the Past Geography of an Urban Place: Blairsville, PA 1930.	Matthew Gaul, Hilary Fernandes, Aaron Ebner	<i>John Benhart (GGEP)</i>

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SESSION: Biological Research

Pres.	Title	Author(s)	Faculty Mentor
*P80.	Lagomorph Use of Managed Forest in Pennsylvania.	Jacob Newbill, Jeffrey Larkin, Declan O'Sullivan, J.T. Larkin, Emily Boyd, Sarah Emel, Joseph Duchamp	<i>Joseph Duchamp (Biology)</i>
*P81.	Treating Methamphetamine Dependence; Optimization of Methods for Mice.	Joanna Stralka, Idoia Huerta Gallardo	<i>Daniel Widzowski (Biology)</i>
*P82.	Effects of the herbicide Glyphosate on fish species composition in a Western Pennsylvania stream.	Sierra Farrington, Elijah Clevenger, Shaun Busler, David Janetski	<i>David Janetski (Biology)</i>
P83.	Honeysuckle Plants of Native Origin have more Soil Fungal Associations than Invasive Plants.	Mitchell Posney, Ellen Yerger	<i>Ellen Yerger (Biology)</i>
*P84.	Cloning of Genes Encoding Wnt Pathway Members in the Planarian.	Maggie Miller	<i>Robert Major (Biology)</i>
P85.	Cloning of Four-Jointed Gene in Planarian Flatworm.	Samuel Smith	<i>Robert Major (Biology)</i>
*P86.	Modelling Prescription Opioid Oxycodone Addiction in Planaria.	Maclyn Vasey	<i>Christina Ruby (Biology)</i>
P87.	Characterizing the effects of chloroquine treatment on planarian tissue maintenance.	Rufus James	<i>Robert Major (Biology)</i>
*P88.	Characterizing Cell Shape and Actin Accumulation in the Planarian Epidermis.	Cierra Henderson	<i>Robert Major (Biology)</i>
*P89.	Loss of the S-Phase Protein Tipin Results in a Delay and Asymmetry of Tissue Regeneration.	Eman Soliman	<i>Robert Major (Biology)</i>
P90.	Phenotypic and Expression Analysis of tbx20 During Planarian Tissue Regeneration.	Neil Rossman	<i>Robert Major (Biology)</i>
*P91.	The Effect of High Fat Diet on Lipid Peroxidation and Red Blood Cell.	Jadyn Hunter	<i>Megan Knoch (Biology)</i>
*P92.	The Effect of Body Condition on Neophobia in Zebra Finches; A Many Birds Study.	Karlie Thompson	<i>Paul Nealen (Biology)</i>

**Women in STEM presentation*

SESSION S: STEM High School Poster Presentations

This session features exemplary research conducted by a select group of Indiana Area High Schools students under the mentorship of Ms. Emily Hixson.

Pres #	Title	Author
S-01	The Effectiveness of Mechanical v. Chemical Cleaning	Adams, Lily
S-02	Snakes and the Unknown	Adams, Trey
S-03	Spinach as a Substitute of Insulin	Ali, Vanya
S-04	Turning Plants Into Biofuel	Ball, Jadyn
S-05	Pneumatic Prosthesis for Kinesthetic Learning	Branan, Kiley
S-06	Amount of Sleep vs Amount of Energy	Brown, Alexandra
S-07	Finding Ways to Promote Healthy Eating in Kids	Cowburn, Hannah
S-08	The Effects of Different Surfaces on the Coefficient of Friction on Tires	Dunmyer, Gavin
S-09	Supplemental Feeders for Migratory Birds	Edmonds, Avery
S-10	Abandoned Mine Drainage Bioindicators	Grim, Emma
S-11	The Effect of Cleaner Amount & Type on Paint Removal	Grim, Isabella
S-12	Comparative Ecological Survey of Two Lick and Crooked Creek	Jablunovsky, Christian
S-13	Project O.P.E.G.S - Ocean Powered Electricity Generation System	Kenning, Gabriel
S-14	The Effect of Subliminal Stimulation on Human Response	Kinneer, Elizabeth
S-15	Conquering Fungi with Natural Remedies	Krimin, Olivia
S-16	The Effects of Caffeine on Food Consumption	Lawson, Samantha
S-17	The Effect of Thermochromic Coatings on Structures' Temperatures	Lehman, Jack
S-18	Flywheel Energy Storage System (FESS)	Lin Xu, Belinda
S-19	Hybrid Wind Powered Street Lights	Lin, Edmond
S-20	Bandage Enhance Project	Lin, Sanderson
S-21	Tap Water vs Filtered & Boiled Water	Liu, Kevin
S-22	Bacterial Growth in Water	Mill, Katelyn
S-23	The Effect of Color on Temperature Perception	Nealen, Eva
S-24	The Effect of Screen Time on Sleep	Runge, Emma
S-25	Peer Pressure in Testing Environments	Runge, Julia
S-26	Natural Antibiotics	Runge, Sophie
S-27	Bacterial Adhesion to Textiles Used in Athletic Wear	Stevens, Lillian
S-28	Environmental Effects on Morphology of Mycelium	Wang, Ronald
S-29	The Effect of Bionic Font on Reading Speed and Comprehension	Wheeler, Alexa
S-30	The Effect of Wind Intensity of Flute Sound Quality	Yang, Audrey
S-31	Endocrine Disruption from Menstrual Products	Yuha, Isabella

Three-Minute Thesis Competition

Toretti Auditorium

1:30–2:30pm

This exciting event features graduate students advancing from the preliminary competition into the final round of the 3-Minute Thesis competition. Students have exactly three minutes to present their original scholarship with the aid of one static PowerPoint slide. This event is hosted by the School of Graduate Studies and Research and organized by Kathryn McKeever and Bethany Jackson.

Pres.	Title	Participant
T01	“Colors of COVID: Correlations Between Pandemic Stress and Consumer Color Choice”	Jill Baumgardner
T02	“Growing Brand Engagement through Gen Z TikTok Humor”	Jenna Bluedorn
T03	“Unconscious Values: How Counseling Discourse Constructs Substance Use Disorder”	Brian Nuckols
T04	“Teacher Educators’ Perception of Their Readiness to Prepare Preservice Teachers to use AI in their Teaching Practice: An Exploratory Study”	Asmaa Radwan

STUDENT RESEARCHER INDEX

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Adamczyk, Michael	P-27	Graduate
Adams, Lily	S-01	High School
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Addicott, Ethan	P-47	Undergraduate
Albert, Victoria	P-04	Undergraduate
Alcantara, Angelique	B-01, P-21	Undergraduate
Ali, Vanya	S-03	High School
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