## IUURC – Program 2018

IUPUI Campus, Campus Center

November 16, 2018  
8:30 am – 3:50 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-10:00 am</td>
<td>Final Competition (closed door)</td>
<td>406</td>
<td></td>
</tr>
<tr>
<td>8:30-10:10 am</td>
<td>Registration, Continental Breakfast</td>
<td>Lounge, 4th floor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Issuance of Lunch Cards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15-10:50 am</td>
<td>Dr. Simon Atkinson, IU Associate Vice President for Research</td>
<td>450 A</td>
<td></td>
</tr>
<tr>
<td>10:50-11:00 am</td>
<td>IUURC Best Project Competition Awards</td>
<td>450 A</td>
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**Key Note Address: 10:15-11:00 am**

Breakout Sessions: 11:20-12:20 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:20-12:20 pm</td>
<td>Poster Session I</td>
<td>450 B and C</td>
<td>Life/Health Sciences, Physical Sciences, Arts/Humanities, Business</td>
</tr>
<tr>
<td>11:20-12:20 pm</td>
<td>Oral A</td>
<td>450 A</td>
<td>Social &amp; Behavioral Sciences</td>
</tr>
<tr>
<td>11:20-12:20 pm</td>
<td>Oral B</td>
<td>405</td>
<td>Life &amp; Health Sciences</td>
</tr>
<tr>
<td>11:20-12:20 pm</td>
<td>Oral C</td>
<td>409</td>
<td>Arts &amp; Humanities</td>
</tr>
</tbody>
</table>

**Lunch Break**

*(Lunch Cards will only be issued to attendees who registered by 10:10 am)*

Breakout Sessions: 1:15-2:15 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:15-2:15 pm</td>
<td>Poster Session II</td>
<td>450 B and C</td>
<td>Engineering, Informatics, Public/Environmental Affairs, Social/Behavioral Sciences</td>
</tr>
<tr>
<td>1:15-2:15 pm</td>
<td>Oral D</td>
<td>450 A</td>
<td>Social &amp; Behavioral Sciences</td>
</tr>
<tr>
<td>1:15-2:15 pm</td>
<td>Oral E</td>
<td>405</td>
<td>Life &amp; Health Sciences</td>
</tr>
<tr>
<td>1:15-2:15 pm</td>
<td>Oral F</td>
<td>409</td>
<td>Arts &amp; Humanities</td>
</tr>
</tbody>
</table>

Breakout Sessions: 2:30-3:30 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30-3:30 pm</td>
<td>Poster Session III</td>
<td>450 B and C</td>
<td>Life/Health Sciences, Social/Behavioral Sciences</td>
</tr>
<tr>
<td>2:30-3:30 pm</td>
<td>Oral G</td>
<td>450 A</td>
<td>Social &amp; Behavioral Sciences</td>
</tr>
<tr>
<td>2:30-3:30 pm</td>
<td>Oral H</td>
<td>405</td>
<td>Informatics</td>
</tr>
<tr>
<td>2:30-3:30 pm</td>
<td>Oral I</td>
<td>409</td>
<td>Education</td>
</tr>
</tbody>
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3:40-3:50 pm  **Drawing of Scavenger Hunt Winners**  
(12 x $20 CrimsonCards)  
450 B and C
24th Indiana University Undergraduate Research Conference
List of Oral Presenters

Oral Session A – Social and Behavioral Sciences (11:20am – 12:20pm)

01. Rachel Desmarais
Existence and Self-Perception of Stereotypes at Indiana University

02. Kelly Howard
The Effect of Childhood Emotional Abuse on Adult Romantic Relationship Satisfaction, Infidelity, and Promiscuity

03. Brandi Pirtle
Vocation, Personality, and Linguistic Expression

04. Halee Kaiser
Read My Lips: The impact of Lip Color on First Impressions of Photographs

05. (cancelled)

Oral Session B – Life and Health Sciences (11:20am – 12:20pm)

06. Isra Haider
Testing of 12-Lipoxygenase Inhibitors Using Zebrafish Pancreas Development

07. Sean Hurt
Genetically Modified Foods, a Health Concern, or Health Answer

08. Antonio Prieto
Development of Antimicrobial Peptides Bactericidal to Multidrug-resistant Gram-negative Bacteria

09. Dhruv Solanki
Studying the Genes that Affect Me31B's Expression in Drosophila Germ Cells

10. Neal Govani
Studying Recruitment of Me31B in Drosophila Germ Plasm

Oral Session C – Arts and Humanities (11:20am – 12:20pm)

11. Alejandro Barrett
For He Himself Has Said It; The Political Dichotomy of Sir James Brooke, Rajahof Sarawak

12. Sydney Raynor
The Dark Extremities of Opaque Duality: Love, Fantasy, and a thirst for blood as manifested in “The Metamorphosis of the Vampire” by Charles Baudelaire

13. Madeline Robb
Representations of Women, Sexuality, and Mental Illness in Literature and Feminist Theory by Women

14. Taylor Myers
How Do Leonardo da Vinci’s Blueprints Relate to Modern Inventions?
O15. Laura Zoeller  
Development of the Railroad System and the Effects on the Social and Economic Structure of the United States

Oral Session D – Social and Behavioral Sciences (1:15pm – 2:15pm)

O16. Katie Shircliff and Devan Case  
Sleep and Cognition

O17. Kristina Riddle  
Walking Media Zombies: The Effects of Social Media Addiction on Sleep Quality

O18. George Patrick Hutchins  
Exploring the Relationship Between Stress and Mental Health for Black Pre-Health Students

O19. Ayden Chapman  
Willingness of Individuals to use Mental Health Services: The Impact of Knowledge and Perceptions

O20. Samantha Heidlage  
Brain Music

Oral Session E – Life and Health Sciences (1:15pm – 2:15pm)

O21. Aidan McCambridge  
A Comparative Analysis of Me31B Protein Complexes in Drosophila Ovary and Embryo

O22. Sinai Valdez  
Short-term pharmacologic inhibition of RAGE suppresses bone turnover and muscle atrophy in aging

O23. Kierra Ready  
The Effects of Transcranial Direct Current Stimulation on Conditioned Pain Modulation Response in Healthy Younger Adults

O24. Alec Iruri-Tucker  
Can Human Interaction Affect the Presence of Antibiotic Resistance in the Wild Primate Microbiome?

O25. Nicholas Olchawa  
Me31B’s Role in mRNA Regulation in Drosophila Ovarian Tissue

Oral Session F – Arts and Humanities (1:15pm – 2:15pm)

O26. Taylor Whitehead  
Methods of Communication in the United States and its Impact from 1800 to Present

O27. Alexandra Stepp  
Eisenhower’s Best Mistake: Earl Warren and the Civil Rights Activism of the Warren Court

O28. Serena Hawkins  

O29. Jaclyn Flores  
Vowels Are Like Dessert in Dominican Spanish: They Are Eaten at The End
Oral Session G – Social and Behavioral Sciences (2:25pm – 3:25pm)

031. Mallory Hatcher
Vaccination and Preventative Public Health

032. Kaitlyn Miller
Early American Medicine and How It Affected Public Health

033. Emily Vetne
Victims or Perpetrators: How Former Hitler Youths Work Through Their Childhoods under Nazi Rule

034. Hannah Embry
How Your Personality Could Influence Your Workout and Reduce Stress

035. Brendan Moore
Depressor Tone Shift in SiSwati

Oral Session H - Informatics (2:25pm – 3:25pm)

036. Amanda Echegaray
Lift Me - A Motivational Application to Support Underrepresented Students in Informatics

037. Jiva Capulong
Designing Food Preparation Technologies for Campus Food Insecurity

038. Tony Smith
Identifying GC rich and GC poor regions in understanding the organization of Alu-elements in the genome.

039. Sameer Karali
Detection of Anti-Patterns in Program Code Using Semantic Web Technologies

040. Cassandra Coe
Emotions and Fact: Using Language to Identify Fake News Articles

Oral Session I – Education (2:25 – 3:05)

041. Joseph Alford
Comparative Analysis of American Versus Chinese Science Education

042. Cortney Baird
Using Twitter to Promote Learning

043. Yazmyne Franklin
Multicultural Science and Math Integrated in Social Studies through Cooperative Learning and Critical Thinking
24th Indiana University Undergraduate Research Conference
List of Presenters

Poster Session I: 11:20am – 12:20pm

Life and Health Sciences

P1. Edgar Gallardo
Nitrate and Nitrite Content of Beetroot Juice Products Marketed to Athletes

P2. Samantha Alcantara
The Impact of Urbanization on Song Repertoire Size of Song Sparrows

P3. Catherine Vaerewyck
Effect of Garlic Mustard (an Invasive Plant) on Survival and Mycorrhizal Fungal Abundance in Hydrophyllum appendiculatum (a Native Understory Plant)

P4. Michael O’Daniel
Alpha-Blocking Stress Away: Determining the Effects of Prazosin on Stress Responses in Zebrafish (Danio rerio)

P5. (cancelled)

P6. Matthew Blackwell
Identifying Influential Trisomic Genes in Addition to Dyrl1a that Contribute to Skeletal Phenotypes Found in Down Syndrome

P7. Donnai Casillas
Analysis of me31BGene’s Role in Stabilizing Drosophila Germline RNA and Me31B protein’s RNA Binding Specificity

P8. Corey Lage
Role of Antibiotics and control of disease

P9. Caylin Billingsley
Overexpression of WNT16 does not Prevent Cortical Bone Loss due to Glucocorticoid Treatment in Mice

P10. Mary Makanjuola
Generation of luciferase-tagged ovarian cancer cell line for mice studies

Physical Sciences

P11. Pierre-Emmanuel N’Guetta
Engineering a Fluorescent Biosensor for the Detection of Herbicide Glyphosate

P12. Scott Foster
Phanerochate chrysosporium Desaturase, A Molecular Model forthe Oxidative Modification of Fatty Acids

P13. Tyler Kindoll
Formation of Acetals and Ketals from Carbonyl Compounds: A new and Highly Efficient Method Inspired by Palladium

P14. Jordan Wenger
Photoelectrochemical and Optical Studies on Photoactive Interface of SnS2, SnS Occluded in Poly 2,2 Bithiophene (PBTh)
P15. Tiffany Cohee  
Accounting for the Difference in Photochemistry of TpdA versus dApT

P16. Samuel Canner  
A role for lipid-lipid interactions in vitamin E’s function as a membrane antioxidant

P17. Vicky Pai  
Optimization of Electrochemical Reduction of CO2 using Gold Nanoparticle Catalysts

P18. Tial Rem  
Interactions of Tryptamine with Lipid Vesicles

P19. Anthony Jeffers  
Optical and Photoelectrochemical Studies on FTO /Polyterthiophene in Aqueous Electrolytes.

Arts and Humanities

P20. Mary Lechner  
The Voice Behind the Vote: Mechanisms of Political Efficacy in Latino/a Youth

P21. Houston Hart  
A History of Bloodletting and its Modern Applications

P22. Julia Verdouw  
The Textile Industry and Its Impact on the Second Industrial Revolution

P23. Samantha Mullins  
The Transcontinental Railway and American Economic Growth

Business

P24. Khrisma McMurray  
Japan: More in Africa Than We Think

P25. Ben Sheets  
The Crypto Question: Are Cryptocurrencies Good Investments?

P26. (cancelled)
Poster Session II: 1:15pm – 2:15pm

Engineering and Technology

P27. Rene Harshbarger
Following the Fakeness: Tracing the Path of False Information

P28. KeeJoh O’Hearon
Seeing the unseen for Society’s Betterment: Measuring the IoT Privacy and Security

P29. Elysa Thompson
Renewable Energy’s Present and Future Outlook

Informatics

P30. Christina Colon
The Power of Music Therapy

P31. Niang Chin
The Overly Friendly Crockpot: Internet of Things Threat Modeling Analysis

P32. Zachary Cochran
Cyber Security Competitions and Information Security Education: Gaps and transitions on the way from novice to expert

P33. Jeff Philapy
Tracing and Learning the Cognitive Process of Cybersecurity Analysts

P34. Joseph Pickard
A Recommendation System for Facilitating Cyber Security Data Analysis

P35. Brandon Sayger
Using a Visualized Map for Capturing the Analytical Reasoning Process of Cyber Security Analysts

P36. Demetrius Stanton
Agriculture improvements

Public and Environmental Affairs

P37. Courtney Roberts
The Lack of Potable Water in Africa: Damaging Society and the Economy

P38. Tejus Arora
Faith-Based Diplomacy and Interfaith-dialogues for Peacemaking and Conflict Resolution

P39. Kathryn Hart
To What Extent Will the Throughfall Displacement Experiment (TDE) Simulate an Artificial Soil Moisture Reduction?

P40. Eryn Jochim
Medical Experiments and Ethics in the Holocaust

P41. Madison Norris
Effect of GMOs on National Agricultural Economies and Rural Quality of Life
Social and Behavioral Sciences

P42. **Adriana Gonzalez-Tigre**
Approaches to Confronting Racial Bias

P43. **Sidney Nall**
Restaurant Tipping Behavior Study

P44. **Taylor Clan**
Does Your Attachment to Your Pet Differ from Your Attachment to Your Partner?

P45. **Brittany Harris**
The Influence of Music Intensity on Creative Problem Solving

P46. **Jacob Smith and Savannah Horn**
Gender differences in sexual attitudes

P47. **Emily Merritt**
Examining the Influence of Learning Method on Symbol Recognition

P48. **Autumn Hockenbury**
Next Step in the Feeding Minds Project: Survey to Assess Food Insecurity on Indiana University Regional Campuses

P49. **Anh Luu**
Human and Robot Interaction with Prisoner’s Dilemma

P50. **Andrew Fields**
Factors That Influence the Way Job Applicants Are Seen: The Impact of Having Different Majors

P51. **Krista Rich**
Mindfulness in the Workplace

P52. **Laikyn Pavey**
Correlation Between Sleep Paralysis and Anxiety Disorders
Poster Session III: 2:25pm – 3:25pm

Life and Health Sciences

P53. John Klem
Expression and purification of putative alkaline proteases from Halobacillussp. BBL2006 genes in Bacillus subtilis

P54. (cancelled)

P55. Olivia Abraham
Role of ADR-2 in Receptor Mediated Endocytosis of Yolk Proteins

P56. Courtney McGrew
Effect of Nicotine on Streptococcus mutans Binding to Collagen

P57. Alia Alia
Anxiety Behavior and Whole-Body Cortisol Responses to Components of Energy Drinks in Zebrafish (Danio rerio)

P58. Michelle Owsei
Seasonal Phenology Associated Polymorphism in the CLOCK Gene

P59. Heidi Porod
Effect of Garlic Mustard (an Invasive Plant) on Survival and Mycorrhizal Fungal Abundance in Hydrophyllum appendiculatum (a Native Understory Plant)

P60. Fiyinfoluwa Olaniyi
It’s a Matter of Taste: Edible and Competitive Ability of Native vs. Invasive Plants in Urban Woodlands

P61. Evan Messenger
Sex and Age Effects on Cerebral Amyloid Angiopathy and Intracerebral Hemorrhage

P62. Mark Mason
Septic Systems as a Potential Source of Microbial Contamination to Indiana Waterways

P63. Nicole Leon-Duran
The Evolutionary Effect of Microphallus in Freshwater Snails

Social and Behavioral Sciences

P64. Stefanie Fuller
A Study of #Metoo, Rape Myth Acceptance and Belief in a Just World

P65. Karen Torres
Reactions to Being Confronted About Prejudice

P66. Laura Slucher and Emilie Deich
Measuring Emotional Responses to YouTube Videos

P67. Annie Thomas and Glenn Giles
Collegiate Athlete Survey

P68. Julia Bauer
Media Coverage and Political Action: The Fight for Clean Water
P69. Rachel Needham and Nicole Curtis-Davis
Scent and Mood: Evaluating the Placebo Effect

P70. Haley Funkhouser and Zachery Saunders
Emotional Intelligence

P71. Caitlynn Hale
Yoopers to “Y’al”: A study on dialect perception in the state of Indiana

P72. Thomas Myers
“Give Me a Break”: Political Party and In-group Bias in Attributions of Risky Decision Makers

P73. Jasmine Vonderheide
Childhood Abuse and Behaviors in Adulthood

P74. Rebekah Morgan
How Gender Affects the Gaining of Confidence and Knowledge When Doing Sociological Research.

P75. Isaac Garcia-Rojas
The Role of Movement in Social Perception

P76. Sydney Lossin and Kearstin O’Daniel
Can Robotic Companion Animals Reduce Stress in College Students?

P77. Destiny Abell
Leader Humor and Job Satisfaction: The Mediating Role of LMX

P78. Sarah Embrey
God Gave me You? A Study into the Correlation Between Religion and Relationship Satisfaction

P79. Saul Martinez
The Relationship Between Grief and Music Therapy