2022

PURDUE SUMMER UNDERGRADUATE RESEARCH SYMPOSIUM

JULY 28-AUGUST 4, 2022
West Lafayette, Indiana
SUMMER UNDERGRADUATE RESEARCH SYMPOSIUM

SCHEDULE OF EVENTS

JULY 28, 2022 | HICKS UNDERGRADUATE LIBRARY
9:00 — 11:00 AM  Morning Research Talks

JULY 28, 2022 | PMU SOUTH BALLROOM
11:30 — 1:30 PM  Poster Symposium

JULY 28, 2022 | HICKS UNDERGRADUATE LIBRARY
2:00 — 3:40 PM  Afternoon Research Talks

JULY 28—AUGUST 4, 2022 | ONLINE
Virtual research talks and poster presentations are available on the Summer Undergraduate Research Symposium website.
RESEARCH TALKS

SESSION 1: 9:00AM-10:00AM
ROOM: HIKS G980D

9:00  Analysis of Optimal Parameters for Wastewater Reuse for Agricultural Applications in Kenya
      Lahiri Chitturi
      Mentors: David Warsinger

9:20  Drivers of the Global Distribution of Hemorrhagic Septicemia
      Dylan Clarke, Yuke Zhang, Ally Eaton
      Mentors: Wendy Beauvais, Eric Kontowicz, Lei Wang

9:40  Identification of Mechanisms of T-DM1 Resistance in HER2-Positive Breast Cancer
      Jean-Paul Pertuit
      Mentors: Michael Wendt, Luis Solorio, Brenna Vaughn

SESSION 2: 10:00AM-11:00AM
ROOM: HIKS G980D

10:00 Exploring the role of salon professionals in identifying sex trafficking victims in Indiana
      Alexandra Hughes, Meagan DeMark, Ashley Bolen, Aliza Anderson, Samuel Bauer
      Mentors: Andrea DeMaria, Kathryn Siegfried-Spellar, Laura Schwab-Reese

10:20 "I say tell him to buzz off and don't speak to him if you don't like his advances": Understanding young
      people's online child maltreatment disclosure experiences
      Amelia Williams, Anneliese Williams
      Mentors: Laura Schwab-Reese

10:40 Making internships more accessible for marginalized college students
      Samantha Hayden, Gabriella Goss, Jordan Johnson
      Mentors: Nancy Rasche

SESSION 3: 2:00PM-3:00PM
ROOM: HIKS G980D

2:00  Development of inhibitors for N-terminal acetyltransferases D
      Thitiwat Larndate
      Mentors: Yi-Hsun Ho, Rong Huang

2:20  A comparison between net-metering and the P2P model at the commercial level
      Andrea Hernandez, Alexander Vizcarrondo
      Mentors: Lisa Bosman, Esteban Soto

2:40  Reduction of emissions by massive integration of solar plants in the US grid
      Alexander Vizcarrondo Ortega, Andrea P. Hernandez Guzman
      Mentors: Lisa Bosman, Esteban Soto
ROOM: HIKS G959

2:00 Testing for FEMTA Thruster Measuring Device
309 Kevin Ganbold, Nikolai Baranov
Mentors: Katherine Fowee Gasaway, Alina Alexeenko, Steven Pugia, Anthony Cofer

2:20 Propellant Tank Redesign of the FEMTA Suborbital Flight Experiment
310 Philip Voronin, Keshav Agarwal
Mentors: Katherine Fowee Gasaway, Alina Alexeenko, Steven Pugia, Anthony Cofer

2:40 Explore Climate Impact on Global Distribution of Hemorrhagic Septicemia
311 Yuke Zhang, Dylan Clarke, Alyssa Eaton
Mentors: Lei Wang, Wendy Beauvais, Eric Kontowicz, Valentina Castañeda

SESSION 5: 3:00PM-3:40PM

ROOM: HIKS G980D

3:00 Text mining and classification of injury narratives
312 Harmya Bhatt
Mentors: Gaurav Nanda

3:20 The Effect of Fibronectin on Breast Cancer Dormancy
313 Grace May
Mentors: Jordanna Payne, Alexandra Plummer, Luis Solorio

ROOM: HIKS G959

3:00 Trajectory and Stability Analysis of a Space-shot Rocket for PSP - High Altitude
314 Daniel Qi, Elliot Basem, Alexander Suppiah, Venkata Yellapragada
Mentors: Eric Williamson

3:20 Towards the development of novel catheter-integrated thin-film microelectrodes for deep brain stimulation
315 Pei-Lun Chen
Mentors: Hyowon Lee, Jae Young Park, Jongcheon Lim

VIRTUAL PRESENTATIONS | WATCH ON THE CONFERENCE WEBSITE

Virtual Implications for Great Saphenous Vein Closure Using a New Radiofrequency Ablation Catheter: A First Experience, Comparative Study
400 Megha Gupta
Mentors: Oleg Sostin

Withdrawn
401

Virtual The Impact of Accessible Data on Cyberstalking and Digital Abuse
402 Elise Kwan
Mentors: Kendall Roark

Virtual Ethical Dilemmas in Implementing Data Science to Healthcare
403 Hyeonwoo Park, Wankyu Kim
Mentors: Kendall Roark

Virtual Promises and Risks of Applying AI Medical Imaging to Early Detection of Cancers, and Regulation for AI Medical Imaging
404 Yiyao Zhang
Mentors: Kendall Roark

Virtual SoCET Software Team, QEMU implementation
405 Peter Zhu
Mentors: Mark Johnson, Cole Nelson
| Posters sorted by research program, if available, then by last name of first author. Spelling is as submitted. |
|---|---|
| 100 | Ryland Barton  
Mentors: Laura Bowling, Katy Mazer |
| 101 | Jaea Cho  
Mentors: Sudip Vhaduri |
| 102 | Anthony Garcia  
Mentors: Caitlin Proctor, Madeline Larsen |
| 103 | Lauren Gartenhaus  
Mentors: Leonor Boavida, Diwen Wang |
| 104 | Zoey Grant  
Mentors: Olga Lyanda-Geller |
| 105 | Colton Griffin, Sanchita Chakraborty,  
Micky Santiago-Zyas, Yuxiao Wang  
Mentors: Thomas Sinclair |
| 106 | Samantha Langdon  
Mentors: Caitlin Proctor, Maddy Larsen |
| 107 | Harry Lee  
Mentors: Garam Kim, Eduardo Barocio |
| 108 | Adam Lovato  
Mentors: Danzhou Yang, Sarah Dagher,  
Adam Buric, Jonathan Dickerhoff |
| 109 | Joshua Mendoza  
Mentors: Jyotirmoy Ghosh |
| 110 | Lillian Millspaugh  
Mentors: Carolyn McCormick, Rose Mason,  
Veronika Peskova |
| 111 | Caleb Mull, Harry Lee  
Mentors: Garam Kim, Eduardo Barocio |
| 112 | Obehi Ozua  
Mentors: Yi-Kai Liu, Xiaofeng Wu, Andy Tao |
| 113 | Mili Patel, Chloe Cloutier  
Mentors: Carolyn McCormick,  
Veronika Peskova, Bridgette Kelleher,  
Jessica Huber |
| 114 | Madilyn Reid  
Mentors: Xiyue Chen, Shihuan Kuang |
| 115 | Summer Thomlison  
Mentors: Jonathan (Alex) Pasternak,  
Devon Anderson, James Markworth |
| **BIOCHEMISTRY NSF REU** |
| 116 | Geordan Bolden  
Mentors: Humaira Gowher, Ming He,  
Isaiah Mensah |
| 117 | Madeline Burghaze  
Mentors: Scott Briggs, Justin Gregor |
| 118 | Eliam Jearim Hernandez Santos  
Mentors: Sujith Puthiyaveetil,  
Iskander Ibrahim |
| 119 | Andrea Laboy  
Mentors: Vikki Weake, Sarah McGovern |
| 120 | Briana Mercado  
Mentors: Adam Hamdani, Andrew Mesecar |
| 121 | Amirah Nieves Medina  
Mentors: Paradyse Blackwood |
| 122 | Jackson Pierce  
Mentors: Joseph Ogas, Jacob Fawley,  
Jiaxin Long |
| 123 | Michelle Shanguhyia  
Mentors: Andy Tao, Lois Luo,  
Marco Hadisurya |
| **CISTAR** |
| 124 | Ariana Adkisson, Chloe Arana  
Mentors: Jeffrey Miller, Christopher Russell,  
Hamta Bardool |
| 125 | Chloe Arana, Ariana Adkisson  
Mentors: Jeffrey Miller, Hamta Bardool,  
Kurt Russell, David Dean |
| 126 | Lauren Bristol  
Mentors: Zewei Chen, Rakesh Agrawal |
| 127 | Brian Garcia Hernandez,  
Barry Najarro-Blancas, Jack Ueding,  
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Keylin Boyd, Michael Roberts  
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Edwin Rodriguez, Yufei Zhao |
| 128 | Lauren Oleksy, Nelanne Bolima  
Mentors: Justin Rosa-Rojas, Hwiyoon Noh |
**DIGITAL AGRICULTURE REU**

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**DURI - DISCOVERY PARK RESEARCH INTERNS**

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**NSF REU ANALYTICAL CHEMISTRY**

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**NSF REU IN APPLIED ENERGY**

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**PLANT BIOLOGY REU (PURE-PD)**

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**SCARF - AGRICULTURE SUMMER RESEARCH**

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<td>Ashley Fow</td>
<td>James Forney, Cody Goode</td>
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Joshua Kaluf, Jacob Fawley  
Mentors: Joe Ogas, Jiaxin Long

Taylor Main  
Mentors: Senay Simsek, Kristin Whitney

Cameron Matthews  
Mentors: Patrick Rich, Adedayo Adeyanju, Nathan Bowser, Gebisa Ejeta

Madeline Maurer  
Mentors: Jennifer Rackliffe, Jiqin Ni

Morgan Murff  
Mentors: Chris Staiger, Weiwei Zhang

Mario Perez-Ahuatl, Hern Tan  
Mentors: Humaira Gowher, Isaiah Mensah

Madeline Rockey  
Mentors: Caitlin Proctor, Madeline Larsen

Shelby Sliger, Angela Meyer, Ogechukwu Ezenwa  
Mentors: Joe Ogas, Jiaxin Long

Payne Turney, Krishna Patel  
Mentors: Scott Briggs, Smriti Hoda

Dalton Whitehead  
Mentors: Brad Kim, Allison Trigg, Maha Abdelhaseib

Sabrina Chang, Suyash Mishra  
Mentors: James Ogg, Aaron Ault

Juan Colberg-Martinez  
Mentors: Ann Kirchmaier, Ronard Kwizera

Adler Edsel  
Mentors: Briony Horgan

Stefanie Neufeld  
Mentors: Vikki Weake, Sarah Stanhope

Abinands Ramshanker, Min Thaw Ko, Jingyung Liu  
Mentors: Mark Johnson, Matthew Swabey, Vito Gamberini

Anusha Sarraf  
Mentors: Mark Stevens

Dongsheng Yan  
Mentors: Scott McAdam

Rachel Zheng, Nathan Tank, Grace Cook  
Mentors: Leopold Green, Kari Class, Stephen Lindemann

Isabel Jensen  
Mentors: Emily Usher, Linda Prokopy

SURF - SUMMER RESEARCH FELLOWSHIP

Nina Hawkins, Tianqi Zhou  
Mentors: V. Jo Davisson, Digambar Waiker

Daniel Hristov  
Mentors: Hugo Samayoa-Oviedo

Shuyi (Samantha) Zhou  
Mentors: Sandro Matosevic, Tram Dao

VIP - VERTICALLY INTEGRATED PROJECTS

Kyle Day, Elbek Nazarov, Akshat Verma, Audrey Ward  
Mentors: Keith Woeste, Guofan Shao

Zhaoyu Jin, Xinyu Yang, Ansh Patel  
Mentors: Mark Johnson, Matthew Swabey, Cole Nelson

Fangling Zhang, Andrew Jarrell  
Mentors: Mark Johnson

VIRTUAL POSTER PRESENTATIONS | WATCH ON THE CONFERENCE WEBSITE

Anna Strong  
Mentors: Carolyn McCormick, Bridgette Kelleher, A.J. Schwichtenberg, Wei Siong Neo

Albert Sun  
Mentors: Mark Johnson

Sui Xiong Tay  
Mentors: Remi Dingreville, Jacob Startt, Daniel Vizoso

Kyle Tong, Dan Pham, Langchao Shen, Ray Li, Chen Guo, Thanh Le  
Mentors: Nan Kong, Nicole Adams

Madhuri Vempati, Elise Miller  
Mentors: Maggie O’Haire, Sarah Leighton

Yunlin Zhang, Emma Grafford, Aryan Ghadge, Rodrigo Altmark  
Mentors: Sidd Subramanya
CELEBRATING PURDUE’S THINKERS, CREATORS, & EXPERIMENTERS

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