



RESEARCH & CREATIVITY SYMPOSIUM

Honoring Excellence in Research and Creativity



Scan for Student Abstracts

April 24, 2025

Program: Simpson College Research & Creativity Symposium

Information about the keynote presentation	2
8:00-9:00 A.M. - Registration, & Presenter T-shirt Pick-up, Kent Campus Center, Atrium	3
Oral Presentations & Panel Sessions	3
9:00-10:00 A.M. – Concurrent Oral Presentations and Panel Sessions I	3
10:15-11:15 A.M. – Concurrent Oral Presentations and Panel Sessions II	4
11:30 AM-12:30 PM – Keynote Address. Kent Campus Center, Black Box Theater	5
Oral Presentations & Panel Sessions	5
1:45-2:45 P.M. – Concurrent Oral Presentations & Panel Sessions III	5
Poster Session	6
3:00-4:00 P.M. – Research & Creativity Poster Session, Kent Campus Center, Hubbell Hall	6
4:00-4:15 PM – Awards and Remarks. Kent Campus Center, Hubbell Hall	8
Index of participating students	11

Keynote Presentation

This year's Research & Creativity Symposium keynote speaker is Dr. Meagan Call-Cummings (PhD, Indiana University Bloomington). The title of her talk is **“How Research Can Change the World.”**

Dr. Call-Cummings is an Associate Professor at the Johns Hopkins University School of Education where she teaches courses in critical theory, socially responsible research, and qualitative methodologies. Dr. Call-Cummings is a world-renowned expert in critical participatory inquiry and youth-led research and co-founded the Youth Research Council in 2021 and the Summer Institute for Liberatory and Decolonizing Research Methods in 2022. Her work centers questions of ethics and validity in the context of participatory and community-based research.



Abstract:

Right now in the United States, many of us are asking ourselves, “What can I do in this moment?” We might tell ourselves, “I’m not a political operative,” or “I don’t have any access to power.” Sitting in a college class, writing a 30-page research paper, or coding interview data can feel like we are a million miles away from the real, world-changing “action”. That couldn’t be farther from the truth. Mohammed Anisur Rahman wrote:

Domination of masses by elites is rooted not only in the polarization of control over the means of material production but also over the means of knowledge production, including control over the social power to determine what is useful knowledge. (Rahman, 1991, p. 14)

That is, social change is not just about shifting who has power over material things, but also who has power over and through knowledge production. Research is knowledge production. Rahman is saying that those who have been historically (and who are presently) mistreated, pushed to the margins, or harmed by conventional knowledge creation (research) processes must in fact, if we want social change, be meaningfully involved in (and leaders of) research that is about them.

In this talk I share several examples of youth- and community-led research that takes Rahman’s charge seriously. These examples illustrate that we can redistribute the power to create and share knowledge and we can shift the narrative around whose knowledge counts as we engage in creative and participatory research methods innovated by those with whom we work – those who know their communities best and offer their own lived experiences as valuable – and valid – expertise. As part of this presentation, participants will map out their own values, expertise, and commitments related to knowledge creation and will leave with articulated commitments and goals – as well as inspiration – to change the world.

8:00-9:00 A.M. – Registration & Presenter T-shirt Pick-up, Kent Campus Center, Atrium

Oral Presentations & Panel Sessions

Each student's oral presentation will last between 12 and 15 minutes, with five minutes for a Q&A session. Please note that this time limit does not apply to individual presentations within a class panel.

9:00-10:00 A.M. – Concurrent Oral Presentations, Performances, and Panel Sessions I

Biology and Chemistry, Carver 231

SAM DERNING and MADDY STREICHER, Application of Covalent Warhead Inhibitors for Improved Cancer Therapy

JARED OOSTERHUIS, Survival and Movement of Juvenile Muskellunge

Critical Analyses of Society, Carver 205

EM IRLMEIER, Goddess Sita: Rape, Purity, and Hindu Women

HANNAH CURTIS, Marital Cruelty in London, 1836-1859

AVA CARNES and JACK CAMPBELL, The Phenomenology of Mental Illness, Moral Blame, and Character Development

Class Panel: Design Identity Branding by 9 Designers, McNeill 107

Organized by Professor Justin Nostrala

Natalie Carmenate, Katie Harryman, Spencer Krantz, Joann Martin, Addi Olson, Noah Placiente, Morgan Rosenbeck, Jade Sprague, and Mady Vasquez

Class Panel: Battle of the Bots: Privacy and Security Threats Posed by the Widespread Implementation of Artificial Intelligence, Jordan Lecture Hall, Carver 215

Organized by Professor Mark Green

Makayla Paulsen, Brie Ginnaty, Brady Siders, Kendrick Achebe, Trey McDowell, Eli Jauron, JR Knauss, and Anna Schewe

Class Panel: Healthcare Administration Capstones and Internships, Pioneer Hall, McNeill 111

Organized by Professor Jacy Downey

Justin Taylor, Kate Kriegel, Fred Sklors, and Teryn Shields

10:15-11:15 A.M. – Concurrent Oral Presentations, Performances, and Panel Sessions II

Media and Design, McNeill 107

SPENCER RAY ELLSWORTH, Technology and the New Humanity

KATELYN R. PUDERBAUGH, Darwin, Carson and the Media

Mathematical Modeling, Carver 231

CAELYNN OBLETON, Modeling Effects of Crisis on Populations

BRANDON BARKEY, Reaching Out a Helping Hand

MATTHEW DIETRICH, RACHEL GARCIA, CAELYNN OBLETON, and LANIE SHETTLESWORTH, Is the Down syndrome birthrate in México randomly distributed, and what factors influence it?

Class Panel: No More Ramen: How NIL is Feeding College Athletes, Jordan Lecture Hall, Carver 215

Organized by Professor Mark Green

Clare Hackman, Claire Hughes, Macy Gaskill, Cole Staska, Grant Love, and Jacey Moore

Wesley Service Scholars Poster Session, Kent Campus Center, Hubbell Hall

Organized by Tayler Keitzer, Director of Community Engagement

Andrea Warner	Gracie Clark	Kinsey Grauer
Denise Alvarado Lopez	Ava Croft	Sophia Harrington
Laura Anthofer	Meredith Downs	Katie Harryman
Makenna Askeland	Macy Emgarten	Rowan Hess
Lyza Benegas	Ellie Fina	Lorelei Hinders
Kendra Bliss	Emerson Fleming	Kenzie Hodge
Taylor Busho	Elizabeth Garcia	Keiri Holmquist
Natalie Carmenate	Gabriela Garcia Medina	Coilee Hynek
Kennedy Clark	Dionni Garcia-Vasquez	Lillian Irwin

Chloe Jamieson	Bailey Petersen	Kassandra Sims
Michael Kasperbauer	Ella Pippert	Emma Sump
Nathan Keating	Abby Pope	Aubrie Tejada
Lauren Long	Sydni Powell	Bree Tenges
Kaylin Long	Eric Reines-Schmidt	Kylie Torres
Cameron Martin	Sarah Roberts	Brett Vanstrein
Landen McDonald-Simpson	Adrianna Ruble	Caroline White
Sophia Miller	Erica Rust	Emily Wilshusen
Kennedy Moore	Savannah Schneider	Jenna Woodward

11:30 AM-12:30 PM – Keynote Address: Revolutionizing Research for Social Change, Meagan Call-Cummings (Johns Hopkins University). Kent Campus Center, Black Box Theater

Oral Presentations & Panel Sessions

1:45-2:45 P.M. – Concurrent Oral Presentations, Performances, and Panel Sessions III

The Socio-Political Landscape in the United States, Carver 205

ANAKA WAMSTAD-EVANS, The Three Lees: Memorialization of the Confederacy

MAGGIE FITZPATRICK, School Choice in Iowa: Rhetoric vs. Reality

Artificial Intelligence and Predictive Modeling, Carver 231

NOAH KING and KEVIN MCCONNELL, Algorithmic Determination of Vehicle Steering Angle from Plant Location Data

BRANDON BARKEY, Keypsafe: AI Phishing Detection

LANE SUNDBERG, Predicting the Madness that is March

Class Panel: SUPERsized and Subsidized: How Big Food Shapes the American Plate, Jordan Lecture Hall, Carver 215

Organized by Professor Mark Green

Mason Brouillet, Avery Dickerson, Lainie Burkhart, Jalynn Goodale, Tim Sedlock, Kaelyn Tally, Keeley Kehrli, and Juan Zamora

Class Poster Session: Optimizing Human Performance Through Physiology Research, Carver 211

Organized by Professor Jackie Brittingham

Anna Angus, Morgan DenBeste, Dayton Gatewood, Ally Hoffa, Keiri Holmquist, Mya Jansen, Aaliyah Johnson, Mickey Johnson, Jenna Joseph, Nicole Marinero Cea, Camden McCollaugh, Jess Moore, Ben Reidburn, Evalyn Resnick, Jada Schmidt, Aaron Scholes, Katie Shaner, and Kai Starr

Poster Session

3:00-4:00 P.M. – Research & Creativity Poster Session, Kent Campus Center, Hubbell Hall

1. TEGHAN BOOTH, RYAN HOLLADAY, and DRAKE DOWNARD How do NCAA D3 Track Stars Compare to D1 Athletes: Better Than You May Think
2. ELDRED BORJA, Merging Minds and Machines: A Tale on NeuraLink
3. AMELIA BOTHWELL, Study of Scarab Beetles: Diversity in Warren and Surrounding Counties
4. BIANCA CLEMONS, BROOKLEN MORGAN, LAUREN ELLWANGER, and CJ HANGARTNER, Ambiguity got you down? Just believe... or maybe don't
5. KEELIN ANN CURLEY, WYATT MANNING, AMELIA BOTHWELL, and BAILEY DOSTAL, The Effect of Climate on the Feeding Habits of *Dermestes maculatus*
6. BLAKE DEPHILLIPS, Maximizing Health and Cleanliness through Liquid Trees
7. BREANNA DRAHOTA, Politics, Procedures, and Prejudice: Perceptions of Abortion and Healthcare Coverage
8. ALIVIA EATON, Consistency is Key: Designing Modular Rubrics to Support Student Success in Biology Labs
9. JAKE GIOFFREDI, The impact of smartphone presence and silent notifications on cognitive load
10. ELLIE GRAY, Walking a Mile in their TikToks: A Study of Viewer Empathy
11. MADDY GUNZENHAUSER, Props Design- Speed Dating Tonight!
12. MO CHRISTINA F HANEY, Igniting Innovation: Empowering the Next Generation Through the History of Science
13. ANTHONY HARRINGTON, CHASE WAINWRIGHT, and TIM WILBURN, NCSSC Discussion

14. EMMA HAYNES, and BRAELYN THOMAS, Wordy Work: How Clause Choices Change Sentence Endings
15. BREANA HINSON and ALARIA BODE, The Effects of Substrate Type on Plant Growth and Yield
16. ABIGAIL HINTZ, The Moors Dramaturgy
17. JACE HOWARD, Shifting Gears: Analyzing Automotive Trends Using Data Science
18. ROBERT HOWES, JIMMY BERNA, BRETT SNYDER, and BRADY CONNER, Realignment of Division 3 Sports
19. KATE HUISINGA and ELLEE MORTENSEN, Evaluation of Data Augmentation for Tabular Data
20. EMILEE LYNN LANDTISER, The Birth of Environmentalism
21. HANNAH LARSEN, Stage Manager “The Moors”
22. AVA LEVINGS, Unmasking Pleasure: the role of communication and closeness in women’s motivations for faking orgasms
23. SETH MAHEDY, Reappraisal, Bias, and the Anxious Mind
24. SYDNEY MCCARRON and ANTHONY POTRATZ, Insights Across Math Levels: Comparing the Use of Entry vs. Exit Tickets in Algebra 1 and Algebra 2
25. MAXIMILIAN CHESTER MONROE, Medea - Dramaturg
26. HAZEL MORGAN-FINE, Media Literacy Among College Students
27. ELLEE MORTENSEN, Examination of Academic Performance at Simpson College by Sex
28. KENNETH NORRIS, Lighting Designer for The Moors
29. AVERY PLATHE, Application of Covalent Warhead Inhibitors for Improved Cancer Therapy
30. BRYNN POTTS, Effects of Valproic Acid on Zebrafish Caudal Fin Regeneration
31. SARAH ROBERTS, Unmasking the Imposter: The Role of Perfectionism in First- and Continuing-Generation College Students
32. PAYTON SEO, Adrenal Control in Pediatric 11β -Hydroxylase Deficient CAH Patients Using Different Hydrocortisone Formulations: A Two-Patient Case Study
33. TATUM JEAN SHEPHERD, CARTER PICHLER, and ERICA RUST, Simulated Hall of Fame Committee Research

34. TATUM JEAN SHEPHERD and AUSTIN YOUNG, Evaluating NCAA DIII Athletic Hall of Fame Selections
35. SAVANNAH SKAGGS, Heartbeats and Hierarchies; (Mis)understanding of Iowa's Abortion Law
36. MAUDE STEINBECK, Gay and Here to Slay: Perceptions of Individuals Using Humor to Challenge LGBTQ+ Prejudice
37. TEAGAN TOWNSEND, Crime or Nawh? Is Cognitive Load too High to Decide?
38. ANDREA WARNER and ALIVIA EATON, Effect of Exposure to Different Light Intensities on the Foraging Behavior of *Pheidole bicarinata*
39. BEN WILSON, Tangled Thoughts: Anxiety and Confidence in Ambiguous Tasks
40. ANDREW WOLFF, Web3

4:00-4:15 PM – Recognitions and Closing Remarks. Kent Campus Center, Hubbell Hall

Index of Participating Students

Achebe, Kendrick, 3
 Alvarado Lopez, Denise, 4
 Angus, Anna, 6
 Anthofer, Laura, 4
 Askeland, Makenna, 4

 Barkey, Brandon, 4, 5
 Benegas, Lyza, 4
 Berna, Jimmy, 7
 Bliss, Kendra, 4
 Bode, Alaria, 7
 Booth, Tegan, 6
 Boria, Eldred, 6
 Bothwell, Amelia, 6
 Brouillet, Mason, 5
 Burkhardt, Lainie, 5
 Busho, Taylor, 4

 Campbell, Jack, 3
 Carmenate, Natalie, 3, 4
 Carnes, Ava, 3
 Clark, Gracie, 4
 Clark, Kennedey, 4
 Clemons, Bianca, 6
 Conner, Brady, 7
 Croft, Ava, 4
 Curley, Keelin Ann, 6
 Curtis, Hannah, 3

 DenBeste, Morgan, 6
 DePhillips, Blake, 6
 Dering, Sam, 3
 Dickerson, Avery, 5
 Dietrich, Matthew, 4
 Dostal, Bailey, 6
 Downard, Drake, 6
 Downs, Meredith, 4
 Drahota, Breanna, 6

 Eaton, Alivia, 6, 8
 Ellsworth, Spencer Ray, 4
 Ellwanger, Lauren, 6
 Emgarten, Macy, 4

 Fina, Ellie, 4
 Fitzpatrick, Maggie, 5
 Fleming, Emerson, 4

 Garcia , Elizabeth, 4
 Garcia Medina, Gabriela, 4
 Garcia, Rachel, 4
 Garcia-Vasquez, Dionni, 4
 Gaskill, Macy, 4
 Gatewood, Dayton, 6
 Ginnaty, Brie, 3
 Gioffredi, Jake, 6
 Goodale, Jalynn, 5
 Grauer, Kinsey, 4
 Gray, Ellie, 6
 Gunzenhauser, Maddy, 6

 Hackman, Clare, 4
 Haney, Mo Christina F, 6
 Hangartner, CJ, 6
 Harrington, Anthony, 6
 Harrington, Sophia, 4
 Harryman, Katie, 3, 4
 Haynes, Emma, 7
 Hess, Rowan, 4
 Hinders, Lorelei, 4
 Hinson, Breana, 7
 Hintz, Abigail, 7
 Hodge, Kenzie, 4
 Hoffa, Ally, 6
 Holladay, Ryan, 6
 Holmquist, Keiri, 4, 6
 Howard, Jace, 7

Howes, Robert, 7
 Hughes, Claire, 4
 Huisinga, Kate, 7
 Hynek, Coilee, 4

 Irlmeier, Em, 3
 Irwin, Lillian, 4

 Jamieson, Chloe, 5
 Jauron, Eli, 3
 Jensen, Mya, 6
 Johnson, Aaliyah, 6
 Johnson, Mickey, 6
 Joseph, Jenna, 6

 Kasperbauer, Michael, 5
 Keating, Nathan, 5
 Kehrli, Keeley, 5
 King, Noah, 5
 Knauss, JR, 3
 Krantz, Spencer, 3
 Kriegel, Kate, 4

 Landtiser, Emilee Lynn, 7
 Larsen, Hannah, 7
 Levings, Ava, 7
 Long, Kaylin, 5
 Long, Lauren, 5
 Love, Grant, 4

 Mahedy, Seth, 7
 Manning, Wyatt, 6
 Marinero Cea, Nicole, 6
 Martin, Cameron, 5
 Martin, Joann, 3
 McCarron, Sydney, 7
 McCollaugh, Camden, 6
 McConnell, Kevin, 5
 McDonald-Simpson, Landen, 5
 McDowell, Trey, 3
 Miller, Sophia, 5
 Monroe, Maximilian Chester, 7

 Moore, Jacey, 4
 Moore, Jess, 6
 Moore, Kennedy, 5
 Morgan, Brooklen, 6
 Morgan-Fine, Hazel, 7
 Mortensen, Ellee, 7

 Norris, Kenneth, 7

 Obleton, Caelynn, 4
 Olson, Addi, 3
 Oosterhuis, Jared, 3

 Paulsen, Makayla, 3
 Petersen, Bailey, 5
 Pichler, Carter, 7
 Pippert, Ella, 5
 Placiente, Noah, 3
 Plathe, Avery, 7
 Pope, Abby, 5
 Potratz, Anthony, 7
 Potts, Brynn, 7
 Powell, Sydni, 5
 Puderbaugh, Katelyn R., 4

 Reidburn, Ben, 6
 Reines-Schmidt, Eric, 5
 Resnick, Evalyn, 6
 Roberts, Sarah, 5, 7
 Rosenbeck, Morgan, 3
 Ruble, Adrianna, 5
 Rust, Erica, 5, 7

 Schewe, Anna, 3
 Schmidt, Jada, 6
 Schneider, Savannah, 5
 Scholes, Aaron, 6
 Sedlock, Tim, 5
 Seo, Payton, 7
 Shaner, Katie, 6
 Shepherd, Tatum Jean, 7, 8
 Shettlesworth, Lanie, 4

INDEX OF PARTICIPATING STUDENTS |

Shields, Teryn, 4
Siders, Brady, 3
Sims, Kassandra, 5
Skaggs, Savannah, 8
Sklors, Fred, 4
Snyder, Brett, 7
Sprague, Jade, 3
Starr, Kai, 6
Staska, Cole, 4
Steinbeck, Maude, 8
Streicher, Maddy, 3
Sump, Emma, 5
Sundberg, Lane, 5

Tally, Kaelyn, 5
Taylor, Justin, 4
Tejada, Aubrie, 5
Tenges, Bree, 5
Thomas, Braelyn, 7

Torres, Kylie, 5
Townsend, Teagan, 8

Vanstrein, Brett, 5
Vasquez, Mady, 3

Wainwright, Chase, 6
Wamstad-Evans, Anaka, 5
Warner, Andrea, 4, 8
White, Caroline, 5
Wilburn, Tim, 6
Wilshusen, Emily, 5
Wilson, Ben, 8
Wolff, Andrew, 8
Woodward, Jenna, 5

Young, Austin, 8

Zamora, Juan, 5