

SCHOOL OF ARTS AND SCIENCES

2025 INTERDISCIPLINARY RESEARCH CONFERENCE



Friday, April 18, 2025
10:00 AM - 3:00 PM

Livingston Student Center
Rutgers University - New Brunswick

Showcasing



**INTERDISCIPLINARY
HONORS THESES**



**INTERDISCIPLINARY
RESEARCH TEAMS**



**CAREER LAB
CAPSTONE PROJECTS**

For more information, please contact
honors@sas.rutgers.edu



RUTGERS-NEW BRUNSWICK
School of Arts and Sciences
Honors Program

School of Arts and Sciences
Interdisciplinary Research Conference
Friday, April 18, 2025 | Livingston Student Center

REGISTRATION & BREAKFAST

9:30 am – 10:30 am
LSC Gathering Lounge

MORNING SESSIONS

10:00 am – 12:00 pm
Interdisciplinary Honors Theses: Panel A
LSC, Room 201AB

Interdisciplinary Honors Theses: Panel B
LSC, Room 202BC

LUNCH BREAK

12:00 pm – 1:00 pm
LSC Gathering Lounge

AFTERNOON SESSIONS

1:00 – 3:00 pm
Interdisciplinary Honors Theses: Panel C &
Career Lab Capstone
LSC, Room 201AB

Interdisciplinary Honors Theses: Panel D
LSC, Room 202BC

Interdisciplinary Research Teams
LSC Collaborative Learning Center

Interdisciplinary Honors Theses

10:00 am – 12:00 pm

Panel A: Exploring Humanities | Chair: Amanda Ackerman,
Assistant Dean, SAS Honors Program

Adam Ahmadi, *Men in Rooms: Allegorizing Ideology in Contemporary America Through the Films of Paul Schrader*

Advisors: David Fresko (Cinema Studies) and Jeffrey Lawrence (English)

Ingrid E. Malanka, *Codes of Communication: The Films of Pier Paolo Pasolini and the Non-Verbal Language of Painting*

Advisors: David Fresko (Cinema Studies) and Benjamin Paul (Art History)

Andi Craciun, *Through the Fog: Existentialist Applications In Defining the Cultural Self*

Advisors: Jerry Piven (Philosophy) and Damaris Otero-Torres (Spanish)

Cami H. Tortajada, *The Platonic Transformation of Truth: Plato's Theory of Falsehood*

Advisors: Azzan Yadin-Israel (Classics) and Alexander Skiles (Philosophy)

Panel B: Science and Health | Chair: Jennifer Kim-Lee,
Assistant Dean, SAS Honors Program

Vividha V. Sharma, *Testing for Differential Relationships Between White Matter Microstructures in Hyperactivity and Inattention*

Advisors: David H. Zald (Rutgers Brain Health Institute/
Rutgers-Robert Wood Johnson Medical School: Psychiatry)

and Linden Parkes (Rutgers-Robert Wood Johnson Medical School: Psychiatry)

Karen E. Melendez Alas, *Examining the Impact of Physician Modeling of Shared Reading on Observed Parent-Child Interactions*

Advisors: Manuel Jimenez (Rutgers-Robert Wood Johnson Medical School: Pediatrics) and Silvia Perez-Cortes (World Languages and Cultures, Rutgers University – Camden)

Erin N. Dindial, *The Impact of Food on Numerical Decision-Making*

Advisors: Jinjing Jenny Wang (Psychology/Center for Cognition) and Liping Zhao (Microbiology and Biochemistry)

**Interdisciplinary Honors Theses &
Career Lab Capstone
1:00 pm – 3:00 pm**

Panel C: AI and Global Affairs | Chair: Kathleen Sadowsky, Assistant Dean, SAS Honors Program

Ryan Smith, *Painting with Sound: Intelligent Lighting Design Using Audio Feature Extraction and Machine Learning*

Advisors: Michael LuValle (Statistics) and Donald Holder (Theater)

Navneet Kaur, *Global Procurement Citizenship at Johnson & Johnson*

Advisor: Anthony Taitt (Supply Chain Management)
Internship Site: Johnson & Johnson

Mahek Shah, *The Human Hands Behind Artificial Intelligence*

Advisors: Mary Giordano (Management and Global Business) and Lauren Goodlad (English)

Panel D: Identity and Inclusion | Chair: A. Musu Davis, Administrative Dean, SAS Honors Program

Adia A. Win, A Preliminary Evaluation of Teaching Budgeting Skills to Adults with Autism

Advisors: SungWoo Kahng (Graduate School of Applied and Professional Psychology) and Lei Lei (Sociology)

Amit D. Modha, Becoming: Transgender Existentialisms Twice Embodied

Advisors: Jerry Piven (Philosophy) and Richard Miller (English)

Interdisciplinary Research Teams **1:00 – 3:00 pm**

Session One: | Chair: Jenevieve DeLosSantos, Director of Special Pedagogic Projects, SAS Office of Undergraduate Education

How you say the meaning you convey: Investigating the language of headlines and events

Advisors: Kristen Syrett (Linguistics) and Shannon Bryant (Cognitive Science)

Team: Alexandria Kenney, Isabel Holland, Mukul Ramesh, Samantha Fornini, and Vachagan Melikian.

A Comprehensive Approach to Brain Radiation Therapy

Advisors: Amitabh Lath (Physics and Astronomy) and Chingyun Cheng (Radiation Oncology)

Team: Aidan Beelitz, Kaya Canikligil, Scott Hiltner, and Tyler Matsumoto

Investigating the Interactions Between Microplastics and Human Cells

Advisor: Cassandra Nelson (Exercise and Sport Science)

Team: Naomi Gallic, Onyeka Okoye, and Riya Patel

Break: 5 minutes

Session Two: | Chair: Jenevieve DeLosSantos, Director of Special Pedagogic Projects, SAS Office of Undergraduate Education

Investigating Incidental Urban Nature and Its Reasons for Being

Advisor: Nathan Gabriel (Geography)

Team: Avery Groves, Initha Selvaumar, Kyle Raymundo, Nick Furnari, and Sarah Ahmad

Investigation of Societal Development in Ecuador and other Bolivarian Countries through an Ethnomusicologist Lens

Advisors: Kathleen Lopez (History; Latino and Caribbean Studies)

Team: Brandon Mejia

Conference Participants

Sarah Ahmad (IRT) is an aspiring anthropology and environmental studies double major with hopes to pursue museum curation or environmental protection post-graduation. She aims to travel the world and aid in historic preservation in her home country, Iraq. She is an active member of the Rutgers Undergraduate Society of History, a community of like-minded individuals. She aspires to be a future PhD student and continue doing anthropological and environmental research.

Adam Ahmadi (IHT) is completing a double major in English and cinema studies with a minor in creative writing while pursuing a master's in English education at the Rutgers Graduate School of Education. He also covers politics for the Daily Targum and serves as the travel Model United Nations team president.

Aidan Beelitz (IRT) is an undergraduate student majoring in computer science. He plans to become a software engineer after graduation. He is active outside of school, goes to the gym, does yoga, and is the president of Men's Club Volleyball. Aidan is an expert in trees and can name almost every tree on the Rutgers campus.

Kaya Canikligil (IRT) is pursuing a cell biology and neuroscience major and a Turkish minor. Following his undergraduate studies, he hopes to attend medical school to become a physician. Outside the IRT program, he performs research at Robert Wood Johnson Medical School and is a RWJ Surgical Oncology unit clinical care technician. Within Rutgers, he serves as an ambassador and peer mentor for the Division of Life Sciences and the SAS Honors Program.

Andi Craciun (IHT) is a student at both the School of Arts and Sciences and Mason Gross School of the Arts, where they are majoring in philosophy, visual art, and Spanish. They will be completing their studies at Rutgers with a minor in psychology.

During their time at university, they have enjoyed their role as co-president of the Rutgers Queer Student Alliance for the past three years. They also love their job as a teaching assistant for classes at the Visual Arts Center of New Jersey. They plan to apply for a master's in art therapy to work with Spanish-speaking children this summer. They are thankful to the SAS Honors Program and, most of all, their advisors for this incredible opportunity and for their massive impact on their academic development.

Erin Dindial (IHT) is a senior majoring in biological sciences with a minor in health and society. She leads her research project at the Rutgers Cognition and Learning Center, which specializes in creating fun study games for children to investigate how they learn about the world around them. Outside of university, she enjoys working as a medical assistant and plans to apply to medical school in the upcoming cycle.

Samantha Fornini (IRT) is a senior double majoring in linguistics and cognitive science with a minor in psychology. Additionally, she is completing the certificate in speech and hearing sciences. Outside of classes, Samantha is the legislative advocacy chair for the Rutgers Speech and Hearing Club. She spends her summers directing a local summer camp and working as a swim instructor, experiences that have provided her with valuable leadership and communication skills for her future. Following graduation from Rutgers, Samantha plans to pursue a master's in speech-language pathology. She is eager to continue her academic journey and learn more about language and the brain!

Nick Furnari (IRT) is a senior majoring in geography and minoring in political science and urban planning and design. Nick is the president of the Rutgers Undergraduate Geography Society and a teacher's assistant for Principles of Cartography. He has interests in history, photography, and philosophy and aspires to launch a career in geospatial information science.

Naomi Gallic (IRT) is a senior at Rutgers, pursuing a major in cell biology and neuroscience with a minor in philosophy. As a dedicated pre-med student, she combines her strong interest in biological sciences with a focus on healthcare's ethical and philosophical dimensions.

Avery Groves (IRT) is a geography major focusing on human geography. He is also minoring in urban planning and design. He is aiming to work for a city government or the census bureau, likely working with GIS. Avery is a member of the Rutgers cycling team and races cyclocross and mountain bikes; he also runs track and cross country. Avery is also interested in art history, camping, hiking, politics, graphic design, photography, and travel.

Scott Hiltner (IRT) is an undergraduate physics student with a minor in mathematics. He plans to pursue graduate studies in medical physics and continue that path into residency, aiming to be a medical physicist. In addition to his academic pursuits, he is the social chair for the Men's Club Volleyball team, a brother of Sigma Chi, and a member of the art club and the Society of Physics Students. Scott loves to paint, go to the gym, and design graphics for a clothing company in his free time.

Isabel Holland (IRT) is a senior majoring in philosophy and comparative literature with a minor in Spanish. She is interested in the philosophy of literature, social epistemology, and the philosophy of language, emphasizing their intersections with ethics. On campus, she is ecstatic to teach the First-Year Interest Group Seminar in philosophy and continue her editorial internship at Rutgers University Press. Following graduation, she plans to resume teaching at a collegiate level by pursuing a PhD in philosophy. Isabel enjoys cooking, baking, playing tennis, and collecting antiques in her free time.

Navneet Kaur (Career Lab) is a Rutgers Business School student majoring in finance and supply chain management. Throughout her academic journey, she has gained valuable hands-on

experience through internships as a financial representative intern at Northwestern Mutual, a direct supply intern at MillerKnoll, and a procurement citizenship intern at Johnson & Johnson. In addition to her internships, Navneet has held leadership roles as a programming board member and peer mentor for the School of Arts and Sciences Peer Mentor Program. She is actively involved in volunteering and is dedicated to sustainability efforts; she obtained her sustainability leadership certificate. After graduation, Navneet plans to gain further experience in the finance industry before pursuing a master's degree to deepen her expertise.

Alexandria Kenney (IRT) is a senior majoring in journalism and media studies with minors in linguistics and business administration. She is a member of the IRT program, where she lends her editorial experience as the head news editor for the university's independent, student-run newspaper, The Daily Targum. She is currently investigating binding relations and the interplay between cognitive perception and syntax. She wants to work as a journalist upon graduation, and she hopes to find a way to foster her academic passion for linguistics. Outside work and research, she likes playing with her cat, solving logic and word puzzles, and exploring new train routes.

Ingrid Malanka (IHT) is a soon-to-be graduate double majoring in cinema studies and art history with a minor in Italian. She has held a position on the Animation Club e-board since her junior year and has participated in the creation of four animated short films throughout her time at Rutgers. After graduating, Ingrid plans to attend graduate school for a master's in library sciences and continue working in libraries after her part-time work as an undergraduate. In her free time, Ingrid enjoys drawing, seeing films, writing about them, and reading.

Tyler Matsumoto (IRT) is an undergraduate student majoring in computer science with a double major in history and political science and a minor in critical intelligence studies. He plans

to become a software engineer after graduation. Outside of school, he is a brother of Sigma Chi and a member of the external relations committee for the Rutgers Mobile App Development Club (RUMAD). Tyler enjoys watching the Golden State Warriors, San Francisco 49ers, and F1 in his free time. He also enjoys lifting and playing basketball.

Brandon Mejia (IRT) is pursuing a B.M. in jazz saxophone performance with a double major in I.T.I through the School of Communication and Informatics. He is active on campus, leading BIPOC@MGSA as the co-chair and CLAW as their artistic manager. Brandon is also an event manager for the Shindell/Schare Halls and Nicholas Music Center on the Douglass MGSA campus. Brandon has many scholarly memberships, being a product of Rutgers Future Scholars, Cooperman College Scholars, Educational Opportunity Fund, Student Success Services, Horatio Alger Scholars, and recently, a McNair Post-Baccalaureate Achievement Scholar, where he researched Ecuadorian music. Brandon also participated in a study abroad program in Ecuador and utilized what he learned in the field toward his IRT project.

Karen Melendez Alas (IHT) is a first-generation Latina student at Rutgers University, majoring in cell biology and neuroscience with a minor in psychology. She is a School of Arts and Sciences Honors Program member and has been awarded the Edwards Chester Pre-Medical Scholarship. Karen has developed robust research skills as a bilingual research assistant at RWJMS-Pediatrics at The Boggs Center and the Child Health Institute, where she assisted with research on early childhood development and healthcare disparities. She has also served as a patient care technician in a dialysis unit, delivering direct patient care and gaining a solid background in chronic disease management. Outside the classroom, she is a proud member of ODASIS and has volunteered time to mentor students as an AVID tutor for New Brunswick Public Schools. With a passion for eliminating healthcare disparities, she will apply to medical school upon graduation to help bring compassionate, community-focused care to underserved groups.

Vachagan Melikian (IRT) is a junior double majoring in computer science and cognitive science with minors in linguistics and history. At the university, he served as the president of the Rutgers Armenian Students Association. He also worked as a research assistant in the Nicolas Lab, researching intersectional biases in large language models. Professionally, he previously worked at Fidelity Investments as a mobile engineer, designing the Fidelity Health iOS app. After graduation, he plans to work as a software engineer and is considering a doctoral program in the future.

Amit Modha (IHT) is a double major in English and economics at Rutgers University, also minoring in philosophy. He is a member of Phi Beta Kappa and has been published in the Rutgers Writers' House Review. He is interested in queer and existential philosophy, critical theory, and 20th-century literature. He intends to go to graduate school to study English.

Onyeka Okoye (IRT) is a cell biology and neuroscience major at Rutgers University-New Brunswick. He plans to apply to medical schools after graduation and is passionate about addressing health disparities through clinical research. Onyeka completed summer research at Rutgers New Jersey Medical School, where he studied vaccination rates in underserved communities. Outside of academics, he enjoys athletic and strength training and is an active member of the Calisthenics Club.

Riya Patel (IRT) is a senior at Rutgers University, majoring in public health with a minor in biological sciences. With hands-on experience in emergency departments, international medical volunteering, and interdisciplinary research, she is passionate about positively impacting healthcare. She is also actively involved in youth leadership, cultural engagement, and volunteering. Currently applying to PA schools, Riya plans to continue her education and pursue a career as a physician assistant once she completes her undergraduate degree. She

enjoys reading and traveling in her free time, embracing opportunities to learn and explore new perspectives.

Mukul Ramesh (IRT) is a double major in computer science and data science with a minor in cognitive science, aspiring to become a data architect. He has developed a strong foundation in data architecture, designing systems that align with business models and ensuring their proper functionality and security. He plans to pursue a master's in data science post-graduation. Passionate about community service, he has volunteered at Hillsborough Public Library, leading computer literacy workshops for underprivileged youth. His projects include creating educational games for language learners and mobile apps for streamlining public transportation. Mukul also has experience as a planning and development intern at Isles Inc., saving costs for the organization with custom Python applications and designing a tracking game as a software developer at Rutgers. His hobbies include playing the piano, reading sci-fi, and hiking.

Kyle Raymundo (IRT) is an information technology major with a minor in economics. They are pursuing a career in IT, with a particular interest in health informatics. They are planning to enter the workforce after graduation but are also considering pursuing a master's degree. In addition to their academic pursuits, they co-lead the Voice Acting Network and Collective of Entertainers at Rutgers (VANCE Rutgers) and enjoy going to the gym.

Initha Selvaumar (IRT) is double majoring in cognitive science and environmental studies with a minor in philosophy. They are currently involved in neuropsychology research, specifically the effects of aging and neurodegenerative diseases on cognition. They are interested in journalism and wildlife conservation. They love drawing and finding new music to listen to.

Mahek Shah (IHT) is a finance major at Rutgers Business School. She is a soccer fanatic, serving as the treasurer of the Rutgers

Women's Club Soccer Team and working as the Rutgers Club Sports office assistant. She aims to go to a law school in the near future, and her dedication to that can be seen through her position as the president of Phi Alpha Delta, the pre-law fraternity on campus. After graduation, she will be moving to Boston to work in consulting.

Vividha V. Sharma (IHT) is a psychology major with a minor in biology. Passionate about mental health advocacy, she serves as the peer mental health education coordinator at Rutgers Student Health, where she helps organize workshops, train educators, and coordinate a peer mentorship program she created. She has also gained experience in clinical and research settings as an RA at the RWJMS Clinical and Affective Neuroscience Lab, an intern at the Overlook Medical Center, & and a volunteer crisis counselor for the National Suicide Text-line. Additionally, she enjoys writing and serves as the external vice president of The Examiner: Rutgers Pre-Health Journal. She is also an honors ambassador and peer mentor in the School of Arts and Sciences Honors Program. After graduation, she hopes to pursue a career in medicine, combining her interests in mental health advocacy, research, and patient care.

Ryan Smith (IHT) is from Robbinsville, New Jersey, studying computer science and data science at Rutgers School of Arts and Sciences. Ryan is an active brother of Chi Psi, serving as both the philanthropy chair and social chair. Ryan interned at Wodify as a data scientist last summer and during this school year. He plans to work full-time there after traveling "for a bit." Ryan loves playing basketball, hiking, and surfing. He enjoys his mom's cooking, cruising with his dad in their '72 Ford Bronco, and doing almost anything with his best friend Sean.

Cami Tortajada (IHT) is graduating from the Rutgers SAS Honors Program this year with a philosophy and cognitive science degree. During her time at Rutgers, her innovative thinking led her to pursue opportunities in both majors. Cami is academically driven,

which has led to her making the Dean's List every semester at Rutgers. She is also a member of the Innovation, Design, and Entrepreneurship Academy, where she has applied and cultivated her creative thinking skills. Her membership in the Academy provided her with the resources to pursue two professional internships. Cami is also the author of two published works of creative nonfiction; she enjoys combining creative writing with multimedia art. Her favorite Rutgers experience has been playing the cello in the Rutgers Sinfonia Orchestra. Cami's love of ancient Greek philosophy began in Professor Yadin-Israel's classroom, and she enjoyed working under his mentorship to present her interdisciplinary honors thesis.

Adia Win (IHT) is a psychology major with minors in biology and health and society. Passionate about leadership and community involvement, Adia serves as a resident assistant, volunteers for the Hospital Elder Life Program, and co-president of the Rutgers Asian Pacific American Medical Student Association (APAMSA) undergraduate chapter. Adia enjoys crocheting, teaching arts and crafts to kids, going cafe-hopping, hiking, or perfecting her putt on the golf course in her free time. Adia plans to apply to medical school in the upcoming cycle while spending her gap year gaining hands-on experience working in a hospital and traveling.



RUTGERS—NEW BRUNSWICK

School of Arts and Sciences

Honors Program

Thank You

With thanks for the generous support of:

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- The SAS Honors Program staff
- SAS Office of Undergraduate Education

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