



SCHEDULE OF EVENTS

THURSDAY, APRIL 15TH, 2021

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|---------------------|--|
| 9:00 AM – 9:30 AM | Welcome and Opening Remarks
“Dancing Alone Together: Anger and Sadness in COVID Quarantine”
Dr. Daniel Stark |
| 9:30 AM – 10:30 AM | Undergraduate Poster Sessions 1, 2, 3, 4
Undergraduate Oral Sessions 1, 2 |
| 11:00 AM – 12:00 PM | Undergraduate Poster Sessions 5, 6
Undergraduate Oral Session 3
Creative Exposition Q&A
Graduate Oral Session 1 |
| 1:00 PM – 2:00 PM | Keynote Presentation and Panel
“Research to Practice: Connecting Evidence, Proof, and Trust”
Dr. Jessica Albers
Question and Answer Panel
Dr. Jessica Albers & Dr. Daniel Stark |
| 2:00 PM – 3:00 PM | Undergraduate Poster Sessions 7, 8
Undergraduate Oral Sessions 4, 5
Graduate Poster Session |
| 3:30 PM – 4:30 PM | Undergraduate Poster Sessions 9, 10, 11
Undergraduate Oral Session 6
Graduate Oral Session 2 |
| 5:00 PM – 5:45 PM | Keynote Presentation
“Research Experiences Throughout My Career in the Space Industry”
Tom Leimkuehler, PhD (NASA Johnson Space Center) |
| 5:45 PM – 6:00 PM | Awards Ceremonies and Closing Remarks |

College of Allied Health & Nursing

COVID-19 Impacting Care Partners Assisting Socialization for Dementia Friendly Chorus

Anna Peterson

Hsinhuei Sheen Chiou, Faculty Mentor (Department of Speech, Hearing, and Rehabilitation Services)

Physical Therapy Use among Collegiate Dancers

Vanessa Kotek

Jessica Albers, Faculty Mentor (Department of Human Performance)

The State of Play Before and During COVID

Mackenzie Glaser

Heather Von Bank, Faculty Mentor (Department of Family Consumer Science)

Family Coping In the Time of COVID-19

Ivy Packard

Daniel Moen, Faculty Mentor (Department Family Consumer Science)

Exploring COVID-19 Impact on Social Inclusion in Dementia Chorus

Cassidy Hall

Hsinhuei Sheen Chiou, Faculty Mentor (Department of Speech, Hearing, and Rehabilitation Services)

End-of-Life Care Conversations: Family Care Partners Share Their Experiences about Their Loved One Living with Dementia at End-of-Life

Chandler Johnson

Kristen Abbott-Anderson, Faculty Mentor (Department of Aging Studies)

The Potential Mechanism of Leptin

Lyric Lopez-Kohler

Charles Krois, Faculty Mentor (Department of Biochemistry, Chemistry, and Geology)

Disease Mutations and Oxidative Effects on Calmodulin Structure and Function

Ethan Hayes

Rebecca Moen, Faculty Mentor (Department of Biochemistry, Chemistry, and Geology)

Effect of Epinephrine on Brown Adipose Tissue

Tsion Sherbeza

Charles Krois, Faculty Mentor (Department of Biochemistry, Chemistry, and Geology)

APOBEC3A Mediated Genome Targeting of the Thyroid Hormone Response Element

Abbigail Osgood

Allison Land, Faculty Mentor (Department of Biological Sciences)

Soil Health Characterization under Different Land Uses in Southern Minnesota

Mohammed Abdurahman

Mriganka De, Faculty Mentor (Department of Biological Sciences)

An Assistive Mobile Communication Application for Individuals Who Are Mute or Have Speech Impairments

Sashwot Koirala

Guarionex Salivia, Faculty Mentor (Department of Computer Information Science)

Instagram Bot Development

Wen Sun

Michael Rutkowski, Faculty Mentor (Department of Physics and Astronomy)

Studying the Effect of Laser Power on Carbonaceous Meteorites by Raman Spectroscopy

Mohamed Zakariya

Analía Dall'Asén, Faculty Mentor (Department of Physics and Astronomy)

Cosmic Ray Detector

Jamal Saeed

Michael Rutkowski, Faculty Mentor (Department of Physics and Astronomy)

Bridge Deck Thermography: Revisiting ‘Bridges Freeze before Roadway’ From a Safe Salt Perspective

Emily Bollendorf

Stephen J. Druschel, Faculty Mentor (Department of Mechanical and Civil Engineering)

Condition Data Collection for City of Richfield Water Pipes: An Assessment

Chancellor McDonald

Basak Bektas, Faculty Mentor (Department of Mechanical and Civil Engineering)

Automatic Cutting Expert (ACE)

Cesar Vega

Jacob Swanson, Faculty Mentor (Department of Integrated Engineering)

IoT-based Solution to Gather Foot Plantar Pressure for Daily Life Activities

Abdelrahman Elkhatib

Puteri S. Megat Hamari, Faculty Mentor (Department of Electrical and Computer Engineering & Technology)

College of Allied Health & Nursing
College of Social & Behavioral Sciences

Interdisciplinary approach within Art Education - A Lesson Plan

Aditi Bheda

Gina Wenger, Faculty Mentor (Department of Art Education)

9:30 am – 9:45 AM

Rhetorically Speaking: Danica Patrick in the Wide Marketing Game of Sports

Johnathan Fjeld

Emily Sauter, Faculty Mentor (Department of Communication Studies)

9:45 AM – 10:00 AM

Skinwalkers and Gender Roles

Marius Vold

Rhonda Dass, Faculty Mentor (Department of Anthropology)

10:00 AM – 10:15 AM

Impact of Tire Temperature on Grip in a Racecar

Val Urman

Sam Ertl, Faculty Mentor (Department of Automotive Engineering Technology)

9:00 AM – 9:15 AM

Impact of Intake Air Charge Cooling from Upstream Auxiliary Fuel Nozzle

Gabe Villalpando

Matthew Simones, Faculty Mentor (Department of Automotive Engineering Technology)

9:15 AM – 9:30 AM

Coil Suppression

Samuel Squires

Matthew Simones, Faculty Mentor (Department of Automotive Engineering Technology)

9:30 AM – 9:45 AM

RPM Limiting System

Arjun Veerwal

Gary Mead, Faculty Mentor (Department of Automotive Engineering Technology)

9:45 AM – 10:00 AM

Effects of Various Thyroid Hormone Concentrations

Lauren Krieg

David Sharlin, Faculty Mentor (Department of Biological Sciences)

PER1 Expression in the Breeding and Non-Breeding Season of Anole Lizards

Alexus Bunnam

Rachel Cohen, Faculty Mentor (Department of Biological Sciences)

Effects of Gonadotropin Releasing Hormone on Reproductive Behavior and Testis Morphology in A Seasonally Breeding Lizard

Jada Harley

Rachel Cohen, Faculty Mentor (Department of Biological Sciences)

Evolution of Terrestrial Behaviors in Aquatic and Amphibious Fishes

Andrew Ruiz

Michael Minicozzi, Faculty Mentor (Department of Biological Sciences)

Isolation and Identification of Cellulolytic Bacteria from Forest Soil

Andre Bluth

Yongtao Zhu, Faculty Mentor (Department of Biological Sciences)

Investigation of Pulsed Eddy Current Effect for Multi-Target Non-Destructive Testing

Yaman Pandey

Min Li, Faculty Mentor (Department of Mechanical and Civil Engineering)

Effects of a Restrictor on a Turbocharger

Deven Paulsen

Matthew Simones, Faculty Mentor (Department of Automotive and Manufacturing Engineering Technology)

Three Degree of Freedom Spherical Motor

Jack Zimmerman

Min Li, Faculty Mentor (Department of Mechanical and Civil Engineering)

Effects of Bisymmetrical and Bilateral Symmetrical Vertical Axis Wind Turbine Designs

Annalisa Tostenson

Nazli Wodzinski, Faculty Mentor (Department of Mechanical and Civil Engineering)

College of Allied Health & Nursing
College of Social & Behavioral Sciences

Discerning Science Fact from Science Fiction: Effects of Science Fiction Media Consumption on Undergraduate Perceptions of Neurotechnology

Shannon Bruce

Adam Steiner, Faculty Mentor (Department of Psychology)

11:00 AM – 11:15 AM

The Relationship between Intramural, Club, and University Student-Athletes' Belongingness and Motivation during COVID-19

Osadolor Louis Ikponmwosa

Michelle McAlarnen, Faculty Mentor (Department of Human Performance)

11:15 AM – 11:30 AM

Predicting Effective Learning: What Traits Make College Students Receptive to Learning?

Teana Krolak

Karla Lassonde, Faculty Mentor (Department of Psychology)

11:30 AM – 11:45 AM

College of Arts & Humanities

Resilience - A Dance on Film

Emily Schumacher

Daniel Stark, Faculty Mentor (Department of Theatre & Dance)

11:00 AM – 11:15 AM

Experimental Videos

Jack Linell

Areca Roe, Faculty Mentor (Department of Art & Design)

11:00 AM – 12:00 PM

Expression of the Dancing Body Without the Face

Kaitlin Murray

Daniel Stark, Faculty Mentor (Department of Theatre & Dance)

11:00 AM – 12:00 PM

A Century of Racism in Minnesota

Nicole Jecha

Leah White, Faculty Mentor (Honors Program)

11:00 AM – 12:00 PM

Beyond the Field: Poetry Reading

Robyn Katona

Michael Torres, Faculty Mentor (Department of English)

11:00 AM – 12:00 PM

College of Arts & Humanities
College of Education
College of Science, Engineering, & Technology

Breaking Traditions in Medieval Literature: Finding Parallels in Reynard the Fox and Robin Hood

Brianna Rose DeValk

Justin Biel, Faculty Mentor (Department of History)

11:00 AM – 11:15 AM

Meriam's Momentary Metamorphosis: Progressive Education and The Indian New Deal

Abigail Fer

Angela Cooley, Faculty Mentor (Department of History)

11:15 AM – 11:30 AM

Classroom Equity Research

Shivani Gautam

Brooke Burk, Faculty Mentor (Center for Excellence in Teaching and Learning)

11:30 AM – 11:45 AM

Ways by Which Extracurricular Activities My Impact English Language Learners (ELL)

Paul Selman

Nancy Drescher, Faculty Mentor (Department of English)

11:45 AM – 12:00 PM

College of Allied Health & Nursing

College of Social & Behavioral Sciences

Prenatal Experiences Of Hmong Women in Minnesota

Prerana Khatri KC

Laurel Ostrow, Faculty Mentor (School of Nursing)

COVID-19's Impact on Motives, Barriers, And Amount of Physical Activity Among College Students

Beth Albrecht

Jessica Albers, Faculty Mentor (Department of Human Performance)

Learning about Global Elder Care Practices through an International Virtual Collaboration

Sarah Gunderson

Renee Kumpula, Faculty Mentor (School of Nursing)

How Has Current Physical Activity Levels and Stability of That Activity Impacted Coping Skills during COVID-19 and the Transition To Online Learning in College Students?

Kaitlyn Vomhof

Jessica Albers, Faculty Mentor (Department of Human Performance)

The Relationship between Critical Thinking and Emotional Intelligence among College Students

Louisa Hall

Emily Stark, Faculty Mentor (Department of Psychology)

Understanding How Notum Promotes Glypican-3 Shedding In Hepatocellular Carcinoma

Meaghan Keohane

Samantha Katner, Faculty Mentor (Department of Biochemistry, Chemistry, and Geology)

Investigating Key Enzymes Involved In Glypican-3 Release from Hepatocellular Carcinoma

Stevan Colakovic

Samantha Katner, Faculty Mentor (Department of Biochemistry, Chemistry, and Geology)

Cellular Localization Determinants of the HIV-2 Vpx Protein

Ramsey Pankratz

Allison Land, Faculty Mentor (Department of Biological Sciences)

Function of the Glycoside Hydrolase Family 8 Endoglucanases in *Cytophaga Hutchinsonii* Cellulose Utilization

Chouakou Vang

Yongtao Zhu, Faculty Mentor (Department of Biological Sciences)

An Analysis of Migration Ability and Effects of Carboplatin and Cisplatin on Glioblastoma Cells with Proteoglycan Knockouts

Rachel Vankuelen

Samantha Katner, Faculty Mentor (Department of Biochemistry, Chemistry, and Geology)

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College of Science, Engineering, & Technology

ARV-825

Shelby Lund

Keenan Hartert, Faculty Mentor (Department of Biology)

2:00 PM – 2:15 PM

Development of Techniques for the Genetic Manipulation of the Fish Pathogen *Flavobacterium Psychrophilum*

Lankesha Sudasinghe

Yongtao Zhu, Faculty Mentor (Department of Biology)

2:15 PM – 2:30 PM

The Effects of a Broad-Spectrum Fungicide on Photosynthetic Yield at Different Developmental Stages of Corn in an Agronomic Setting

Ashley Frederickson

Christopher Ruhland, Faculty Mentor (Department of Biology)

2:30 PM – 2:45 PM

Reconstructing Earths Oxygen History from Iron-rich Rock Samples

Emily Faust

Chad Wittkop, Faculty Mentor (Department of Geology and Chemistry)

2:45 PM – 3:00 PM

College of Science, Engineering, & Technology
College of Social & Behavioral Sciences

How Normative Beliefs Affect Procrastination Rates in College Students

Adam Recknagel

Kevin Filter, Faculty Mentor (Department of Psychology)

2:00 PM – 2:15 PM

Analyzing the Trend and Forecasting of Covid-19 Outbreak using Machine Learning Technique

Benie Bebela

Suboh Alkhusayni, Faculty Mentor (Department of Computer Information Science)

2:15 PM – 2:30 PM

Generating a GPC-1 Knockout in Glioblastoma Cells Using CRISPR

Jamie Rogers

Samantha Katner, Faculty Mentor (Department of Biochemistry)

2:30 PM – 2:45 PM

Regulation of the Type IX Secretion System in *Flavobacterium johnsoniae*

Ireland Manning

Yongtao Zhu, Faculty Mentor (Department of Biology)

2:45 PM – 3:00 PM

Mental Health Literacy in College Students

Emily Schiltz

Emily Stark, Faculty Mentor (Department of Psychology)

3:00 PM – 3:15 PM

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Function of Ribonucleotide Reductase-Encoding Genes in *Flavobacterium johnsoniae*

Hunter Doheny

Yongtao Zhu, Faculty Mentor (Department of Biological Sciences)

Pre-methylation of Foreign DNA Improves Conjugation Efficiency in the Fish Pathogen *Flavobacterium psychrophilum*

Seada Sloboda

Yongtao Zhu, Faculty Mentor (Department of Biological Sciences)

Investigating miRNA Regulation of the Human APOBEC3 Enzymes

William Dietrich

Allison Land, Faculty Mentor (Department of Biology)

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Importance of Sex Steroid Hormone Levels on Neurogenesis in Green Anole Lizards

Zachary Sandborgh

Rachel Cohen, Faculty Mentor (Department of Biological Sciences)

The Effects of a Fish's Fins in a Terrestrial Jump

Mackenzie Reed

Michael Minicozzi, Faculty Mentor (Department of Biological Sciences)

Contrasting Oak Responses to Water Stress - Osmolyte Profiling Across Species

Joseph Newman

Matthew Kaproth, Faculty Mentor (Department of Biological Sciences)

Effect of Thyroid Hormone Transporters in Adrenal Cortex Remodeling

Amayah Ockenga

David Sharlin, Faculty Mentor (Department of Biological Sciences)

DNA Repair Genes and Their Expressions in Breeding and Non-breeding Seasons of Green Anole Lizards

Alex Calli-Wehrman

Rachel Cohen, Faculty Mentor (Department of Biological Sciences)

Myosin Oxidation and Effects on Magnesium and Actin Binding

Muna Mifta Awel

Rebecca Moen, Faculty Mentor (Department of Biochemistry, Chemistry, and Geology)

College of Social & Behavioral Sciences

Infectious Misinformation: Observing Conformity on Social Media

Adam Flores

Bradley Arsznov, Faculty Mentor (Department of Psychology)

College Students' LASSI Performance

Kailing Aw

Karla Lassonde, Faculty Mentor (Department of Psychology)

Student Perceptions of Professionalism

Christina Sanders

Kristie Campana, Faculty Mentor (Department of Psychology)

Examining the Impact of COVID-19 on the College Students' Experience

Kaylee Engle

Carlos Panahon, Faculty Mentor (Department of Psychology)

Honors Program
College of Allied Health & Nursing
College of Social & Behavioral Sciences

University Health Services and Non-English Speaking Patients

Riley Lehmer

Leah White, Faculty Mentor (Honors Program)

Mask Usage Behaviors amongst the MNSU, Mankato Community

Molly Hill

Leah White, Faculty Mentor (Honors Program)

Impact of Supplemental Technology on Student Performance

Kade Patterson

Leah White, Faculty Mentor (Honors Program)

Exploring How Duration and Mode of Delivery Impacts Outcomes of Literacy Intervention

Rebecca Guss

Megan Mahowald, Faculty Mentor (Department of Speech, Hearing, and Rehabilitation Services)

Strategies for Teaching History

Sage Grothe

Emily Stark, Faculty Mentor (Department of Psychology)

Angela Cooley, Faculty Mentor (Department of History)

Sentimental Analysis of COVID-19 Vaccine Related Tweets

Mohannad Rayani

Suboh Alkhushayni, Faculty Mentor (Department of Computer Information Science)

3:30 PM – 3:45 PM

Detecting Online Review Fraud Using Sentiment Analysis

Bryn Caron

Rajeev Bukralia, Faculty Mentor (Department of Computer Information Science)

3:45 PM – 4:00 PM

S-Cubed

Cohen Rautenkranz

Jake Swanson, Faculty Mentor (Department of Integrated Engineering)

4:00 PM – 4:15 PM

The Importance of Measuring Air Velocity on a Race Car

German Orrego

Gary Mead, Faculty Mentor (Department of Automotive Engineering Technology)

4:15 PM – 4:30 PM

College of Allied Health & Nursing
College of Social & Behavioral Sciences

Teletherapy and Camp Maverick: Literacy Students and Caregiver's Perspectives

Kelsey Anderson

Megan Mahowald, Faculty Mentor (Department of Communication Sciences and Disorders)

3:30 PM – 3:45 PM

What Do the Twitter Sentiments Say About the COVID-19 Vaccine?

Ilma Sheriff

Naseef Mansoor, Faculty Mentor (Department of Computer Information Science)

3:45 PM – 4:00 PM

The Effect of Resistance Training on Distance Running Performance: A Comprehensive Meta-Analysis

Nathan Goslin-Klemme

Corey Selland, Faculty Mentor (Department of Human Performance)

4:00 PM – 4:15 PM

Xtreme-NoC: Extreme Gradient Boosting Based Latency Model for Network-on-Chip Architectures

Ilma Sheriff

Naseef Mansoor, Faculty Mentor (Department of Computer Information Science)

4:15 PM – 4:30 PM