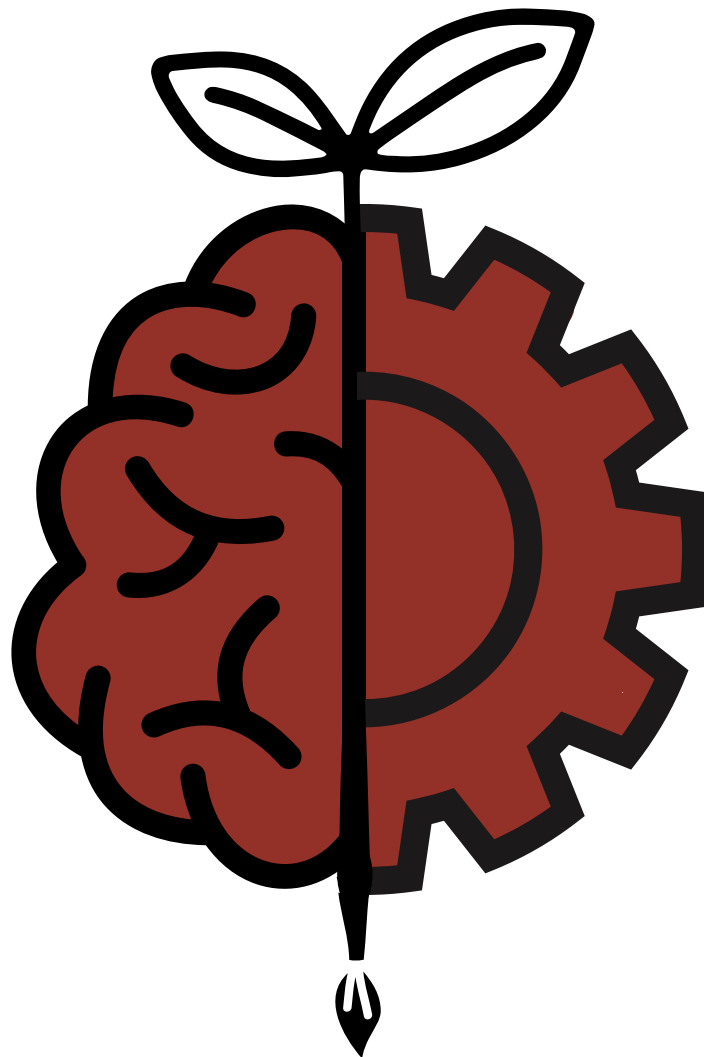


Graduate Research & Arts 2023 Symposium

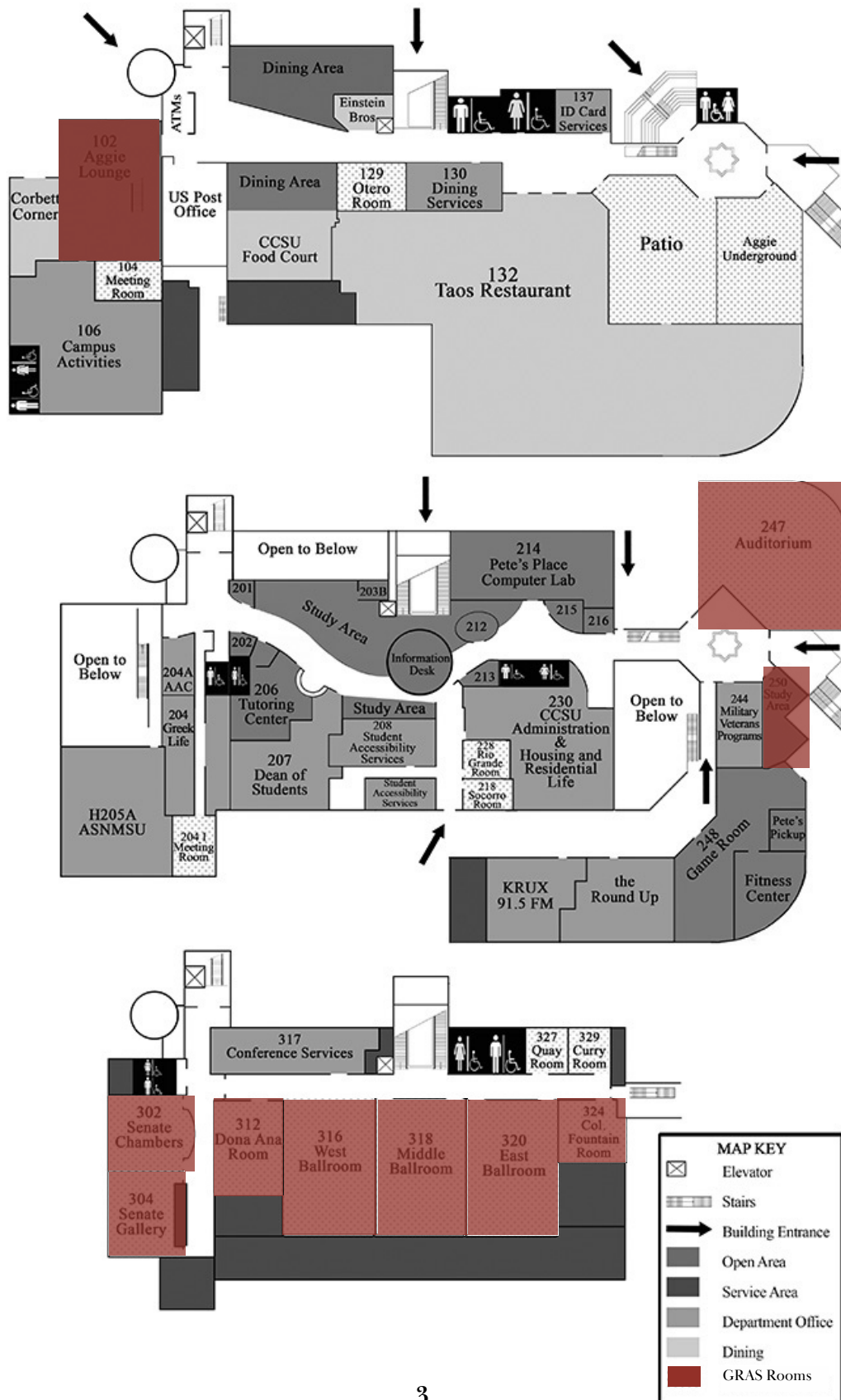


FRIDAY, NOVEMBER 10TH, 2023

NEW MEXICO STATE UNIVERSITY
Corbett Center Student Union, Las Cruces, NM

PRESENTED BY GRADUATE STUDENT COUNCIL

MAP OF LOCATIONS



AGENDA

MORNING

8:00 A.M. - 12:30 P.M.

8:45 A.M.: REGISTRATION OPENS
BALLROOM HALLWAY

9:00 A.M. - 9:30 A.M.: WELCOME SESSION
EAST BALLROOM

9:30 A.M. - 5:30 P.M.: POSTER SESSION
AGGIE LOUNGE

9:30 A.M. - 10:30 A.M.: LIGHTNING TALKS
WEST BALLROOM

9:30 A.M. - 11:00 A.M.: PRESENTATION SESSION I
SENATE GALLERY, SENATE CHAMBERS, WEST BALLROOM, CENTRAL BALLROOM
& COLONEL FOUNTAIN ROOM

11:00 A.M. - 12:30 P.M.: PRESENTATION SESSION II
SENATE CHAMBERS, WEST BALLROOM & COLONEL FOUNTAIN ROOM

AFTERNOON

12:30 P.M. - 6:30 P.M.

12:30 P.M. - 1:30 P.M.: LUNCH BREAK
EAST BALLROOMS

1:30 P.M. - 3:00 P.M.: PRESENTATION SESSION III
SENATE CHAMBERS, CENTRAL BALLROOM & COLONEL FOUNTAIN ROOM

3:00 P.M. - 4:00 P.M.: PRESENTATION SESSION IV
DONA ANA ROOM

3:00 P.M. - 5:30 P.M.: MUSIC AND OPEN MIC PERFORMANCES
CCSU AUDITORIUM

5:30 P.M. - 6:30 P.M.: CLOSING SESSION & AWARDS
CCSU AUDITORIUM

PRESENTATIONS

POSTER

9:00 A.M. - 5:30 P.M. *Aggie Lounge*

EMILIA MARMOLEJO

Engineering - Civil Engineering

Enzyme-Induced Carbonate Precipitation (EICP)
Treatment for Erosion Control in Sloping Ground

ANJALI KARKI

Arts and Sciences - Biology

Optimizing the bloodmeal alternative,
SkitoSnack, for Anopheles mosquitoes.

ABU BUCKER

*Engineering - Electrical and Computer
Engineering*

Deep Learning Estimation of Modified Zernike
Coefficients from Multispectral Imagery in
Turbulence

LINDLEY HORNSBY

*HEST School of Social Work, Dept of Public
Health Sciences*

Public Health Field Work: Reproductive Health
Access in New Mexico

ALEXANDER ALLISON

Arts and Sciences - Biology

Assessing Juvenile Dispersal Patterns in the
Great Green Macaw

SHAMMINUJ AKTAR

*Engineering - Electrical and Computer
Engineering*

Scalable Experimental Bounds for Entangled
Quantum State Fidelities

HAILEY LUKER

Arts and Sciences - Biology

Testing the repellent activity of essential oils on
Aedes aegypti mosquitoes and *Ixodes scapularis*
ticks using contact assays with human volunteers

STEPHANIE REINERT

Arts and Sciences - Computer Science

Differentiation in Hematopoiesis: Two Distinct
Stages of Erythroid Fate Commitment

RASHNI ANANDAWANSHA

Arts and Sciences Physics

Using ScS reverberations to map Earth's upper
and mid-mantle

TATIANA KARDASHINA

*Engineering - Mechanical & Aerospace
Engineering*

Comparison of Remote Soil Moisture Sensing
Methods

PRESENTATIONS

POSTER

9:00 A.M. - 5:30 P.M. *Aggie Lounge*

NICHOLAS GRIJALVA

Arts and Sciences - Computer Science

Low-Cost Monocular Vision Localization and Feedback Control Strategy for a Quad-Rotorcraft Unmanned Aircraft System (UAS)

LUIS CHAVEZ

ACES - Agricultural Economics & Agricultural Business

Occupational safety issues and labor challenges in small meat processing plants: A systematic review

GIOVANNA DEL SORDO

Arts and Sciences - Psychology

Exploration vs. exploitation in a novel complex card sorting task: Evidence from pupillometry

KHAGENDRA KATUWAL

Arts and Sciences - Astronomy

Unipolar magnetic field configuration of the equatorial coronal holes.

JOY IKEDICHI AGBAWODIKE

ACES - Family and Consumer Science

Studying The Melting of Ice-Cream Through The Modification of Its Structural Element

COBE WILSON

Arts and Sciences - Psychology

Sampling Precision in Basic Versus Applied Research

NUSRAT ABDULLA

HEST - Public Health Sciences

Effective Mosquito Reduction with Larvicide *Bacillus thuringiensis* var. *israelensis* (Bti): A Safe and environment-friendly approach

EMILY EMBURY

Arts and Sciences - Biology

Microbial communities in the changing vegetation of the Chihuahuan Desert

MEHDI MOGHADAM MANESH

ACES - Water Science and Management

Exploring Equilibrium Points of the Mesilla Groundwater Basin: Some System Insights

JANET KWAKYE

Engineering - Industrial Engineering

A Discrete Event Simulation Model for the 3D Printing Supply Chain of Dental Prostheses

PRESENTATIONS

POSTER

9:00 A.M. - 5:30 P.M. *Aggie Lounge*

APRIL LOPEZ

Arts and Sciences - Biology

Phosphoproteomic analysis of *Aedes aegypti* fat body reveals blood meal-induced cell signaling and metabolic pathways

CHINENYENWA ONYEANWU

ACES - Hotel Restaurant and Tourism Management

PGC-1 α Induces Release of Factors From Muscle Cells Which Impact Neural Stem Cell Behavior

MOHSEN ZAMANI

Engineering - Civil Engineering

Experimental Plan for Centrifuge Testing of Bioinspired Laterally Expansive Piles

ALICIA MARMOLEJO

Arts and Sciences - Molecular Biology

Genetic structure and geographic origins of *Heterotheca subaxillaris* (Asteraceae): a North American native invader of the Middle East

BERNADETTE ROMERO-BENALLY

ACES - Water Science Management

Assessing the Administrative Right-of-Way Process for the Navajo Allotment Lands in Connection to the Navajo-Gallup Water Supply Project

BIPIN KHANAL

Arts and Sciences - Chemistry and Biochemistry

Late-Stage Diversification of HIV-1 Protease Inhibitor via SuFEx Click Chemistry

AMIN SARIHI

Engineering - Electrical Engineering

Multi-Criteria Hardware Trojan Detection: A Reinforcement Learning Approach

REZA GHANAVATI

Engineering - Chemical & Materials Engineering

Optimizing forcefield flexibility parameters for metal-organic frameworks

JACOB DEVARGAS

Arts and Sciences - Molecular Biology

Assessing DNA damage, cell viability and toxicity in melanocytes

MARIA ALVAREZ ZAVALA

ACES - Plant and Environmental Science

LC-MS/MS Method Development for Argentatin Quantification

AMINOU SAIBOU

ACES - Plant and Environmental Science

Can Summer Cover Crops Suppress Weeds in New Mexico?

PRESENTATIONS

POSTER

9:00 A.M. - 5:30 P.M. *Aggie Lounge*

HARRISON COOK

Arts and Sciences - Astronomy

Supernova Explosions in Accretion Disks of Active Galactic Nuclei

JOSEPH LEE CASEY ESTRADA

Arts and Sciences - Biology

Exploring the Immunomodulatory Role of Nep15 in *Drosophila melanogaster*

ANDREA SOLER

ACES - Family and Consumer Sciences

Impact of Phospholipids on Rheology and Microstructure in Greek-style Yogurt

SAHITHI REDDY PULICHERLA

Arts and Sciences - Molecular Biology

Characterization of Late embryogenesis abundant (LEA) genes in Pecan (*Carya illinoensis*)

MELISSA MEYERS

ACES - Department of Entomology, Plant Pathology, and Weed Science

Plant-soil feedback of Lehmann lovegrass (*Eragrostis lehmanniana*) and its effect on competition with native black grama (*Bouteloua eriopoda*)

DIANA BAUTISTA

Arts and Sciences - Chemistry

Assessment of IGF-1R and $\beta 1$ integrin as biomarkers of tamoxifen resistance

KRISTEN FULTZ

HES - Sociology

No Place Like Home: How Conservatism and Distrust Contribute to Households as Quasi-Total Institutions

SEYEDMAJID MINAYHASHEMI

ACES - Hotel, Restaurant and Tourism Management

Climate Change Impact and Sustainable Practices in the Wine Industry

VALERIA F. MOTENEGRO

Arts and Sciences - Biology

Investigating tropomyosin isoform localization and function during sea star development.

HENGAMEH MIRHAJIANMOGHADAM

Engineering - Electrical and Computer Engineering

Real-time implementation of Model Predictive Control for fast trajectory tracking of a quad rotorcraft UAS

PRESENTATIONS

POSTER

9:00 A.M. - 5:30 P.M. *Aggie Lounge*

MEHRAN POURAKBAR

Engineering - Civil Engineering

P-wave Velocity and Thermal Conductivity of Lunar Regolith Simulants at different densities in Vacuum

TETSUYA ABOSHI

HEST - Curriculum and Instruction

A popular videogame 'Momotaro Dentetsu' for Japanese Language Acquisition, Cultural Understanding and Motivation for L2 University Students in Southern New Mexico

FRANCISCO MANUEL MARES SOLANO

Arts and Sciences - Computer Science

Using Historical Power Grid Failures to Predict the Targets and Impacts of Future Cyber Attacks

KYANA BENJAMIN

HEST - School of Teacher Preparation, Administration, and Leadership

Supporting Students with Disabilities for Transition to Higher Education

MUSIC

3:00 P.M. - 5:30 P.M. *Corbet Center Auditorium*

ISAAC REYNAGA

Arts and Sciences - Music

Suite per Violoncello solo: I Preludio - Fantasia composed by Gaspar Cassado

HERIBERTO RAMÍREZ MIGUEL

Arts and Sciences - Music

Ballade no. 1 op. 23 composed by Frédéric Chopin