

PRESENTATION SCHEDULES

MONDAY, MARCH 24, 2025

COLLEGE OF AGRICULTURE

ORAL PRESENTATIONS - RSP 163

9:00 AM	036-AGR	CLONING OF ACETY TRANSFERASE GENE PROMOTERS TO INVESTIGATE ROLE DURING ROOT NODULE SYMBIOSIS IN MEDICAGO Blake Wright*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Sonali Roy, Hyndavi Yammanuru
9:15 AM	045-AGR	COWPEA MARKET CLASS SEED CHARACTERISTICS EFFECT ON PRODUCTION FACTORS Elana Bodude*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Matthew Blair, Max Miller II
9:30 AM	055-AGR	DNA-BASED IDENTIFICATION OF PIGWEED SPECIES FROM SIX TENNESSEE REGIONS Averson Ocean* Gouse Shaik, Mustapha Oláwuni. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Ahmad Aziz
9:45 AM	078-AGR	EVALUATION OF PEROXYACETIC ACID SOLUTION AS AN ANTIMICROBIAL INTERVENTION TREATMENT FOR FRESH BEEF TRIMMINGS Emery Minor*. Family and Consumer Sciences, College of Agriculture. Advisor(s): Veronica Oates, Sharon Suggs, Randall K. Phebus
10:00 AM	088-AGR	HARMFUL ALGAL BLOOM MONITORING IN THE TENNESSEE STATE UNIVERSITY WETLAND Jordyn Cotten*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Thomas Byl
10:30 AM	094-AGR	I WOULD TITLE YOUR PROJECT “UNCOVERING GENE EXPRESSION PATTERNS OF A LEUCINE-RICH REPEAT RECEPTOR KINASE DURING ROOT NODULE SYMBIOSIS Janae Terrell*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Sonali Roy, Rajni Parmar
10:45 AM	177-AGR	THE EFFECT OF THE MOLECULAR WEIGHT OF PECTIN ON THE GROWTH OF PROBIOTIC STRAINS Amani Matlock* CheKenna Fletcher, Subir Das. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): YingWu
11:00 AM	191-AGR	THE RAPID RESPONSE TO RISING TEMPERATURES IN FRESH-MARKET TOMATO PRODUCTION FOR SMALL FARMERS Katrina Seaman*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Suping Zhou, John Ricketts, Anji Chang
11:15 AM	043-AGR	COVER CROP DECOMPOSITION DYNAMICS IN NO-TILL CORN PRODUCTION SYSTEMS Puja Sapkota* Sabin Shrestha. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Resham Thapa
11:30 AM	159-AGR	RNA SEQUENCING APPROACH TO IDENTIFYING GENES ASSOCIATED WITH ALUMINUM TOXICITY TOLERANCE IN COWPEA (<i>Vigna unguiculata</i> L. Walp.) Max Miller*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Matthew Blair

11:45 AM	200-AGR	TWO-YEAR EXPERIMENTAL WARMING EFFECTS ON SOIL RESPIRATION AND MICROBIAL COMMUNITY FUNCTION IN A SWITCHGRASS CROPLAND IN MIDDLE TENNESSEE Matthew Manu* Aviyan Pandey. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Jianwei Li
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Afternoon Session Begins

1:00 PM	004-AGR	INVESTIGATING THE POTENTIAL OF AUTOFERMENTATION CYANOBACTERIA CRUDE EXTRACT AS ANTIMICROBIAL ANIMAL FEED ADDITIVES. Mohana krishnan Neelakrishnan*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Mohana krishnan Neelakrishnan, Brahmaiah Pendyala
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1:15 PM	021-AGR	ASSESSING SOIL HEALTH AMONG CONVENTIONAL ANNUAL, COVER CROP ANNUAL, AND PERENNIAL FORAGE SYSTEMS IN TENNESSEE Pooja Chaudhari* Mukesh Chaudhary. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Krishna Bhandari
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1:30 PM	042-AGR	COVER CROP BASED REDUCED TILLAGE MANAGEMENT IN FLORAL HEMP CULTIVATION Rodgers Kabenomuhangi*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Emmanuel Omondi
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1:45 PM	044-AGR	COVER CROPS INFLUENCE SEASONAL SOIL TEMPERATURE AND MOISTURE DYNAMICS IN CONSERVATION TILLAGE-BASED CORN PRODUCTION SYSTEMS Sabin Shrestha* Puja Sapkota. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Resham Thapa
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2:00 PM	047-AGR	CRISPR-Cas9-BASED MODIFICATION OF TOMATO METABOLISM FOR IMPROVED VARIETIES Sudhakar Madhavarapu* Jing Zou, Jun Guo. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Suping Zhou, Roy Sonali
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2:15 PM	049-AGR	DEVELOPING A FOUR-IN-ONE GENE EDITING SYSTEM TO IMPROVE PRODUCTION AND SUSTAINABILITY OF BIOENERGY IN SWEET SORGHUM Onyemaobi Oluchukwu* Mustapha Olawuni. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Christine Ondzighi-Assoume, Ahmad N. Aziz
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2:45 PM	063-AGR	EFFECTS OF SOIL MANAGEMENT PRACTICES ON REHABILITATING COMPACTED URBAN SOILS Diksha Tamang*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): YujuanChen, De'Etra Young, Jianwei Li, Bharat Pokharel, Dafeng Hui
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3:00 PM	077-AGR	EVALUATION OF FUNGICIDES AND BIOFUNGICIDES FOR MANAGING BOTRYOSPHERIA DOTHIDEA CANKER IN REDBUD Pratima Subedi*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Fulya Baysal Gurel
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3:15 PM	079-AGR	EVALUATION OF ZUCCHINI (CUCURBITA PEPO VAR. DUNJA) YIELD GROWN IN VARIOUS COVER CROPS AND TERMINATION METHODS IN ORGANIC MANAGEMENT SYSTEMS Sai Prakash Naroju*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Dilip Nandwani
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3:30 PM	091-AGR	HIGH-PRESSURE PROCESSING, MILD HEAT, AND CARVACROL FOR INACTIVATION OF NON-TYPHOIDAL SALMONELLA SEROVARS IN BUFFERED ENVIRONMENT
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Junicé Sibley* Ranju Kafle. Cooperative Extension, College of Agriculture. Advisor(s): Aliyar Fouladkhah

3:45 PM 139-AGR **OPTIMIZING THE SPATIAL ARRANGEMENT OF INSECTARY PLANTS FOR ENHANCING ARTHROPOD PEST MANAGEMENT IN VEGETABLE PRODUCTION**

Manju Yogi*. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Kaushalya GAmarasekare, Binita Sigdel

4:00 PM 201-AGR **ULTRAVIOLET C (UV-C) - NOVEL APPROACH FOR MITIGATING AIRBORNE RISK IN FOOD PROCESSING FACILITIES**

Housyn Mahmoud. Agricultural Sciences and Environmental, College of Agriculture. Advisor(s): Ankit Patras

**Denotes Presenters*

PRESENTATION SCHEDULES

TUESDAY, MARCH 25, 2025

COLLEGE OF ENGINEERING

ORAL PRESENTATIONS - RSP 163

9:00 AM 040-ENGR **COMPUTATIONAL MODEL FOR PREDICTING POLYMER DEGRADATION AND ACCELERATED AGING**

Shelton Hawkins*. Mechanical and Manufacturing Engineering, College of Engineering. Advisor(s): Mohammad Habibi, Landon Onyebueke

9:15 AM 067-ENGR **ELIMINATING JERKING IN ZERO-TURN MOBILITY: A UNIBALL WHEEL DESIGN APPROACH**

Jake Scott*. Mechanical and Manufacturing Engineering, College of Engineering. Advisor(s): Mohammad Habibi

9:30 AM 135-ENGR **OPTIMIZING FLUID POWER FOR HIGH-EFFICIENCY VEHICLE**

Courtney Krechel* Luc Lemassi*. Mechanical and Manufacturing Engineering, College of Engineering. Advisor(s): Mohammad Habibi

9:45 AM 163-ENGR **SIMPLIFYING COLLEGE REGISTRATION PROCESS WITH AN AI CHATBOT**

Emily Bodude* Ilse Martinez* Bradley Shirling*. Computer Science, College of Engineering. Advisor(s): Caleb Vatrak

10:00 AM 011-ENGR **A NOVEL CLEAN BIOPOLYMER-BASED ADDITIVE TO IMPROVE MECHANICAL AND MICROSTRUCTURAL PROPERTIES OF FINE-GRAINED CONSTRUCTION AND DEMOLITION WASTE**

Beatrice Magombana*. Civil and Architectural Engineering, College of Engineering. Advisor(s): Lin Li, Shihui Liu

10:15 AM 039-ENGR **COMPREHENSIVE LITERATURE AND PRELIMINARY OPTIMIZATION OF ADAPTIVE SIGNAL SYSTEM THROUGH AI BASED ON DIGITAL TWIN MODELLING.**

Therezia Matongo*. Civil and Architectural Engineering, College of Engineering. Advisor(s): Deo Chimba

10:45 AM 071-ENGR **ENHANCING PVDF-TrFE PROPERTIES WITH Fe₃O₄ VIA ELECTROSPINNING FOR MULTIFERROIC APPLICATIONS**

Joshua Adjei - Yeboah*. Center of Excellence: Information Systems and Engineering Management, College of Engineering. Advisor(s): Richard Mu, Fatima Tuz Zahra, Akira Ueda, Lei Zhu, Axel Hoffmann

11:00 AM 080-ENGR **EXPLORING THE CAPABILITIES OF ESRI ROADS AND HIGHWAYS TO BUILD A MASTER ROAD NETWORK**

		Sandeep Bist*. Civil and Architectural Engineering, College of Engineering. Advisor(s): Deo Chimba
11:15 AM	118-ENGR	MACHINE LEARNING-BASED ANALYSIS OF CRASH FREQUENCY AT RAILROAD GRADE CROSSINGS Erickson Senkondo*. Civil and Architectural Engineering, College of Engineering. Advisor(s): Deo Chimba
11:30 AM	197-ENGR	TIME OPTIMIZATION FOR TRAFFIC SIGNAL CONTROL USING GENETIC ALGORITHM Jeannine Mbabazi*. Civil and Architectural Engineering, College of Engineering. Advisor(s): Deo Chimba
11:45 AM	206-ENGR	USING AI AND MACHINE LEARNING TO ENHANCE THE SAFETY AND OPERATIONAL EFFICIENCY OF RAILROAD- HIGHWAY CROSSINGS Masanja Madalo*. Civil and Architectural Engineering, College of Engineering. Advisor(s): Deo Chimba

COLLEGE OF LIFE AND PHYSICAL SCIENCES

ORAL PRESENTATIONS - RSP 163

1:00 PM	026-LIPS	BIOPHYSICAL CHARACTERIZATION OF AUREIN: INSIGHTS INTO ITS DaCarlos Street*. Biological Sciences, College of Life Sciences. Advisor(s): Bashiyar
1:15 PM	007-LIPS	"THE ROLE OF IMMUNE CELLS AND FIBROBLAST IN MOUSE MYOCARDIAL INFARCTED MODULE: DYNAMICS OF INFLAMMATION AND TISSUE REPAIR" Cecilia Koko*. Biological Sciences, College of Life Sciences. Advisor(s): Saraswati Sarika, Cooney, Kimberly
1:30 PM	061-LIPS	EFFECTS OF NO-TILL AND REDUCED TILLAGE PRACTICES ON SOIL ORGANIC CARBON IN CROPLANDS: A COMPREHENSIVE MEGA-ANALYSIS Lovish Kasrija*. Biological Sciences, College of Life Sciences. Advisor(s): Dafeng Hui
1:45 PM	068-LIPS	ELUCIDATING THE ROLE OF SFRP2 IN MODULATING KIDNEY FIBROSIS Delany Bradford*. Biological Sciences, College of Life Sciences. Advisor(s): Sarika Saraswati, Kim Cooney, PhD
2:00 PM	114-LIPS	ISOLATING NOVEL ENZYMES AND MICROORGANISMS FROM YELLOWSTONE NATIONAL PARK FOR USE IN FOOD WASTE DEGRADATION. Shannon Jeffries*. Biological Sciences, College of Life Sciences. Advisor(s): Joshua Ohair
2:15 PM	124-LIPS	METRO NASHVILLE PUBLIC SCHOOLS FOOD WASTE COLLECTION AND ANALYSIS FOR DOWNSTREAM BIOCONVERSION Edreshia Bowles*. Biological Sciences, College of Life Sciences. Advisor(s): Joshua Ohair
2:45 PM	128-LIPS	MICROWAVE-ASSISTED SYNTHESIS AND SURFACE CHARACTERIZATION OF GRAPHENE OXIDE- ANTIMONY TRIOXIDE NANOCOMPOSITES FOR ASCORBIC ACID ELECTROCHEMICAL SENSOR Samir Mallick*. Chemistry, College of Life Sciences. Advisor(s): Mulugeta Wayu
3:00 PM	132-LIPS	NUCLEIC ACID-LINKED IMMUNE-SANDWICH ASSAY (NULISA): A DOUBLE-CAPTURE MECHANISM ACHIEVING ATTOMOLAR SENSITIVITY FOR LIQUID BIOPSY APPLICATIONS

Sadiye Aras* Nevein Soliman, Roud Alamri, Sammatha Stiff. Biological Sciences, College of Life Sciences. Advisor(s): Xiaofei Wang

3:15 PM 147-LIPS **POVIDONE IODINE EFFECTS ON CHICKEN EMBRYONIC DEVELOPMENT**
Nevein (Vaana) Soliman* Sammatha Stiff, Rhia Nelson. Biological Sciences, College of Life Sciences. Advisor(s): Xiaofei Wang

3:30 PM 154-LIPS **REGIOSELECTIVE N-ALLYLATION AND C-ALLYLATION BY PD-CATALYZED CROSS-COUPPLING OF INDOLE WITH POTASSIUM ALLYLTRIFLUOROBORATE**
Milton Kumar Kundu* Md Shahin Reza. Chemistry, College of Life Sciences. Advisor(s): Mohammad Al-Masum

3:45 PM 160-LIPS **ROLE OF TOLL-LIKE RECEPTORS IN TRIBUTYLTIN STIMULATION OF TUMOR NECROSIS FACTOR-A PRODUCTION BY HUMAN IMMUNE CELLS**
Latoya Daniel* Aleshia Seaton-Terry, Quinn Hudson. Chemistry, College of Life Sciences. Advisor(s): Margaret Whalen

**Denotes Presenters*

WEDNESDAY, MARCH 26, 2025

COLLEGE OF HEALTH SCIENCES

GRADUATE ORAL PRESENTATIONS - RSP 163

9:00 AM 179-LIB **THE EFFECTS OF ADVERSE CHILDHOOD EXPERIENCE ON EDUCATIONAL OUTCOMES**
Chimiah Trapp*. Sociology, College of Liberal Arts. Advisor(s): Roger Klomegah

9:15 AM 115-HS **KEY FACTORS INFLUENCING JOB SATISFACTION FOR PHYSICAL THERAPISTS IN THE EMERGENCY DEPARTMENT: A SYSTEMATIC**
Destiny AkinngabeYes, Nhadya cambridgeYes, Nico FeichkoYes, Nicole PennellYes, Deshaunte RolleYes, , , . Physical Therapy, College of Health Sciences. Advisor(s): KarenSmith, ,,,

9:30 AM 173-HS **TAKING THE CLINIC TO THE THEATRE**
Kendall Mitchell* Kamyryn Collier*. Speech Pathology and Audiology, College of Health Sciences. Advisor(s): Iris Johnson-Arnold
