2019 UNIVERSITY EXPOSITION
FRIDAY, MARCH 22

FACULTY POSTERS


101 Northwest Flow of Groundwater within the Overall Creek Watershed, Rutherford County, Tennessee. Mark Abolins, Faculty, Geosciences; Albert Ogden, Geosciences; Josh Upham, Grad student, Geosciences; Leanna Davis, Geosciences

102 American Consultants and the Marketization of Television News in the United Kingdom in the 1990s. Madeleine Liseblad, Faculty, Journalism and Strategic Media

103 A Presumed Media Influence Exploration of #MeToo Tweets During the Ford-Kavanaugh Hearing. Ken Blake, Faculty, Media and Communication; Tricia Farwell, Faculty, Media and Communication; Valen Wilcox, Grad student, Media and Communication; Jennifer Woodard, Faculty, Media and Communication

UNDERGRADUATE POSTERS

300 Said in the Dark, Heard in the Daylight: Unearthing the Secrets of the 1921 Greenwood Massacre. Christopher Hyde, Student, English; Laura Dubek (Faculty sponsor) English

301 Facilitating Neural Networks for Multi-Task Learning in Partially and Non-Observable Environments. Lucas Remedios, Student, Computer Science; Joshua Phillips, (author/Faculty Sponsor), Computer Science

302 Food Security Status of College Students Attending a Moderate-Sized University. Korissa Hobbs, Student, Human Sciences; Elizabeth Smith, (author/Faculty Sponsor), Human Sciences; Chandra Story, Faculty, Health and Human Performance; Ying Jin, Faculty, Psychology

303 The Effects of Divalent Cations on the ATPase Activity of Topoisomerase II. Alexis Brimmingham, Student, Chemistry; Donald Burden, (author/Faculty Sponsor), Chemistry

304 Probing the Differences in the Emission Profiles of JUUL Electronic cigarettes Based on Nicotine and Nicotine Salts. Kittichoti Simakorn, Student, Chemistry; Ngee Chong (Faculty sponsor) Chemistry

305 Relationships between Skin Carotenoids, Body Mass Index, and Fruit/Vegetable Intake. Daniela Vega Little, Student, Human Sciences; Elizabeth Smith, (author/Faculty Sponsor), Human Sciences; Janet Colson, Faculty, Human Sciences

306 N-Substituted Azaaurones: Synthesis and Photochemistry. Asfah Mohammed, Student, Chemistry; Scott Handy (Faculty sponsor) Chemistry

307 The Relationship between Sexual Behavior and Substance Use among Tennessee High School. Tatiyanna Sanders, Jasmine Williams, Ashley Mallard (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

308 The Effects that Memory has on Chamulas. Kelly Parker, Student, Media and Communication; Rebekka King (Faculty sponsor) Religious Studies

309 Examining the Relationship Between Substance Abuse and Violent Behavior Among High School Students in the U.S. Seneka Robertson, Chelsea Cox, Kiyanna Taylor (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

310 Dimensional Attention Learning For Working Memory. Ngozi Omatu, Student, Biology; Joshua Phillips (Faculty sponsor) Computational Science

311 Caenorhabditis elegans as an Infection Model for the Novel Intracellular Bacterium Candidatus Berkelia cookevillensis. Chelsey Molina, Student, Biology; Desta Kidane, Grad student, Biology; Paola Molina, Grad student, Biology; Anthony Farone, (author/Faculty Sponsor), Biology; Mary B. Farone, Faculty, Biology

312 Is Gratitude the Reason Mindful Couples are Happier? Robyn Sessler, Student, Psychology; Cameron Gordon (Faculty sponsor) Psychology

313 Illuminating Structural Differences in Donor-Pi-Acceptor Dyes with (Thio)barbituric Acid Acceptors. Gabriell Gowirtsman, Student, Chemistry; Darshit Patel, Student, Chemistry; Anna Pietrzak, Visiting scholar, Chemistry; Andrienne Friedli, (author/Faculty Sponsor), Chemistry

314 Modeling the PINK1/Parkin Signaling Pathway. Neal Halper, Student, Mathematics; Rachel Leander (Faculty sponsor) Mathematics

View full abstracts on your mobile using the QR code or visit http://www.mtsu.edu/scholarsweek/
315 Intrasexual Behaviors in the Nonnative Mediterranean House Gecko, *Hemitragus tigrinus*. Clinton Warren, Student, Biology; Matthew Klukowski (Faculty sponsor) Biology

316 Relationship between Income and Food Insecurity in African American and White College Students. Naiya Drayton, Student, Biology; Daniel Bryant, Grad student, Biology; Rajarshi Ghosh, Grad student, Biology; Shannon Smith, Grad student, Biology; Paul Kline, Faculty, Chemistry; Anthony Farone, (author/Faculty Sponsor), Biology

317 Analysis of Bioactive Crude Polysaccharide Composition in White and Red American Ginseng (*Panax Quinquefolius*) Roots. Michael Dixon-Morgan, Student, Biology; Gurvan Tharay, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

318 Preaching to the Choir: 1906 Atlanta. Jason Smith, Student, English; Laura Dubek (Faculty sponsor) English

319 Spider Silk: A Brief Overview. Autumn Trail, Student, Textiles, Merchandising, and Design; Rick Cottle (Faculty sponsor) Textiles, Merchandising, and Design

320 Hands Up, Don’t Shoot: The Massacre in 1968 Orangeburg, South Carolina. Grace Cade, Student, English; Laura Dubek (Faculty sponsor) English

321 The Relationship Between Drinking Alcohol Before Sex and Being Physically Forced To Have Sex. Kiana Thompson, Naiya Drayton (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

322 Validation and Annotation of Novel Gender-related *Cryptococcus neoformans* Genes Identified by RNA Sequencing. Marissa Turner, Student, Biology; Madonna Ghobrial, Student, Biology; Valerie Risk, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology

323 Analysis of Ginsenoside Content in Tennessee Wild Ginseng by Optimized Standard CODEX Method and High Performance Liquid Chromatography (HPLC). Oscar Valenzuela, Student, Chemistry; Yuhang Guo, Visiting scholar, Agriculture; Ying Gao, Faculty, Agriculture; Mengliang Zhang, (author/Faculty Sponsor), Chemistry

324 Fluorescent Tagging of Genomic Parkin in Human Osteosarcoma Cells Using CRISPR Technology. Gabriella Morin, Student, Biology; Jiwoo Park, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology

325 Whole Cell Biocatalysis of Major Ginsenosides in Ginseng Beer Using *Saccharomyces* spp. and *Lactobacillus* spp. Caldwell Charlet, Jordan Bevill, (Students, Agriculture); Seokmo Ku (Faculty sponsor) Agribusiness and Agriscience

326 One Egg Over-Medium: Applying Marshal McLuhan’s Theory to the "Instagram Egg". Alea Hollandsworth, Student, Communication Studies; Patrick Richey (Faculty sponsor) Communication Studies and Organizational Communication

327 Augmented Reality to Improve Student STEM Success. Myranda Useiton, Student, Chemistry; Levi Madden, Student, Computer Science; Neal McClain, Staff, James E. Walker Library - Systems Department; Andrienne Friedli, Faculty, Chemistry; John Wallin, Faculty, Computational Science; Amy Phelps (Faculty sponsor) Chemistry

328 Examining SNF3’s Role in the Virulence of *Cryptococcus neoformans*. Prianka Griggs, Student, Biology; Erin McClelland (Faculty sponsor) Biology

329 Châtiment. Stephanie Bottum, Student, Theatre; Claudia Barnett (Faculty sponsor) English

330 Insight into Intereelationships among Density, Viscosity, Crystallinity, and Chemical Composition within Hypocrystalline Lavas, Mt. Hood Volcano, Oregon. Abigail Choisser, Student, Geosciences; Warner Cribb, (author/Faculty Sponsor), Geosciences

331 Holy Week Uprising and the Legacy of Martin Luther King, 1968-2019. Siera Ransom, Student, Health and Human Performance; Laura Dubek (Faculty sponsor) English

332 A Social Network Analysis of Introductory Biology Students’ In- and Out-of-Class Study Group Interactions. Gina Bishara, Student, Biology; Joshua Reid, Grad student, Mathematics and Science Education; Grant Gardner (Faculty sponsor) Biology

333 Mathematical Modeling of Cellular Growth to Maintain Cell Traits. Jasmin Laurel, Student, Mathematics; Rachel Leander (Faculty sponsor) Mathematics

334 CRISPR-based Knock-in of BCAT-deficient *Cryptococcus neoformans*. Bethany Poff, Student, Biology; Niah Frantzen, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology

335 Nucleophilic Substitution Reactions of [closo-B10H8-1,10-(IPh)2]. Tegan Schafer, Student, Chemistry; Mustapha Abdulmojeed, Grad student, Chemistry; Anna Pietrzak, Visiting Scholar, Chemistry; Andrienne Friedli, (author/Faculty Sponsor), Chemistry; Piotr Kasynski, Faculty, Chemistry

336 *Cronobacter sakazakii*, a Possible Intracellular Bacterium in *Acanthamoeba polyphaga*. Atia Ahmed, Student, Biology; Mary Farone (Faculty sponsor) Biology

337 Improved Electron Field Emission from Vertically Aligned Carbon Nanotubes Synthesized on Stainless Steel Substrate. Matthew Kurilich, Student, Physics and Astronomy; Suman Neupane (Faculty sponsor) Physics and Astronomy

338 Developing a Method to Analyze Protein Protein interaction in *C. elegans*. Jessica Rodriguez, Neal Halper, (Students, Chemistry); Justin Miller (Faculty sponsor) Chemistry

339 Assessment of Pesticide Impacts on Soil Microbial Viability Using Fluorescence, Nitrate, and Carbon Dioxide Assays. Maria Fernanda Laureano Tosates Coibra, Student, Chemistry; Zachary Forbes, Student, Biology; Kelsie Summers, Student, Biology; Cameron Oldham, Student, Biology; Erik Manovic, Student, Chemistry; Ilija Zecevic, Student, Chemistry; John DiVincenzo, (author/Faculty Sponsor), Chemistry

340 MTSU Rover Team: Human-Powered Exploration. Kylan Burse, Student, Engineering Technology; Saeed Foroudastan (Faculty sponsor) Engineering Technology

341 Early and Late Season Kudzu (*Pueraria montana var. lobata*) Age Variability Effects on Total and Nutrient-specific in situ Rumen Degradation. Joseph Gulizia, Student, Agriculture; Kevin Downs (Faculty sponsor) Agribusiness and Agriscience

342 Comparative Ginsenoside Analysis of Red and White American Ginseng (*Panax quinquefolius*) Roots by HPLC-CAD. George Schroeder, Student, Biology; Rajarshi Ghosh, Grad student, Chemistry; John DuBois (Faculty sponsor) Biology

343 A Comparative Approach of Virtual Curation and Metric Analysis of Human Skeletal Remains. Regan Edwards, Student, Biology; Devin Adcox, Student, Sociology and Anthropology; Hannah Newcomb, Student, Sociology and Anthropology; Tiffany Saul (Faculty sponsor) Sociology and Anthropology

344 Synthesis and Size Dependent Magnetic Properties of Iron Oxide Nanoparticles. Isaiah Sterkel, Student, Physics and Astronomy; Saeed Kamali, Faculty, Physics and Astronomy; Suman Neupane, (author/Faculty Sponsor), Physics and Astronomy

345 Why Perceived Body Image may be Key to Addressing Obesity among High School Students in the United States. Aundria McCadney, Akira Jones, Kianna Garner (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

346 How Machiavelli’s *The Prince* Relates to Incumbent Elections.
347 The Effect of Elicitor Stimulation on Industrial Hemp (Cannabis sativa) Varieties in a Hydroponic System. Rachel Bailey, Student, Biology; John DuBois (Faculty sponsor) Biology

348 Fluorescent-Tagging of Genomic PINK1 in Human Osteosarcoma Cells Using CRISPR/Cas9 Technology. Hannah Jones, Charles Teeple (Students, Chemistry); David Nelson, Faculty, Biology; Rebecca Seipel-Thieman, (author/Faculty Sponsor), Biology

350 Chaos in Cincinnati: An Examination of a 2001 Race Riot in my Hometown. Maddison Falter, Student, English; Laura Dubek (Faculty sponsor) English

351 Solvatochromism in a Series of Dyes with Rhodanine or Tetracyanofuran Acceptors. Wesley Kirkland, Student, Chemistry; Mary Sadek, Student, Chemistry; Anna Pietrzak, Student, Chemistry; Andrienne Friedli, (author/Faculty Sponsor), Chemistry

352 The Endosymbiotic Bacterial Community of the Causative Agent of White Nose Syndrome, (Pseudojymnoascus destructans) of Bats. Ashton Reece, Student, Biology; Kylie Moe, Student, Biology; Matt Grisinik, Grad student, Biology; Donald Walker, (author/Faculty Sponsor), Biology

353 Fungal Endophyte Isolation and Identification from Vitis aestivalis Norton/Cynthiana Grapevines from Virginia and New York. Zachary Lay, Student, Biology; John Dubois, Faculty, Biology; Tony Johnston, Faculty, Agriculture; Rebecca Seipel-Thieman, (author/Faculty Sponsor), Biology


355 The Past is Prologue: What 1957 Little Rock Teaches Us about Our Schools Today. Skylar Smith, Student, English; Laura Dubek (Faculty sponsor) English

356 Reduction of Benzils (1,2 diketone) to Benzoins: Reactivity and Regioselectivity. Kerri Harger, Student, Biology; Scott Handy (Faculty sponsor) Chemistry

357 Remember Your Retiquette. Jessica Wright, Student, Political Science; Patrick Richey (Faculty sponsor) Communication Studies and Organizational Communication

358 Gene Discovery and Annotation of Gardnerella vaginalis, a Bacterium Associated with Bacterial Vaginosis and Pre-term Labor. Marina Ibrahim, Student, Biology; Rebecca Seipel-Thieman, (author/Faculty Sponsor), Biology; Tim Miller, Faculty, Computational Science

359 Using CRISPR to create reconstituted strains in C. neoformans BCAT gene. Madison Childers, Student, Biology; Erin McClelland, (author/Faculty Sponsor), Biology

360 Somatic Embryogenesis from Vitis aestivalis ‘Norton/Cynthiana’ Grape Tissue Callus Derived from Anther and Ovary Explant Tissues. Rebekkah Riley, Student, Biology; Sara Moore, Student, Biology; John DuBois (Faculty sponsor) Biology

361 Trayvon Martin: A Contemporary Narrative of American Race Relations. Laurel O’Neill, Student, English; Laura Dubek (Faculty sponsor) English

362 Synthesis of a Novel Phosphorus Flame Retardant Incorporating Poly(Tetramethylene Oxide). Nolan Woods, Student, Chemistry; Dwight Patterson (Faculty sponsor) Chemistry

363 Link between Prosody Sensitivity and Reading Comprehension: A Combined ERP and Individual Difference Approach. Brenna Wolfe, Student, Chemistry; Timothy Nelson, Faculty, Literature Studies; Cyril Magne, (author/Faculty Sponsor), Psychology

364 #SayHerName and Black Female Empowerment. Ayauna Blair, Student, Africana Studies and English; Laura Dubek (Faculty sponsor) English

366 Examining the Relationship between Bullying and Suicide in High Schools. Tatum England, Destine Gilliland, Abike Egbeniyi, Miaya Edwards (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

367 The Role of Electron-Electron Interactions in Metal-Insulator Transitions. Aric Moilanen, Student, Physics and Astronomy; Hanna Terletska (Faculty sponsor) Physics and Astronomy

368 Is Physical Activity a Major Factor for Obesity Among High School Students in the US Compared to Diet? Martravius Randall, Sara Almoumineen, Nimo Mohamed, Waad Alhazmi (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

369 Analyzing Students’ Understanding of Isomorphism. Marlin Kelley, Student, Mathematics; Jennifer Lovett, Faculty, Mathematics; James Hart, Faculty, Mathematics; Jennifer Lovett (Faculty sponsor) Mathematics

370 The Relationship between Feeling Unsafe at School and Depression among Tennessee High School Students. Tahirah Qadir, Allison Poteete, Macy Taylor, Melissa Davis, Felicia Pursley (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

371 History Lessons: The Scottsboro Boys, Powell v Alabama, and Civil Rights. Kiana Carter, Student, English; Jonathan Mitchell, Student, English; Laura Dubek (Faculty sponsor) English

372 Designing a Mammalian Macrophage:Cn culture System to Study Changes in Gene Expression in Host Macrophages. Jada Murriel, Student, Biology; David Nelson (Faculty sponsor) Biology

373 Identifying of Novel Gender-related Virulence Genes in Cryptococcus neoformans. Zenan Barwari, Student, Biology; Rebecca Seipel-Thieman (Faculty sponsor) Biology

374 Evaluation of a Kid-Friendly Chili Recipe in a National School Lunch Program Participating School. Melissa Austin, Student, Health Sciences; Lindsey Cherry, Student, Human Sciences; Lisa Sheehan-Smith (Faculty sponsor) Human Sciences

375 Investigating the Ability of Spice Extracts to Inhibit Bacterial Growth and Histamine Accumulation Associated with Scombroid Food Poisoning. Merna Ghobrial, Student, Biology; Rebecca Seipel-Thieman, (author/Faculty Sponsor), Biology; Mary Farone, Faculty, Biology

376 Studying the Relationship between Bullying and Suicide in High Schools. Tatum England, Destine Gilliland, Abike Egbeniyi, Miaya Edwards (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance

377 Identification of Novel Gender-related Virulence Genes in Cryptococcus neoformans. Zenan Barwari, Student, Biology; Rebecca Seipel-Thieman (Faculty sponsor) Biology

378 Synthesis of a Novel Phosphorus Flame Retardant Incorporating Poly(Tetramethylene Oxide). Nolan Woods, Student, Chemistry; Dwight Patterson (Faculty sponsor) Chemistry
381 The Construction and Testing of a Compact Acoustic Experimental Apparatus. Isaac Shirk, Student, Physics and Astronomy; William Robertson (Faculty sponsor) Physics and Astronomy
382 Examining the Role of F56F11.4 in Sperm of Caenorhabditis elegans. Robert Owen, Student, Biology; Lynn Boyd, (author/Faculty Sponsor), Biology
383 Injustice of Freddie Gray. Michael Crawford, Student, Computer Science; Laura Dubek (Faculty sponsor) English
384 Fast Screening of Explosives by Direct Analysis in Real Time Mass Spectrometry. Virginia Benfield, Student, Forensic Science; Jared Frazier, Student, Chemistry; Mengliang Zhang, (author/Faculty Sponsor), Chemistry;
385 Learning from the Student’s Perspective. Sarah Dixon-Morgan, Student, Political Science; Ryan Kostrange (Faculty sponsor) University Studies
386 Race, Bullets, and Videotape: Making Sense of Oscar Grant’s Death. Lily West, Student, English; Laura Dubek (Faculty sponsor) English
387 Novel Gene Verification and Annotation in Clinically-Associated Strains of Cryptococcus neoformans. Daviesha Carter, Student, Biology; Rebecca Seielt-Thiemann, (author/Faculty Sponsor), Biology; Erin McClelland, Faculty, Biology
388 Thermal Desorption DART-MS Analysis of Ignitable Liquids with Chemometrics. Isabella Barnett, Student, Forensic Science; Mengliang Zhang, (author/Faculty Sponsor), Chemistry; Frank Bailey, Faculty, Biology
389 Examining Mindsets about Different Ability Domains Relevant to College. Autumn Martin, Student, Psychology; Ryan Kostrange (Faculty sponsor) Psychology
390 Characterization of the Antifungal Peptoid, AEC5, as a Potential Therapeutic Agent against Cryptococcus neoformans. Sabrina Spicer, Student, Chemistry; Kevin Bicker (Faculty sponsor) Chemistry
391 Heritage or Hate: Questions of Representation and Race in America. Zachary Burns, Student, English; Laura Dubek (Faculty sponsor) English
392 Synthesis of Phosphorous/Nitrogen Mixed Donor Ligands and Their Iron and Cobalt Complexes. Kerosol Bushra, Student, Chemistry; Paeton Poynter, Student, Chemistry; Keying Ding (Faculty sponsor) Chemistry
393 Resisting Invasion: Evaluating the Interaction between Exotic Weevils and Native Gladeecress. Robert Dixon, Student, Biology; Joshua Grinath, (author/Faculty Sponsor), Biology; Matthew Cohen, Staff, Biology; Chris Herlihy, Faculty, Biology
394 CRISPR-based Genetic Modification for a Flightless Housefly (Musca domestica). Ansley Morgan, Student, Biology; Rebecca Seielt-Thiemann (Faculty sponsor) Biology
395 The Village: Cultivating Active Citizenship among Undergraduate Social Work Students. Penelope Storm, Augusta Hyberger, Kaylee Lindgren, Chasidy Lauderdale (Students, Social Work); Justin Bucchio (Faculty sponsor) Social Work
396 Synthesis of Biologically Active Benzofuranone Molecules Using Acid Catalyzed Friedel-Crafts Cyclization. Matthew Spock, Student, Chemistry; Scott Handy (Faculty sponsor) Chemistry
397 Restoration and Preservation of Irish Tower Houses: A Regional Study Conducted in County Tipperary, Ireland. Matthew Cureton, Student, Management; Stacey Graham (Faculty sponsor) History
398 Research about Loss Reserving Method in PandC Insurance. Chuanlong Zhang, Student, Mathematics; Don Hong (Faculty sponsor) Mathematics
399 Lights, Camera, Action: The Birth of a Nation and the Forrest Riot. Wendell Smith, Student, English; Laura Dubek (Faculty sponsor) English
400 Using CRISPR to Knock out a Gene Encoding a Virulence-related Non-Coding RNA in Trout Pathogen Flavobacterium psychrophilum. Alaa Mohammed, Chase Burton (Students, Biology); Rebecca Seielt-Thiemann (Faculty sponsor) Biology
401 Isolation of 23B as a Potential Therapeutic Agent against Cryptococcus neoformans. Joseph Rosen, Student, Biology; Erin McClelland (Faculty sponsor) Biology and Scott Handy (Faculty sponsor) Chemistry

GRADUATE POSTERS

500 Examining News Media References of Mental Illness in the Wake of Mass Shooting Events Occurring in the United States. Joshua Hollilbusch, Student, Media and Communication; Jason Reineke (Faculty sponsor) Journalism
501 Language of Racial Reconciliation and Social Justice: Corpus-Based Analysis and Implications for Teaching. Jennifer Grow, Student, Literacy Studies; Mohammed Albakry, (author/Faculty Sponsor), Literacy Studies
502 Relationship between Phonology, Prosody, and Reading Skills. Jessica Steele, Student, Psychology; Tess Fotidzis, Student, Literacy Studies; Cyrille Magne (Faculty sponsor) Psychology
503 The Effects of Thermoelectric Cooling on Solar Panels. Elijah Little, Student, Engineering Technology; Charles Perry (Faculty sponsor) Engineering Technology
504 Workload and Kinematics of Horses during Underwater Treadmill Exercise. Elysia Arnold, Student, Horse Science; Holly Spooner, Faculty, Horse Science; Naomi Minardi, Industry collaborator: Equine PerforMAX, Horse Science; Rhonda Hoffman, Faculty, Horse Science; Holly Spooner (Faculty sponsor) Horse Science
505 A Prussian Blue Zinc Oxide Carbon Nanotube Composite for Rapid Hydrogen Peroxide Assaying. Raja Pandey, Student, Chemistry; Yuhang Guo, Visiting scholar, Biology; Ying Gao, Faculty, Agriculture; Charles Chusuei, (author/Faculty Sponsor), Chemistry;
506 Characterization of Mitochondrial YME1L Protease Oxidative Stress-Induced Conformational State. Chad Brambley, Student, Molecular Biosciences; Justin Marsee, Student, Chemistry; Neal Halper, Undergrad student, Chemistry; Justin Miller, (author/Faculty Sponsor), Chemistry
507 Withdrawn
508 Civic Participation and News Industry Disruption: Assessing Societal Effects of Shifting Business Models. Laura Brown, Student, Journalism and Strategic Media; Ken Blake (Faculty sponsor) Communication Studies and Organizational Communication
509 Genome-wide Association Study Identifies Genomic Loci Affecting Fillet Firmness and Protein Content in Rainbow Trout. Ali Ali, Student, Biology; Rafet Al Tobasei, Postdoctoral fellow; Daniela Lourence; Tim Leeds; Brett Kenney; Mohamed Salem, (author/Faculty Sponsor), Biology
510 Security analysis of Role-based access control methods in NoSQL Databases. Heena Khan, Student, Computer Science; Dr. Suk Seo (Faculty sponsor) Computer Science
511 New Uses for Recycled Wastewater in Murfreesboro. Nova Sullo, Student, Engineering Technology; Charles Perry (Faculty sponsor) Engineering Technology
512 The Forgotten Resource: Analyzing the Architecture of Historic Roller Rinks. Olivia Lane Tillner, Student, History; Carroll Van West (Faculty sponsor) History
513 Identification of Antifungal Peptoids towards Candida albicans via High Throughput PLAD Assay. Robert Green, Student, Molecular Biosciences; Kevin Bicker (Faculty sponsor) Chemistry
514 AngularJS and ReactJS: Paradigm for Front-End Web Development. Charles Tetteh-Quaye, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science
515 Evaluating Physical Ergonomics in MTSU Classrooms. Brianna
Building a Framework for Image Translation using the YOLO Method. Muhammad Abed, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science

Withdrawn

Phonocardiography Data Compression using Discrete Wavelet Transform. Md Tanzil Hoque Chowdhury, Student, Computational Science; Khem Poudel, Student, Computational Science; Dr. Yating Hu, (author/Faculty Sponsor), Engineering Technology

Anti-inflammatory Potential of Aurones in a Murine Macrophage Cell Line. Shelby Lowrie, Student, Biology; Doha Ahmed, Undergrad student, Biology; Arjun Kaffe, Student, Chemistry; Matthew Fuller, Student, Biology; Daniel Bryant, Student, Biology; Anthony Farone (Faculty sponsor) Biology

Tracking the Melting of Ice through Coastal Antarctica: A Look into Antarctic Climate Shift. Gabrielle Armour, Student, Geosciences; Racha El Kadiri (Faculty sponsor) Geosciences

News Feeds and Salience: How Social Media Use Feeds News Awareness. Benjamin Burnley, Student, Media and Communication; Jason Reineke, (author/Faculty Sponsor), Media and Communication; Kenneth Blake, Faculty, Journalism and Strategic Media

Calculus II Students’ Definitions of Function: Attention to Correspondence. Samuel Reed, Student, Mathematics and Science Education; Candice Quinn, Student, Mathematics and Science Education; Jennifer Lovett (Faculty sponsor) Mathematics

A Human-Following Robot for Household Fall Detection. Simeon Adebola, Student, Engineering Technology; Lei Miao (Faculty sponsor) Engineering Technology

Relationship among Response to Instruction and Intervention (RtI2) and Job Satisfaction of Tennessee School Psychologists. Mark Warner, Student, Psychology; Monica Wallace (Faculty sponsor) Psychology

Application of Blockchain Technology to the Microgrids. Manoj Basnet, Student, Engineering Technology; Dr. Charles Perry (Faculty sponsor) Engineering Technology

Creation of an Immersive Experience for Virtual Reality. Valentina Khoruzhaya, Student, Recording Industry; John Merchant (Faculty sponsor) Recording Industry

Industry’s Future for 3D Printing. Christopher Winfrey, Student, Professional Science; Charles Perry (Faculty sponsor) Professional Science

Exploring Sound Field Microphones for Use in the Creation of Stereo, Surround and Immersive Content. Michael Bevers, Student, Recording Industry; John Hill (Faculty sponsor) Recording Industry

Measurement invariance between Classical Test Theory (CTT) and Item Response Theory (IRT) on Reading Comprehension. Ping Wang, Student, Literacy Studies; Jwa Kim, (author/Faculty Sponsor), Literacy Studies; Casey Brasher, Faculty, Elementary and Special Education; Amy Elleman, Faculty, Literacy Studies

A RegTech Research: Better the Insurance Information Regulation System Using Machine Learning and Web Technologies. Jie Long, Student, Mathematics; Wenwen Qin, Student, Mathematics; Lu Xiong (Faculty sponsor) Mathematics

The Influence of Regionalism in Popular Recording: Spotlight on Memphis and Nashville. Ross Rice, Student, Recording Industry; William Crabtree (Faculty sponsor) Recording Industry

Gut Microbiome Analysis of Fast- and Slow-growing Rainbow Trout (Onchorhyncus mykiss). Pratima Chapagain, Student, Biology; Brock Arivett, Student, Biology; Mohamed Salem (Faculty sponsor) Biology

Assessing and Harnessing the Full Capabilities of DeltaV Distributed Control System Software. Oluwagbenga Ogunsoto, Student, Engineering Technology; Chong Chen (Faculty sponsor) Engineering Technology

Parallelizing Seam Carving for Content-Aware Image Resizing using OpenSHMEM. Bukola Omotoso, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science

Bloch Surface Wave Excitation using Maximum Length Sequence Gratings. Khem Poudel, Student, Computational Science; William Robertson, (author/Faculty Sponsor), Computer Science

Withdrawn

Cobalt Catalyzed Acceptorless Dehydrogenative Homocoupling of Primary Alcohols to Esters. Bedraj Pandey, Student, Chemistry; Keshav Paudel, Student, Molecular Biosciences; Keying Ding (Faculty sponsor) Chemistry

Waves and Spirals of Teacher Assistant (TA) Change. Tina Carter, Student, Mathematics and Science Education; Anna Grinath, (author/Faculty Sponsor), Mathematics and Science Education

Perceptions of Veterinarians on the Use of Nutritional Supplements in the Horse Industry. Naomi Oliver, Student, Horse Science; Holly Spooner (Faculty sponsor) Horse Science

SAE Mini Baja Project - MTSU EVP Lab. Behrooz Merikhi, Student, Engineering Technology; Brandon Stahl, Undergrad student, Engineering Technology; James Fassnacht, Undergrad student, Engineering Technology; Saeed Foroudastan (Faculty sponsor) Engineering Technology

A Secure Hybrid Password Authentication Method Based on Images and Text. Luis Chunga, Student, Computational Science; Suk Seo (Faculty sponsor) Computational Science

Subversiveness Masculinity in Children’s Animation: Hey Arnold, Avatar: The Last Airbender and The Loud House. Kristen Sales, Student, Media and Communication; Jane Marcellus (Faculty sponsor) Journalism

Preserving Hidden Histories and the Frierson Chapel Historic District. Sarah Williams, Student, History; Quinlan Odom, Student, History; Jessica Smyth, Student, History; Carroll Van West (Faculty sponsor) History

A Chemogenomic Approach to Understanding the Anti-fungal Action of a Bioactive Aurone Compound. Fatmah Alqatani, Student, Molecular Biosciences; Mary Farone, (author/Faculty Sponsor), Biology; Scott Handy, Faculty, Chemistry; Zachary Taylor, Undergrad student, Chemistry

What Every Company Should Consider Before Entering Into an eSports Sponsorship Agreement: A Practitioner Perspective. Mohammed HutHut Alqatani, Student, Health and Human Performance; Brandy Palmer, Student, Health and Human Performance; Steve Estes (Faculty sponsor) Health and Human Performance

Enumeration of a Novel, Intranuclear, Obligate Parasite of Free-Living Amoeba for Further Study of Host–Pathogen Interactions. Kelly Saine, Student, Biology; Mary Farone (Faculty sponsor) Biology

Personal Emergency Response System: Effective Care for the Elderly. Christian Lawrence, Student, Professional Science; Misa Faezipour (Faculty sponsor) Engineering Technology

Undergraduate Psychology Tutoring Attendance: The Effects of Reminder Messages. Meghan Bentley, Student, Psychology; Aimee Holt, (author/Faculty Sponsor), Psychology; Seth Marshall, Faculty, Psychology; Greg Schmidt, Faculty, Psychology

Gendered Space: NASA’s Women in the Media, 1958-1990. Helen Wilds, Student, Media and Communication; Jane Marcellus (Faculty sponsor) Journalism

College and Career Plans of Horse Oriented Youth and Life Skills and Academic Success in First Semester College Students with Previous Agricultural Organization Involvement. Sarah Kenderdine, Student, Horse Science; Holly Spooner (Faculty sponsor) Horse Science
551 Gas Cars vs. Electric Cars. Rymoun Said, Student, Engineering Technology; Charles Perry (Faculty sponsor) Engineering Technology

552 Commemorative Landscapes of Bangladesh: A History of National Identity and Transformation. Md Rahaman, Student, History; Md Rahaman (Faculty sponsor) History

553 Performance Analysis of Reactive Routing Protocols in Infrastructure-less Networks. Parveen Sultana, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science

554 Machine Vision Systems Performance Improvement. Jude Oshiomha, Student, Engineering Technology; Chong Chen (Faculty sponsor) Engineering Technology

555 Customization: Modern-Day Buying and the Effects on Manufacturing and Supply Chain Design. Stephanie Duhe, Student, Professional Science; Charles Perry (Faculty sponsor) Engineering Technology

556 Cation Exchange Reactions and Zinc Chalcogenide Nanocrystals. Adekunle Akinmola, Student, Chemistry; Naily Hussainey, Undergrad student, Chemistry; Hailey D. Hall, Undergrad student, Chemistry; Justin M. Miller, Faculty, Chemistry; Paul Van Patten (Faculty sponsor) Chemistry

557 Zen and the Art of VR Gardening. Alexander Carter, Student, Recording Industry; John Merchant (Faculty sponsor) Recording Industry

558 A Sensor-Level Intrusion Detection System against Internal Replay Attacks in Wireless Sensor Network. Samuel Meagher, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science

559 Fat Supplementation: Rice Bran Oil vs Corn Oil. Morgan Garrick, Student, Horse Science; Holly Spooner, (author/Faculty Sponsor), Horse Science; Rhonda Hoffman, Faculty, Horse Science; John Haffner, Faculty, Horse Science

560 Enabling Hierarchical and Heterogeneous Memory in OpenSHMEM. Robert Smith, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science

561 Aurone as a Fluorescent Probe for the Selective Detection of H2S in Environmental and Biological Systems. Arjun Kaffe, Student, Molecular Biosciences; Shrijana Bhattachar, Student, Molecular Biosciences; Justin Miller, Faculty, Chemistry; Scott Handy, (author/Faculty Sponsor), Chemistry

562 Parameter Estimation for a Fractional FitzHugh-Nagumo Diffusion Model. Kayode Olumoyin, Student, Computational Science; Abdul Khalig (Faculty sponsor) Computational Science

563 Open-Locating-Dominating Sets in an Infinite King's Graph. Robert Dohner, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science

564 Effects of a of a Mediated Field Experience on a Math Content Course for Elementary Teacher Candidates. Sister Cecilia Anne Wanner, Student, Mathematics and Science Education; Alyson Lischka (Faculty sponsor) Mathematics and Science Education

565 Is Integration Enough? An Analysis of Student Responses from an Integrated BioCalculus Task. Joshua Reid, Student, Mathematics and Science Education; Candice Quinn, Student, Mathematics and Science Education; Jeremy Strayer (Faculty sponsor) Mathematics and Science Education

566 Envisioning the End: A Study on Pre-production. Samuel Ventura, Student, Recording Industry; Michael Hanson (Faculty sponsor) Recording Industry

567 Cobalt-Catalyzed Dehydrogenative Coupling of Primary Alcohols with Amines. Keshav Paudel, Student, Molecular Biosciences; Bedraj Pandey, Student, Chemistry; Keying Ding (Faculty sponsor) Chemistry

568 Evaluating Ergonomics in MTSU Classrooms with a Focus on Indoor Environmental Factors. Lorena Jaeger, Student, Engineering Technology; Valentain Vinca, Student, Engineering Technology; Mina Mohebbi (Faculty sponsor) Engineering Technology

569 The Language of Math Textbooks: Linguistic Roadblock or Bridge to Comprehension? Molly Risley, Student, Literacy Studies; Mohammed Albakry, (author/Faculty Sponsor), English

570 Relationship of Immigration Population and Unemployment Rate in U.S. Pattara Jitsopit, Student, Professional Science; Charles Perry (Faculty sponsor) Engineering Technology

571 Mike Hicks Live: Cinematic In-Studio Music Production with Audience Immersion. Jacob Keeer, Student, Recording Industry; Dan Pfeifer (Faculty sponsor) Recording Industry

572 Mycobacterium tuberculosis ClpC1 N-Terminus Domain Is Dispensable for Adaptor Protein-Dependent Allosteric Regulation. Justin Marsee, Student, Chemistry; Justin Miller, (author/Faculty Sponsor), Chemistry

573 Developing Teachers' Core Practice for Teaching Mathematics through Vertical Lesson Study. Jennifer Seat, Student, Mathematics and Science Education; Rongjin Huang, (author/Faculty Sponsor), Mathematics and Science Education; Dovie Kimmis, Faculty, Mathematics and Science Education; Jeremy Winters, Faculty, Elementary and Special Education

574 The Role of Testosterone in the Melanization of Cryptococcus neoformans. Jamila Tucker, Student, Biology; Erin McCleland, (author/Faculty Sponsor), Biology

575 A Comprehensive Analysis of Graph-based Application Partitioning Algorithm for Offloading in Mobile Cloud Computing. Sayali Borase, Student, Computational Science; Suk Seo (Faculty sponsor) Computer Science

576 Characterizing the role of the sperm specific proteasomal subunit RPN-6.2 in Caenorhabditis elegans. Joshua Evers, Student, Biology; Lynn Boyd (Faculty sponsor) Biology

577 Exploring the Complexity and Treatment Implications of the Bidirectional Relationship between Symptoms of Mental Illness and Chronic Disease Progression in a Rare Disease Population. Chanell Haley, Student, Health and Human Performance; Sarah Patrick, Undergrad student, Health and Human Performance; Angie Bowman (Faculty sponsor) Health and Human Performance

578 The Incorporation of a Live Horn Section into Electronic Music Production. Thomas Nixon, Student, Recording Industry; Misty Jones Simpson (Faculty sponsor) Recording Industry

March 25-April 10 – First-place posters exhibited in the Walker Library

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