

## QUEST 2013 – A Forum for Student Scholarship Projects Organized by Sessions

### 8:30 - 9:30 – Session 1 – Posters (Biology) – Ohio Room

- 01     *The Effects of Liquid Latex on the Degradation of Sheep Deoxyribonucleic Acid*  
          1366   JM Guy, CS Annarumo  
              Faculty Sponsor: Heather E. Lorimer, Susan W. Clutter
- 02     *Biological curation of secreted proteins in fungi and animals*  
          1327   Stephanie Frazier  
              Faculty Sponsor: Xiangjia Min
- 03     *Flora of Noble County, Ohio*  
          1258   Alexandria Szakacs  
              Faculty Sponsor: Carl F. Chuey
- 04     *American Medical Student Association (AMSA)*  
          1393   Peter Stamos, Jonathan Guy, Nicole Hartman, Taylor Kress,  
                  Mike Smith, Joelle Ballone  
              Faculty Sponsor: Michael T. Butcher
- 05     *Identification of a Possible Selenite Sensor Protein from Enterobacter sp. YSU*  
          1403   Beatrice Rono  
              Faculty Sponsor: Jonathan J. Caguia
- 06     *Partial DNA Sequence of a plasmid from Enterobacter sp. PC820*  
          1249   Aaron Sweeney, Travis Denmeade  
              Faculty Sponsor: Jonathan J. Caguia
- 07     *Identification of Metal Resistance Genes in a Multimetal Resistant Strain,  
Stenotrophomonas maltophilia OR02 (S. maltophilia 02)*  
          1290   Devon Archinal, Jessica Casterline, Dan O'Neal, Gina Millick  
              Faculty Sponsor: Jonathan J. Caguia
- 08     *Genotypic and Phenotypic Analyses of a Spore Color Penicillium marneffeii Mutant  
generated by Agrobacterium-tumefaciens Mediated Transformation*  
          1298   Evelyn Akpadock  
              Faculty Sponsors: Chester R. Cooper, Aksarakorn Kummasook, Nongnuch  
                                  Vanittanakom
- 09     *Role of the yak1 gene in Morphogenesis and Stress response in Penicillium marneffeii*  
          1301   Sumanun Suwunnakorn  
              Faculty Sponsors: C. R. Cooper, A. Kummasook, N. Vanittanakom
- 10     *Affects of qa-1F on Neurospora crassa Proteomic Response to Quinic Acid*  
          1315   Dana Tirabassi  
              Faculty Sponsors: David K. Asch, Gary Walker
- 11     *Methods to Analyze Agrobacterium-generated Mutants of Penicillium Marneffeii*  
          1295   Sarah Eisnaugle, Joshua Engle  
              Faculty Sponsor: Chester R. Cooper
- 12     *Protein profiles of Neurospora crassa wild type and nit-2 mutant under varying levels  
of nitrogen availability.*  
          1273   Michael Werry  
              Faculty Sponsors: David K. Asch, Gary Walker
- 13     *Proteomic/ functional genomic analysis of myogenesis; from stem cell to functional  
contractile myotubes*  
          1177   Robert Giles  
              Faculty Sponsor: Gary R. Walker
- 14     *Proteomic Analysis of Butanol Fermentation from Concentrated Wood Hydrolysate  
Reveal Clues for the Optimization of the Fermentative Process*

- 1397 Robert DeVita, Estee George, April Chestnut, Aaron Mrvelj, Nina Lenkey, Nicola Accordino  
Faculty Sponsor: Gary R. Walker
- 15 *Mathematical Modeling of Clostridium beijerinckii Fermentation Pathway and Proteomic Analysis of Gene Expression*  
1303 Robert DeVita, Estee George, Sarah Ritchey  
Faculty Sponsor: Gary R. Walker
- 16 *The Utilization of Multipotent Mesenchymal Stromal Cell Transplantations to Improve Fascial Repair*  
1386 Andre Bown  
Faculty Sponsor: Diana L. Fagan
- 17 *Development of Novel Method for Identification of B-cells Producing anti-Staphylococcus aureus Type 5 and 8 Capsular Antibodies*  
1275 Rahul Gaurav  
Faculty Sponsor: Diana L. Fagan
- 18 *The Development of Monoclonal Antibodies from clone ANT8B1G1 against Staphylococcus aureus*  
1337 Manveen Singh  
Faculty Sponsor: Diana L. Fagan
- 19 *Identification of Oxidized Amino Acid Residues in Hen Egg White Lysozyme Treated with a Copper (II)/Hydrogen Peroxide Metal-Catalyzed Oxidation System*  
1086 Cory Muraco  
Faculty Sponsor: Michael A. Serra
- 20 *Disparities of fruit and vegetable access between inner-city vs suburbs*  
1334 Alison Kovach  
Faculty Sponsor: Richard L. Rogers

## **8:30 - 10:00 – Session 2 – Oral Presentations**

### **Applied Behavior Analysis - Jones**

- 01 *Differential Reinforcement of Other Behavior in the Treatment of Inappropriate Loud Vocalizations*  
1183 Zachary F. Vargo  
Faculty Sponsor: Rocio Rosales
- 02 *The Use of Non-Contingent Reinforcement to Decrease the Rate of Disruptive Behavior and Increase the Frequency of Reinforcement Delivery*  
1169 Anthony J. Miller  
Faculty Sponsor: Rocio Rosales
- 03 *Manding for Information Maintained by Social Reinforcement: A Comparison of Prompting Procedures*  
1263 Matthew Swerdan, Z. Vargo, L. Neidlinger  
Faculty Sponsor: Rocio Rosales
- 04 *A Comparison of Procedures to Establish Emergent Intraverbals in Children with Autism Spectrum Disorders*  
1142 Mary Vallinger, Amanda Gillen  
Faculty Sponsor: Rocio Rosales
- 05 *The relationship between methodology reporting and citation rates in nociception in research articles.*  
1319 James Hamilton  
Faculty Sponsors: Melanie Shoup-Knox, Jill Tall
- 06 *Evaluation of a Treatment Package to Decrease Aggressive and Disruptive Behavior in a Classroom Setting*  
1387 Vilmary Placeres

**Communication Studies - Coffelt**

- 01    *Objectification Theory and The Media Portrayal of Female Athlete: A Look At The Consequences*  
         1333 Sarah Scheidemantel  
             Faculty Sponsor: Rebecca M. Curnalia
- 02    *Image Repair Theory: The right way and the wrong way*  
         1229 Shelby Cunningham  
             Faculty Sponsor: Rebecca M. Curnalia
- 03    *Until debt do us part*  
         1389 Amanda Franklin  
             Faculty Sponsor: Rebecca M. Curnalia
- 04    *Leadership styles and ethics of modern women in the workforce: Are the stereotypes deserved?*  
         1383 Elyse Gessler  
             Faculty Sponsor: Rebecca M. Curnalia
- 05    *The Theory of Planned Behavior: Behind prison walls*  
         1163 Margaret E. Gratz  
             Faculty Sponsor: Rebecca M. Curnalia

**Computer Science I - Bresnahan**

- 01    *Sentiment Classification of Movie Reviews Using Naive Bayes and Support Vector Machines*  
         1351 Novi Trisjanjar  
             Faculty Sponsor: Alina Lazar
- 02    *Data Cleansing: Importance and Processes*  
         1405 Prasanna Bhattarai  
             Faculty Sponsor: Alina Lazar
- 03    *Comparison of Fast Learning Large Scale Multi-Class Classification*  
         1209 Aleksandar Jovanovich  
             Faculty Sponsor: Alina Lazar
- 04    *Multi-Cyclic Training Regimens in GraphChi*  
         1185 James Curnalia  
             Faculty Sponsor: Alina Lazar
- 05    *K-means Algorithm using Different Distance Measures*  
         1412 Sravan Kumar Banka, Akhilesh Rao Meesala  
             Faculty Sponsor: Alina Lazar

**Health & Human Services - Humphrey**

- 01    *Leniency in Vaccination Requirements Results in Risks to the Population*  
         1328 Ann Fiest  
             Faculty Sponsor: Richard L. Rogers
- 02    *Mental Health Service Delivery in Northeast Ohio: Assessment of Current Resources and Suggestions for Improved Services*  
         1003 Brittany Yeager  
             Faculty Sponsor: Ronald V. Shaklee
- 03    *Effectiveness of Asthma Education Program in Grades 1-6*  
         1353 Sarah Navarra  
             Faculty Sponsor: Mary L. Yacovone
- 04    *Income-Related Disparities in Primary Care: Are the impoverished causing undue stress on Emergency Departments?*

- 1313 Matthew Ozanich  
*Faculty Sponsor: Richard L. Rogers*
- 05 *Proposed Physiological Mechanisms and Efficacy of Myofascial Release Therapy*  
 1140 Joe Musial  
*Faculty Sponsor: Frank J. Bosso*
- 06 *The Psychoneuroimmunological Response Influence on Cancer Prognosis*  
 1002 Casey Fitch  
*Faculty Sponsor: Amy L. Weaver*

**Math – Hynes (2068)**

- 01 *A Look at the Circles of Apollonius using Complex Analysis*  
 1173 Mitchell Hamidi  
*Faculty Sponsor: Thomas D. Smotzer*
- 02 *Probability of the Heights of Triangles*  
 1078 Frederick Sommers  
*Faculty Sponsor: Thomas D. Smotzer*
- 03 *Exploring Check Digit Error Correction*  
 1396 Ashley Orr  
*Faculty Sponsor: Nathan P. Ritchey*
- 04 *Rubik's Cube Android App*  
 1194 Jarrett Scacchetti  
*Faculty Sponsor: Nathan P. Ritchey*
- 05 *The Kidd Theory*  
 1352 Matthew William Kidd  
*Faculty Sponsor: Regina M. Rees*
- 06 *YSU's Deficiency of Undergraduate Research in STEM*  
 1228 Shawn Doyle  
*Faculty Sponsor: Deborah Lowry*

**9:40 - 10:40 – Session 3 – Posters (Computer Science / Engineering) – Ohio Room**

- 01 *Parity Calculation in Residue Number Systems*  
 1410 William A. Hill  
*Faculty Sponsor: Robert W. Kramer*
- 02 *Accelerated Learning: Defensive Driving Simulation*  
 1244 Brandi Stillman, Joe Costello, Sruthi Bandaruballi  
*Faculty Sponsor: Abdurrahman Arslanyilmaz*
- 03 *Data Mining Techniques: Data Visualization*  
 1320 Joseph Costello  
*Faculty Sponsor: Alina Lazar*
- 04 *Life Expectancy as an Application of Individual Based Modeling*  
 1345 Joshua Hodges
- 05 *Ranking College Basketball Teams Using the Google PageRank Algorithm*  
 1344 Joseph Stanek  
*Faculty Sponsor: Padraic W. Taylor*
- 06 *Ranking the 2012 NFL Teams*  
 1138 James Munyon, Drew Saluga, Michael Seifert, Tim Shreeve, Bill Seidler  
*Faculty Sponsor: Thomas P. Wakefield*
- 07 *The CATCHER - A System To Capture Video Evidence of Mailbox Vandalism*  
 1262 Rob Kean  
*Faculty Sponsor: Salvatore R. Pansino*
- 08 *Automated Beverage Dispenser*

- 1276 Kyle Faykus, Phil Shuback  
Faculty Sponsor: Jalal Jalali
- 09 *Choosing the Best Material for an SUV Driveshaft*  
1144 Kevin Ball, Mike Kaldy, Dakota Joy, Justin Getz, David Cooper  
Faculty Sponsor: Richard G. Goldthwait
- 10 *Development of a Flow Sensor Based on a Fuzzy Shape Memory Alloy*  
1294 Eric Schubert  
Faculty Sponsor: Pedro Cortes
- 11 *Design of a Conveyor Belt System with Bolt Removal Capability*  
1238 Matthew Lehman, Christopher Scheckelhoff James Schuster Michael Stanley  
Faculty Sponsor: Hazel Marie
- 12 *Design of a Debris Removal Device for Automated Guided Vehicles*  
1237 Brandon Mirto, Benjamin Tadla, Caitlyn Rodomsky, Lauren Rodomsky, Patrick Bollinger  
Faculty Sponsor: Hazel Marie
- 13 *Effect of Aerodynamic Drag Forces on Fuel Consumption for Sport Cars*  
1223 James Limperos, Ashley Martof, Jennifer McAnallen  
Faculty Sponsor: Yogendra M. Panta
- 14 *Time study of production in the Miller Fall protection production line*  
1115 Jonathan Kelly, Tyrone Graham  
Faculty Sponsor: Martin Cala
- 15 *Applying Industrial Process Analysis and Improvement Techniques at Fireline Inc.*  
1214 Danielle Strong, Ashley Martof  
Faculty Sponsor: Martin Cala
- 16 *Time and Motion Study at Gasser Chair*  
1190 Ansel Morsillo, Seth Morrow  
Faculty Sponsor: Martin Cala
- 17 *Video analysis, work measurement and quality improvement at Brainard Rivet.*  
1087 Edward Mullan, Thomas R Zebrasky, Brian Boback  
Faculty Sponsor: Martin Cala
- 18 *Evaluation of Quality Testing Procedure at Altronic, Inc.*  
1004 Matthew Azam  
Faculty Sponsor: Martin Cala
- 19 *Work measurement at Toys R Us with a focus on analyzing productivity and work safety improvement*  
1377 Derek Higham, Shaun Streeter  
Faculty Sponsor: Martin Cala

#### **10:30 – 12:00 – Session 4 – Oral Presentations**

##### **Chemistry & Chemical Engineering - Bresnahan**

- 01 *Synthesis and Characterization of CeO<sub>2</sub>-TiO<sub>2</sub> Nanotubes*  
1342 Varun Sama  
Faculty Sponsor: Ruigang Wang
- 02 *Effect of Hydrogen Sulfide in Landfill Gas on Anode Poisoning of Solid Oxide Fuel Cells*  
1321 Feroze Khan  
Faculty Sponsor: Clovis A. Linkous
- 03 *Energy Harvesting Using ZnO-CNTs Fuzzy Fibers*  
1197 Jessie Keeler  
Faculty Sponsor: Pedro Cortes
- 04 *Heat Exchanger Network Design Using Pinch Analysis in Excel*  
1312 Shawn Bair, Tony Massaro

**Education - Coffelt**

- 01     *An Inner Product Space*  
          1077 Robert Wyant  
              Faculty Sponsor: Thomas D. Smotzer
- 02     *The Power of Technology in the Post-Secondary Classroom*  
          973 Chelsea Carbonell  
              Faculty Sponsor: June Ladd
- 03     *Effects of Technology-Enhanced Science Curriculum on Learning and Engagement for Students with Autism*  
          1199 Elizabeth Johnson, Lisa Ridgley  
              Faculty Sponsor: Darlene Unger
- 04     *Labeling Children with Disabilities: A Conflict between the Insensitive Stigmas and Educational Necessities*  
          1413 Marissa A. Mraz
- 05     *The Effect of Part-Time Employment on Academic Success*  
          1050 Jessica Loar  
              Faculty Sponsor: Tacibaht Turel

**Interpersonal Relations - Humphrey**

- 01     *The impact of stressors on nontraditional college students' college environment*  
          1205 TaNisha Hines  
              Faculty Sponsor: Priscilla N. Gitimu
- 02     *Health Status and Wellness of Adults Over 50*  
          1423 Cynthia M. Moore  
              Faculty Sponsor: Priscilla N. Gitimu
- 03     *Strategies to maintain a satisfactory long-distance romantic relationship*  
          1162 Brianna Vlaiku  
              Faculty Sponsor: Rebecca M. Curnalia
- 04     *Media Portrayal of Body Image and its Effects on Viewers*  
          1178 Nicole Pachol  
              Faculty Sponsor: Rebecca M. Curnalia
- 05     *Relational Maintenance Strategies in Forming Online Romantic Relationships*  
          1174 Lindsay Bowker  
              Faculty Sponsor: Rebecca M. Curnalia
- 06     *Factors contributing to satisfaction in sexual relationships.*  
          1166 Nicole Balog

**Mechanical Engineering – James Gallery**

- 01     *Anti-Ram Vehicle Barrier*  
          1041 Teresa McKinney, Justen Vrabel, Alex Amendolea, Ryan Moore, Bryan Zilka  
              Faculty Sponsor: Elvin B. Shields
- 02     *Anti-Ram Vehicle Barrier by Team Colossus*  
          1061 Massey Fowler, Lauren Jancay, Joe Procick, Tim Daugherty, Travis Keen  
              Faculty Sponsor: Elvin B. Shields
- 03     *Anti-Ram Vehicle Barrier by Team Adine*  
          1018 Adam Bondor, William Slater, Martin Holl, Tim Bellovary, Alexey Kuprienko  
              Faculty Sponsor: Elvin B. Shields

- 04     *Anti-Ram Vehicle Barrier*  
           1011 Anthony Davis, David Carmendy, Adam Harrold, Brandon Spithaler,  
               Edward McCarty  
               *Faculty Sponsor: Elvin B. Shields*
- 05     *Sea Horse Farm*  
           1227 Ken Minteer, Lizzy Gibbs  
               *Faculty Sponsor: Brian D. Vuksanovich*
- 06     *Additive Manufacturing- The Future*  
           1310 Steven Opperman, Nick Carney

**Politics, Business, & Crime – Hynes (2068)**

- 01     *Declining Internet Freedom in Turkey: Turkish Nationalism and Freedom of Expression*  
           1211 Jessica Valsi  
               *Faculty Sponsor: Paul A. Sracic*
- 02     *Campaign Ads and Conventions: The 2012 Political Cycle*  
           1180 Melissa Wasser  
               *Faculty Sponsor: Paul A. Sracic*
- 03     *Tax Incentives to Save for Retirement*  
           1316 Stephanie DelliGatti  
               *Faculty Sponsor: Roy Wayne Counts*
- 04     *The Effect of Cultural Differences on Fraudulent Financial Reporting*  
           1287 Evan Weaks  
               *Faculty Sponsor: Karin A. Petruska*
- 05     *Climate And The Effect It Has On Homicide Rates in the United States*  
           1347 Chelsea Stafford  
               *Faculty Sponsor: John M. Hazy*
- 06     *Perceptions of Police Officer Ethics*  
           1246 Kevin Day  
               *Faculty Sponsor: Richard L. Rogers*

**Psychology I - Jones**

- 01     *Digging at the Roots of Pain: A Comparison of Projective Tests Using Mental Imagery to Determine Age of Trauma*  
           1332 Jason Berg  
               *Faculty Sponsor: Karen Giorgetti*
- 02     *The Struggle For Academic Success: The Relationship Between Physical Activity, Depression, Self-Esteem, and GPA*  
           1266 Dominique Bonamase  
               *Faculty Sponsor: Karen Giorgetti*
- 03     *The Effects of Divorce on Children's Peer Relationships.*  
           1247 Audra Jones  
               *Faculty Sponsor: Molly Jameson Cox*
- 04     *Demographic Factors Associated with Aggressive Behavior in Rural and Urban Elementary Students*  
           1373 Brittany Shea  
               *Faculty Sponsor: Molly Jameson Cox*
- 05     *Does the type of drug used influence people's liking for an individual? An examination of the halo effect in substance use.*  
           1293 Paula Long  
               *Faculty Sponsor: Molly Jameson Cox*
- 06     *Looking Back and Forward: An Academic and Cross Cultural Experience*  
           1308 Heather Miller

**10:50 – 11:50 – Session 5 – Posters (Social / Environmental Sciences) – Ohio Room**

- 01     *Theft Crimes: What affects Theft Crime Rates?*  
          1248   Marissa Hundelt  
              Faculty Sponsor: John M. Hazy
- 02     *Canfield Jail Glassware Analysis*  
          1323   Alexa Kensinger  
              Faculty Sponsor: Matt E. O'Mansky
- 03     *Personal Bankruptcy: Reasons and Causations*  
          1065   Adrianna Ciotola, James Lingo, Matthew French, Andrea Barber  
              Faculty Sponsor: Rosemary D'Apolito
- 04     *A Research Proposal of Religious Fundamentalism in Relation to Racism*  
          1072   Maggie Noday, Tyler Bacon, Ashley Deskins, Mike Warner  
              Faculty Sponsor: Rosemary D'Apolito
- 05     *What is Anthropology?: A Pilot Study*  
          1188   Amanda Bright, Tricia Bright, Amanda Pishotti  
              Faculty Sponsor: Loren R. Lease
- 06     *An analysis of the discrepancy between funding for Anthropology programs and STEM related programs: An empirical approach to determining what causes this discrepancy*  
          1317   Crystal Gianetti, Cara Yacovone  
              Faculty Sponsor: Loren R. Lease
- 07     *College Students and Anxiety: Are Certified Pet Therapy Dogs the Answer?*  
          1071   Ruth A. Madden  
              Faculty Sponsor: Henrique Alrim
- 08     *Should We Know? A Populace Perspective on Consuming Non-Labeled Genetically Modified Organisms*  
          1343   Danielle Wells  
              Faculty Sponsor: Joseph P. Lyons
- 10     *The Early Learning Harvest: The Relationship between Teacher Educational Levels and Child Outcomes*  
          1054   Kim Zippie  
              Faculty Sponsor: Karen H. Larwin
- 11     *Deciphering San Salvador's Storm History: The Effects of Vegetation and Coastal Morphology on Storm Deposition in the Bahamas*  
          1324   Lauren Tadla, Mike Evans, Sarah Perrine  
              Faculty Sponsor: Christopher R. Mattheus
- 12     *QUANTIFYING SEDIMENT YIELD OF THE MILL CREEK WATERSHED, YOUNGSTOWN, OHIO*  
          1226   Michael Norton  
              Faculty Sponsor: Christopher R. Mattheus
- 13     *Evaluating Long-term Effects of Destructive Flooding on In-stream Riparian Characteristics and Macroinvertebrate Abundances in Low Order Streams*  
          1314   EmmaLeigh Given  
              Faculty Sponsor: Thomas P. Diggins
- 14     *Identifying Episodic Storm Events from the Presence and Distribution of Foraminifera within the Coastal Ponds of San Salvador, Bahamas*  
          1059   Kaitlyn Krossman, Briana Camaret  
              Faculty Sponsor: Christopher R. Mattheus
- 15     *Total and Soluble Metal Analysis of Residential and Public Biota, Soil, and Water Samples Surrounding Little Blue Run Lake a Fly Ash Waste Pond*  
          1391   Sarah Springston, Matthew Baldarelli



*Faculty Sponsor: Felicia P. Armstrong*

- 16 *Monitoring Heavy Metal Particulates in the Breathing Zone Near a Hazardous Waste Incinerator*

1375 Kaylin Camp, Patrick Bornemiss, Rae'ven Crum, Vincent Pilolli

*Faculty Sponsor: Alan M. Jacobs*

- 17 *Analysis of Combined Sewer Overflow Contributions to Coliform Density and Total Suspended Solids in the Mahoning River*

1167 Alvin C. Lu

*Faculty Sponsor: Carl G. Johnston*

- 18 *Urban Storm Water Quality Research*

1414 Ryan Smith, Patrick Maple

*Faculty Sponsor: Felicia P. Armstrong*

- 19 *Developing a Complete Storm Record for San Salvador Island, Bahamas: A Multiproxy Analysis of Pond Sediments*

1007 Joshua Fowler, Chad Marsey

*Faculty Sponsor: Christopher R. Mattheus*

- 20 *Using water quality parameters to evaluate the effectiveness of a constructed wetland*

1299 Simone Tonkin, Eric Zamar

*Faculty Sponsor: Colleen E. McLean*

**12:00 – 1:15 - Luncheon & Keynote Speaker – Chestnut Room**

*David W. Ball, Ph.D.*

*Interim Chair and Professor*

*Department of Chemistry, Cleveland State University*

*"Science, Skepticism, and the Benefits of Random Knowledge"*

**1:30 – 2:30 – Session 6 – Posters (Chemistry) – Ohio Room**

- 01 *Economic and Process Analysis of a Model to Convert Biomass into Biofuel*

1241 Scott Brand, Brian Crawford

*Faculty Sponsor: Douglas M. Price*

- 02 *SUAVE: Solar Unmanned Aerial Vehicle*

1255 Tyler Vitullo, Christopher Smaldino Nathan Jones Kurt Shambaugh Kevin Marsteller

*Faculty Sponsor: Jalal Jalali*

- 03 *Large Oscillations in Suspension Bridges: Why Resonance May Not Deserve the Blame*

1339 James Lancaster, Katie Kosela, Kevin McLane, Matthew Pilch, Douglas Thomas, Joseph Gantz

*Faculty Sponsor: Padraic W. Taylor*

- 04 *FunSecKB2: A Knowledgebase of Subcellular Locations of Fungal Proteins*

1277 John Meinken, Gengkon Lum

*Faculty Sponsor: Xiangjia Min*

- 05 *Distributed Computing of Mathematics with Raspberry Pis*

1267 Cody Rigney, Mike Weaver, Ashley Wagner, Nick Popovich, Sasha Monroe

*Faculty Sponsor: Gary L. Stanek*

- 06 *Ballistic Velocity Testing of Composites and Fiber-Metal Laminates*

1202 Sean Gabriel, Nicholas Ragan, Eric Schubert, Samantha Tharp, Paul Jones

*Faculty Sponsor: Pedro Cortes*

- 07 *Using a laser for spectroscopic determination of the effect of a buffer gas on the absorption lines of Iodine*

1371 Connor Hetzel, Chris DeChellis, Ian Schantz, Kyle Spickler, Michael Baker

- Faculty Sponsor: James H. Andrews*
- 08 *Hydrothermal Synthesis and Reactivity Characterization of Ceria Nanoparticles*  
1355 Randi Dangerfield, Samuel I. Mutinda  
*Faculty Sponsor: Ruigang Wang*
- 09 *C-H Insertion of Rhodium-stabilized Carbenoids on Fumaones as a Route to Chiral Natural Product Synthesis*  
1116 Caleb Tatebe, Joseph J. Mihaly, Kwaku Kyei-Baffour  
*Faculty Sponsor: Peter Norris*
- 10 *o-Nitrobenzenesulfonyl Azide in the Conversion of Alcohols into Alkyl Azides*  
1121 Omadee S. Curry, Angela Kwarko, Heather Jasmina Folkwein  
*Faculty Sponsor: Peter Norris*
- 11 *Autoprotolysis in the Solid State? Or is it just Water?*  
1281 Brian Stahl, Jennifer Miller, Matthew LaLama  
*Faculty Sponsor: Matthias Zeller*
- 12 *Comparative Kinetic Analysis of Escherichia coli  $\beta$ -Glucosidase BglX and Its Mutants E293Q and D287G*  
1264 Jon Dean, Christopher Morgan  
*Faculty Sponsor: Nina V. Stourman*
- 13 *Monoclonal Antibody Response to Staphylococcus aureus ANT8C3*  
1346 Aaiza Malik  
*Faculty Sponsor: Diana L. Fagan*
- 14 *Synthesis of Indole Phosphonate Regioisomers*  
1350 David Werner  
*Faculty Sponsor: John A. Jackson*
- 15 *Synthesis and Characterization of Copper(I) Complexes with Thiourea and Related Ligands*  
1196 Ruthairat Nimthong, Chaveng Pakawatchai, Yupa Wattanakanjana  
*Faculty Sponsor: Matthias Zeller*
- 16 *Removal of H<sub>2</sub>S from Landfill gas using Solar Regenerable Adsorbents*  
1272 Sreevani Kalapala, Travis Q. Battiest  
*Faculty Sponsor: Clovis A. Linkous*
- 17 *Determination of Structure and Properties of an Unknown Al-Si-Ti alloy*  
1261 Kristen J. Hernandez, Virgil C. Solomon  
*Faculty Sponsor: Matthias Zeller*
- 18 *Correlation between Porosity of Activated Charcoal and Its Ability to Adsorb Caffeine*  
1216 Dylan Thomas, Rachel M. Centofanti, Jamielynn E. Doyle, Jason Gilmore, Sahara Stauffer  
*Faculty Sponsor: Nina V. Stourman*
- 19 *Testing of Clones RMT8C1, ANT8C3, ANT8B1G1, BNT5D4, TNT5A4, and ANT8B1 to Determine the Monoclonal Antibody Response to Staphylococcus aureus Type 3*  
1404 Kripa Balaram, Kyle Reilly  
*Faculty Sponsor: Diana L. Fagan*
- 20 *Harsh Sound Measurement, Attenuation and Suppression*  
1154 Dom Sikora, Jason Huey, Nico Minniti, Zach Abraham, Heather Siembieda  
*Faculty Sponsor: John H. George*

## **1:30 – 3:00 – Session 7 – Oral Presentations**

### **Biology I – Humhrey**

- 01 *INCIDENCE OF INVASIVE PLANT SPECIES IN WATER LEVEL MANAGED AND UNMANAGED WETLANDS IN NORTHERN OHIO.*  
1207 Scott Denham II

*Faculty Sponsor: John D. Usis*

- 02 *White-tailed Deer (Odocoileus virginianus) Herbivory in Riparian Zones: A Preference Study*

1407 Danielle Mutchler

*Faculty Sponsor: John D. Usis*

- 03 *Predicting Eastern Bluebird reproductive success using local and landscape variables: a GIS approach*

1204 Amanda L. Ruozzo, Stacey C. Pavlik

*Faculty Sponsor: Ian J. Renne*

- 04 *The Putative Role of Learning and Genetics in Host Range Shift in Manduca sexta (Lepidoptera: Sphingidae)*

1394 Angela M. Rovnyak

*Faculty Sponsor: Ian J. Renne*

- 05 *2012 Archaeological Investigation of the Coastline of North Storr's Lake*

1368 Steven Campbell, Michael Flowers, Chris Nichols

### **Computer Sciences II - Bresnahan**

- 01 *Using Isolated Vowel Sounds for Classification of Mild Traumatic Brain Injury*

1152 Michael Falcone, Nikhil Yadav, Christian Poellabauer, Patrick Flynn

*Faculty Sponsor: Bonita Sharif*

- 02 *Assessing SeeIT 3D, a Software Visualization Tool*

1206 Grace H. Jetty

*Faculty Sponsor: Bonita Sharif*

- 03 *An Eye-tracking Study Assessing the Comprehension of C++ and Python Source Code*

1112 Rachel Turner, Michael Falcone

*Faculty Sponsor: Bonita Sharif, Alina Lazar*

- 04 *Assessing the Comprehension of UML Class Diagrams in Onion Notation*

1134 Michael Falcone

*Faculty Sponsor: Bonita Sharif*

- 05 *Discrete Mathematical Applications to the Calendar*

1382 Camron Bagheri

*Faculty Sponsor: Nathan P. Ritchey*

### **Electrical Engineering I - Coffelt**

- 01 *Solar Barbie*

1127 Kenneth Burton, Mathew Biedka, Dustin Bowman

*Faculty Sponsor: Salvatore R. Pansino*

- 02 *Applications of Photovoltaic Cells: Solar Laser*

1357 Larry Frangos, Joe Cassata, Mike Robison, Nicholas Sirianni, Kyle Skiba, Joshua Welsh

*Faculty Sponsor: Salvatore R. Pansino*

- 03 *Creation of the Sun's Solar Energy*

1124 Drew Duraney, Janette Cross, Derek Dowdell, Sean Lynch

*Faculty Sponsor: Salvatore R. Pansino*

- 04 *From Panel to Plug*

1131 David Berry, Tom Hornung, Jeff Wormley, Patrick Mullally

*Faculty Sponsor: Salvatore R. Pansino*

- 05 *The Evolution of the Battery*

1132 Adam Smith, Thomas Bakalar, Marcell Vitello

*Faculty Sponsor: Salvatore R. Pansino*

- 06 *Energy Distribution using Smart Grid*

1093 Yonatan Tadesse, Mike Currao, Josh Gilmore, Tyler Goodwin, Ryan

Hicks, Jacob Tibbits  
Faculty Sponsor: Salvatore R. Pansino

**History – Hynes (2068)**

- 01     *Marring a Rose: How Dramatic Works and Artistic Renderings Have Annihilated Richard III*  
          1068   Brittany Trask  
                  Faculty Sponsor: Eleanor A. Congdon
- 02     *Los Angeles Riots change the future of the Los Angeles Police Department*  
          1006   Chelsea Reed  
                  Faculty Sponsor: Fred W. Viehe
- 03     *Charter Schools: Great Solution or Alarming Failure?*  
          974    Ryan DiPietro  
                  Faculty Sponsor: Fred W. Viehe
- 04     *The Road that Ends in Water: A History of the Erie Extension Canal and Clarksville, Pennsylvania*  
          971    Lisa Garofali  
                  Faculty Sponsor: Fred W. Viehe
- 05     *Privateers, Pirates and Smugglers Colonial Rays of Light*  
          1079   Adam Senczyszak  
                  Faculty Sponsor: Fred W. Viehe
- 06     *Women's Suffrage: A Collective Endeavor*  
          972    Heidi Wagner  
                  Faculty Sponsor: Fred W. Viehe

**Mechanical Engineering II – James Gallery**

- 01     *Design of Hood Latch and Scrap Chute*  
          980    Jason Reiner, Kent Cunningham, Dong Honggan, Clay Reakes, Ray Hudran  
                  Faculty Sponsor: Elvin B. Shields
- 02     *Pneumatic Automated Hopper*  
          994    Brock Elsea, Amanda Cox, Justin Seguin, Angelo Pelini  
                  Faculty Sponsor: Elvin B. Shields
- 03     *Design of Rocker Arm Style Resistance Spot Welder*  
          978    Joseph Reedy, Samantha Rovnak  
                  Faculty Sponsor: Elvin B. Shields
- 04     *FLASH WELDING: BANDSAW BLADE MANUFACTURING*  
          989    Michelle Gbur, Elliott Smith, Robert Dean  
                  Faculty Sponsor: Elvin B. Shields
- 05     *Sand core packaging/transportation rack*  
          981    Bronson Lamoncha, Brian Carey, Kevin Siembieda, Richard Thimons, and Ryan Wayslaw  
                  Faculty Sponsor: Elvin B. Shields
- 06     *Automated Taping Mechanisms*  
          986    Adam Geiger, Thomas Hartman, Brittany Soroka  
                  Faculty Sponsor: Elvin B. Shields

**Psychology II - Jones**

- 01     *Individual Differences in Emotion and Attachment*  
          1219   Samantha Nesnidol  
                  Faculty Sponsor: Julie B. Boron
- 02     *Effects of Thought Speed and Affect on Risk Taking Behavior*

- 1419 Kenneth J. Holt  
*Faculty Sponsor: Frank R. Ragozzine*
- 03 *Differences in Facial Expression and Perceived Gaze Direction*  
 1384 Stephanie Sedall  
*Faculty Sponsor: Frank R. Ragozzine*
- 04 *Warm and Cold: Priming Effects of Red and Blue on Temperature-Related Words*  
 1193 Sean Haughey  
*Faculty Sponsor: Frank R. Ragozzine*

## **2:40- 3:40 – Session 8 – Posters (Health & Human Services) – Ohio Room**

- 01 *Police officer hiring and past substance abuse history.*  
 1338 Jonathan Silverman  
*Faculty Sponsor: John M. Hazy*
- 02 *Unemployment and City Theft Rate*  
 1278 Samantha Burton, Kegan Brady  
*Faculty Sponsor: John M. Hazy*
- 03 *A Closer Look at United States Cities*  
 1231 Crystal Doyle  
*Faculty Sponsor: John M. Hazy*
- 04 *Validity of Capnography to Diagnose Asthma, COPD, or PE in Patients Presenting to Emergency Department with Acute Dyspnea*  
 1271 Amanda Lencyk  
*Faculty Sponsor: Valerie M. O'Dell*
- 05 *The Impact of a Corporate Sponsored Wellness Program on Employee Overall Health*  
 1260 Bobbi Jo Given  
*Faculty Sponsor: Richard L. Rogers*
- 06 *Criminal Parental Influence on Juveniles*  
 1376 Lindsay Spiker  
*Faculty Sponsor: Richard L. Rogers*
- 07 *Homicide: A Tale of Four Cities*  
 1360 Trenton Daily, William Droste  
*Faculty Sponsor: John M. Hazy*
- 08 *Auto Theft*  
 1340 Kenneth McLaughlin II  
*Faculty Sponsor: John M. Hazy*
- 09 *BOOKING AMONG SURVEYED INDIVIDUALS: INFLUENCES OF DRUGS AND DEMOGRAPHICS*  
 1388 Kristin Helle  
*Faculty Sponsor: Richard L. Rogers*
- 10 *The Influence of Socio-economic Conditions and the Diagnosis of Diabetes*  
 1240 Lisa Foley  
*Faculty Sponsor: Richard L. Rogers*
- 11 *The Relationship Among Nutrition Knowledge, Barriers to Healthy Eating and Body Mass Index*  
 1200 Jennifer McConnell  
*Faculty Sponsor: Joseph P. Lyons*
- 12 *Improving the Development of Quality Nursing Clinical Judgment*  
 1175 Ben Roberts  
*Faculty Sponsor: Amy L. Weaver*
- 13 *Prevalence of asthma and its correlation to socioeconomic standing, comparing level of income, unemployment and geographical zone*

- 1417 Kelly L. Colwell  
Faculty Sponsor: Richard L. Rogers
- 14 *Knowledge and Perception of Eating Disorders on YSU's campus*  
1051 Alexis Allen, Aaron Baker, Gabrielle Belcastro, Heidi Buck, Sharon DeAngelo, Patti Massery, Diane Vodhanel  
Faculty Sponsor: Zara C. Rowlands
- 15 *The Use of High-Intensity Inspiratory Muscle Training on Activities of Daily Living in an Individual with COPD: A Case Report.*  
1076 Jennifer Johnstone  
Faculty Sponsor: Jane Wetzel
- 16 *Cutting the Cheese on Parkinson's Disease: Using Smell Testing as An Early Indication of the Parkinson's Disease.*  
1057 Samuel Gindlesberger  
Faculty Sponsor: Jill M. Tall
- 17 *The Effects of Organized Teaching and Readmission Rates*  
1050 Tina Femia  
Faculty Sponsor: Susan Lisko
- 18 *Short Term Study in Mexico: Nursing Students' Lived Experience*  
1160 Rachel Harbarger, Karly Herman  
Faculty Sponsor: Nancy H. Wagner
- 19 *Bethanechol versus Clean Intermittent Catheterization: Long-Term Prevention of Autonomic Dysreflexia Reactions in Adult Male Patients Diagnosed with Neurogenic*  
1354 Stacy L. Burns  
Faculty Sponsor: Susan A. Lisko
- 20 *DON'T RUSH ME! Benefits of Informed Consent and Scheduled Birth*  
1114 Anna Marie Klejka  
Faculty Sponsor: Kimberly A. Serroka

### **3:30 – 5:00 – Session 9 – Oral Presentations**

#### **Biology - Humphrey**

- 01 *Muscle architecture and out-force potential of the thoracic limb in the Eastern mole (Scalopus aquaticus)*  
1084 Jacob Rose  
Faculty Sponsor: Michael T. Butcher
- 02 *Fungal meningitis outbreak resulting from poor sanitation conditions of a drug compounding facility*  
1256 Jonathan M. Guy  
Faculty Sponsor: Jill M. Tall
- 03 *Myosin heavy chain (MHC) isoform expression in the prehensile tails of didelphid marsupials: functional differences between arboreal and terrestrial opossums*  
1381 Joseph E. Rupert  
Faculty Sponsor: Michael T. Butcher
- 04 *Selenium Metabolism in S. maltophilia 02: Growth Modeling and Proteomics*  
1113 Mark Radetic, Joelle Ballone, Matthew Pierson  
Faculty Sponsor: Jonathan J. Caguiat, George T. Yates
- 05 *Effect of the Anti-Fibrotic Hormone Relaxin on Cardiac L-type Ca<sup>2+</sup> Channels*  
1416 Zane Kalik, Guy Salama  
Faculty Sponsor: Mark D. Womble

#### **Communication & Language - Jones**

- 01 *Second Language Acquisition in the Deaf Community*

- 1159 Abigail Margraff  
Faculty Sponsor: Steven R. Brown
- 02 *A Study of Primate Conservation Amongst College Students*  
1075 Jessica Morris, Andrew Skrinyer  
Faculty Sponsor: Loren R. Lease
- 03 *Parent-child communication: How parents communicate to their children about sexual relations that later affects their future decisions*  
1380 Courtney Wolfcale  
Faculty Sponsor: Rebecca M. Curnalia
- 04 *Autism: Communication Disorders*  
1161 Pauline D. Ackerman  
Faculty Sponsor: Rebecca M. Curnalia

#### **Electrical Engineering II - Coffelt**

- 01 *Android Control System for 3D Printer*  
1158 James G. White, Levente Benedekfi, Yashar Nasseri  
Faculty Sponsor: Jalal Jalali
- 02 *Levitation Melting*  
1348 John McCabe  
Faculty Sponsor: Jalal Jalali
- 03 *Student RFID System*  
1083 Noah Weiser, Ronald Welther, Jonathan Groves  
Faculty Sponsor: Jalal Jalali
- 04 *Automated Temperature Regulating Resistive Heating System*  
1157 Matt Virostek, Jacob Kreatsoulas, Ece Isenbike Ozalp  
Faculty Sponsor: Jalal Jalali
- 05 *Magnetic Levitation*  
1408 Nicholas Brown, Nicolas Carbone Klara Chan  
Faculty Sponsor: Jalal Jalali
- 06 *Microstructural Characterization of Aluminum Wire Used in Battery Cables for Electrical Vehicles*  
1053 Brandon Hart, Virgil C. Solomon  
Faculty Sponsor: Virgil C. Solomon

#### **Fine & Performing Arts - Bresnahan**

- 01 *It's a Grimm Grimm Life*  
1279 Lisa Perry  
Faculty Sponsor: Dragana Crnjak
- 02 *Contemporary Jazz Composition: Analysis, Creation, Realization, and Dissemination*  
1141 Kevin Snyder, Mark Higgins, Rob Chase  
Faculty Sponsor: David S. Morgan
- 03 *The Qualities of a Successful Conductor*  
1220 Scott Miller  
Faculty Sponsor: Deborah Lowry
- 04 *The Ghost of Pretty Polly: Gender Stereotypes and Domestic Violence in the American Murder Ballad*  
1300 Karen Considine  
Faculty Sponsor: Randall E. Goldberg
- 05 *The Thrill of the Hunt: Exploring the Similarities of Shooting Animals with a Gun vs. Camera*  
1192 Breanna Gwirtz

### **Mechanical Engineering III – James Gallery**

- 01     *Physical, Chemical, Mechanical and Microstructural Characterization of Nanocarbon-Copper Alloy*  
         1058   Jacob Cvetich  
                 *Faculty Sponsor: Virgil C. Solomon*
- 02     *Natural Gas Conversion of Internal Combustion Engine and Performance Analysis*  
         983   Stephen Rakocy, Bret Bole, Adam Restifo, Aubrey Garland  
                 *Faculty Sponsor: Elvin B. Shields*
- 03     *Anti-Ram Vehicle Barrier By Mech. Commander*  
         1036   Nick Somerfield, DJ Giammarco, Jed Chismar, Matt Callahan, Lauren Hagerty  
                 *Faculty Sponsor: Elvin B. Shields*
- 04     *Vehicle Anti-Ram Barrier-CCR*  
         1026   Brett Comeau, Matthew Lehman, Richard Smith, James Stiger, Robert Virostek  
                 *Faculty Sponsor: Elvin B. Shields*
- 05     *Anti-Ram Vehicle Barrier by Team RAMJAM*  
         1027   Mathew English, AJ Grayson, Ryan White, John Henley, Michael Kaldy  
                 *Faculty Sponsor: Elvin B. Shields*

### **Physics - Pugsley**

- 01     *Analysis of ZnO Films doped with Lithium and Phosphorus*  
         1358   Michael McMaster  
                 *Faculty Sponsor: Tom N. Oder*
- 02     *Fabrication of Microlens Arrays on Layered Polymers*  
         1418   Clayton Reakes  
                 *Faculty Sponsor: Tom N. Oder*
- 03     *Exploration of Laser Interference Lithography to Pattern Sub-Micron Structures*  
         1335   Andrew Smith  
                 *Faculty Sponsor: Tom N. Oder*
- 04     *Investigation of ZnO as a Transparent Conductor for Solar Cell Application*  
         1297   Scott Alfredo  
                 *Faculty Sponsor: Tom N. Oder*
- 05     *The Fabrication of Zinc Oxide Microlens Arrays*  
         1370   Mark Freeman  
                 *Faculty Sponsor: Tom N. Oder*