

| 2018 Auburn Research Faculty Symposium  |   |                                       |  |  |
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| Poster Session  |   |                                       |  |  |
| <u>Author(s)</u>  | <u>Department</u>   | <u>College/School</u>                 | <u>Title</u>   | <u>Coauthors and Affiliation</u>   |
| Amit Morey  | Poultry Science   | Agriculture                           | Developing post-harvest innovative technologies to improve food safety, quality and shelf-life   |  |
| Ian Butts   | School of Fisheries, Aquaculture and Aquatic Sciences                                     | Agriculture                           | Effects of donor-recipient developmental stage and stem cell preparation on transplantation and xenogenesis success in catfish                                   | Veronica Alston, Darshika Hettiarachchi, Khoi Vo, Muyassar Abualreesh, Jeremy Gurbatow, Max Bangs, Chia Chen Weng Chen, & Rex A. Dunham  |
| Jenny Koebernick  | Crop Soil and Environmental Science   | Agriculture                           | Breeding for reniform nematode resistance in cotton  | Gulsah Kaplan, Kathy Lawrence, Jinesh Patel  |
| Leanne Dillard, Sarah Shoup, and Kim Mullenix   | Animal Sciences and Crop, Soil, and Environmental Sciences                                | Agriculture                           | Nutritive value of baleage from different cool-season annual mixtures  |  |
| Rishi Prasad  | Crop Soil and Environmental Sciences, Auburn University                                   | Agriculture                           | Chemical characterization of poultry litter and development of phosphorus extraction methods   | Poulomi Dey <sup>1</sup> , Kristin Champ <sup>2</sup> , Brendan Higgins <sup>2</sup> ; 1. Crop Soil and Environmental Sciences, Auburn University 2. Biosystems Engineering, Auburn University   |
| Ruiqing Miao  | Department of Agricultural Economics and Rural Sociology                                  | Agriculture                           | Climate Change Effects on U.S. Agriculture: Distributional Heterogeneity, Technological Adaptability, and Spatial Spillovers                                     | Emir Malikov and Ruiqing Miao- Department of Agricultural Economics and Rural Sociology  |
| Rex Dunham <sup>1</sup> and Veronica Alston <sup>1</sup>                                  | School of Fisheries, Aquaculture, and Aquatic Sciences                                    | Agriculture                           | Functional Genomics of Air Breathing in Catfishes  | Xiaoli Ma <sup>1</sup> , Nathan Backenstose <sup>1</sup> , Yiliu Zhang <sup>1</sup> , Max Bangs <sup>1</sup> , Chia Chen Weng Chen <sup>1</sup> , Dr. Anthony Moss <sup>3</sup> and Dr. Yen Duong <sup>2</sup> . 1 School of Fisheries, Aquaculture, and Aquatic Sciences Auburn University; 2 Department of Freshwater Aquaculture at Can Tho University; 3 COSAM |
| Yifen Wang  | Biosystems Engineering  | Agriculture                           | Development of Active Packaging Film Combined with $\beta$ -Cyclodextrin Inclusion Complex for Chilled Beef  | Yichao Ma and Yi Wang  |
| Carla Keyvanian   | School of Industrial and Graphic Design   | Architecture, Design and Construction | An Architecture of Reason: The Hospital of S. Spirito in 15th-century Rome.  |  |
| Danielle Willkens and Richard Burt  | School of Architecture, Planning, and Landscape Architecture                              | Architecture, Design and Construction | “Walking in the Footsteps of History: augmenting archives and creating interactive interpretation through innovative conflict archaeology at Civil Rights sites” | Junshan Liu of BSC, Dr Keith Hebert and Dr David Carter CLA.   |
| Il Kim  | School of Architecture Planning & Landscape   | Architecture, Design and Construction | Kenzo Tange (1913-2005) and his Design of the Yukari Cultural Kindergarten in Tokyo (1967)   |  |
| John Pittari  | Architecture, Planning and Landscape Architecture   | Architecture, Design and Construction | Growing Resilience in Birmingham -- Framework to Implementation  | Alex Krumdieck, Director, Center for Architecture and Urban Studies; Jennifer K. Smith   |
| Mary English  | Architecture, Planning and Landscape Architecture   | Architecture, Design and Construction | Communicating Complexity through Movement  | Andreas Fornemark; Trisha Truong and Aubrey Harrold  |
| Shea Tillman  | School of Industrial and Graphic Design; College of Architecture, Design and Construction | Architecture, Design and Construction | Archival research and restoration for the exhibition: ‘Visual Memoranda – The IBM Poster Program 1969-1979’  | Robert Finkel - associate professor, AIGA  |
| Ashish Gupta  | Department of Systems and Technology  | Business                              | “Using Data Science for Improving Food Quality in Poultry Sector”  | Amit Morey and Alireza Farnoush  |
| Kristina Neely  | School of Kinesiology   | Education                             | Motor abnormalities in young adults with ADHD  |  |
| James Lindner <sup>1</sup> , Christopher Clemons <sup>2</sup> , Bruce Murray <sup>3</sup> | Curriculum and Teaching   | Education                             | Spanning the Gap: The Confluence of Agricultural Literacy and Being Agriculturally Literate  | 1. Professor, Agriscience Education; 2. Assistant Professor, Agriscience Education and 3. Associate Professor, Reading Education   |

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|--------------------------------|---|------------------------------|--|--|
| Vicky Cardullo                 | Curriculum and Teaching   | Education                    | Preparing Pre-Service Teachers: STEM Alternate Field placement   | Megan Burton Math Curriculum and Teaching- Elementary Education<br>Octavia Tripp Science- Curriculum and Teaching- Elementary Education<br>Sara Demoiny Social Studies<br>Curriculum and Teaching- Elementary Education  |
| Adil Bashir                    | Department of Electrical & Computer Engineering & Auburn University MRI Research Center | Engineering                  | Combined measurement of skeletal muscle perfusion and T2star with dynamic exercise using MRI   | Sultan Zaman and Thomas S. Denney Jr   |
| Bryan Beckingham               | Chemical Engineering  | Engineering                  | 'Microcapsule-based Self-healing: Adaptation for additive manufacturing processes'   | Vinita V. Shinde (CHEN), Shreyas Shelke (PFEN), Asha-dee Celestine (AERO)  |
| Fan Li and Dongye Zhao         | Civil Engineering   | Engineering                  | "A High-Capacity and Photoregenerable Composite Material for Efficient Adsorption and Photodegradation of Persistent Organic Pollutants"     |  |
| Haodong Ji and Dongye Zhao     | Civil Engineering   | Engineering                  | "A new class of carbon-modified indium oxide nanoparticles for adsorption and photodegradation of Perfluorooctanoic acid (PFOA) in water"    |  |
| Shuting Tian and Dongye Zhao   | Civil Engineering   | Engineering                  | "Removal of perfluorobutanoic acid (PFBA) from water by strong anion exchange resins"  |  |
| Elizabeth Lipke                | Chemical Engineering  | Engineering                  | "Engineered Tissue Microspheres for Regenerative Medicine and Disease Modeling Applications"   | Yuan Tian 1, Ferdous Finklea 1, Wen J. Seeto PhD1, Petra Kerscher PhD 1, Shantanu Pradhan PhD 1, Randolph L. Winter DVM 2, Fred Caldwell DVM, MS 2, Anne A. Wooldridge DVM, MS, PhD 2, 1. Department of Chemical Engineering, Auburn University, AL 36849, 2. Department of Clinical Sciences, Auburn University, AL 36849 |
| Carlos A. Carrero              | Chemical Engineering  | Engineering                  | "Developing a new Raman-spectrokinetic approach to gain insights on the structure-reactivity relationship of supported metal oxide catalysts | William Reid Adams, Raj Thakur, and Michael Julin  |
| Maria Auad and Ramsis Farag    | Department of Chemical Engineering  | Engineering                  | Center for Polymers and Advance Composites (CPAC): "capabilities and opportunities".   |  |
| Mark Schall                    | Industrial and Systems Engineering  | Engineering                  | Operator 4.0: Collaborative Research to Improve Worker Performance and Safety during the 4th Industrial Revolution                           | David Bevely, Jerry Davis, Sean Gallagher, Rich Seseke, Michael Zabala   |
| Masoud Mahjouri Samani         | Electrical and Computer Engineering   | Engineering                  | Laser-Assisted Synthesis, Processing, and Diagnostics of Emerging Nanomaterials and Devices  | Nurul Azam, Salah Elafandi, Baha Yakupoglu, Zabihollah Ahmadi  |
| Michael Zabala                 | Department of Mechanical Engineering  | Engineering                  | "Comparing Two Measures of Knee Valgus Angle."   | 1Taylor Wright, 1Scott Kennedy, 2Megan Young, 2,3Michael Goodlett - Affiliations: 1. Department of Mechanical Engineering, 2. Auburn University Athletics, 3. Edward Via College of Osteopathic Medicine (VCOM)  |
| Vinamra Agrawal                | Aerospace Engineering   | Engineering                  | "Wetumpka impact crater modeling and the role of water"  | David King (Geosciences)   |
| Vrishank Raghav Shankare Gowda | Aerospace Engineering   | Engineering                  | Aerodynamic Adaptation Mechanism of Birds to Turbulent Conditions  | Mike Wietstruk (Aero Engg), Paul Swiney (Aero Engg), Jamie Bellah (Veterinary Medicine)  |
| Brian Via                      | Forest Products Development   | Forestry & Wildlife Sciences | "Creating a Sustainable Future"  | Beatriz Vega, Soledad Peresin, SFWS  |

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| Maria Soledad Peresin and Jay Ramapuram | Forest Products Development Center, Harrison School of Pharmacy             | Forestry & Wildlife Sciences | “Nanocellulose-based materials: renewable solutions to global health challenges”  | Beatriz Vega, SFWS<br>Diego Sanchez Osorio, Universidad Pontificia Bolivariana<br>Sarah Zhody, SFWS<br>Ilari Filpponen, CHEN<br>Virginia Davis, CHEN   |
| Sanjiv Kumar                            | Forestry and Wildlife Services  | Forestry & Wildlife Sciences | Potential reemergence of seasonal soil moisture anomalies in North America  | Kumar, S. (1), M. Nemwan (2), Y. Wang (3), and B. Levehne (4); 1: Auburn University, 2: CIRES/CU Boulder, and NOAA ESRL, 3: CIRES/CU Boulder, and 4: CU Boulder / CIRES  |
| Sarah Zhody                             | School of Forestry and Wildlife Sciences and College of Veterinary Medicine | Forestry & Wildlife Sciences | Distribution of <i>Aedes</i> mosquito vectors and arboviruses in Alabama  | Benjamin McKenzie, Dr. Sara Ziska  |
| Susan (Shufen) Pan                      | International Center for Climate and Global Change Research                 | Forestry & Wildlife Sciences | The Paris climate targets and food security in Africa   | Shufen Pan, Jingting Zhang, Guangsheng Chen and Hanqin Tian, International Center for Climate and Global Change Research, School of Forestry and Wildlife Sciences, Auburn University                          |
| Yee Ming Lee                            | Department of Nutrition, Dietetics, and Hospitality Management              | Human Sciences               | Calorie Knowledge and Use of Menu Labels in the Restaurants among Consumers in the U.S.   | Erol Sozen, MS, Doctoral Candidate, Department of Nutrition, Dietetics, and Hospitality Management   |
| Drew Fruge                              | Department of Nutrition, Dietetics and Hospitality Management               | Human Sciences               | “Exploring the Effects of a High Chlorophyll Dietary Intervention to Reduce Colon Cancer Risk in Adults: The Meat and Three Greens (M3G) Feasibility Trial”                   | Kristen Smith, Department of Nutrition, Dietetics and Hospitality Management, Auburn University; Kimberly-Braxton Lloyd, Department of Pharmacy Practice, Harrison School of Pharmacy, Auburn University       |
| Geetha Thangiah                         | Nutrition, Dietetics and Hospitality Management                             | Human Sciences               | Association of salivary amylase (AMY1) gene copy number with obesity in Alabama elementary school children  | Chandra Mohan Kurapaty Venkatapoorna, postdoctoral fellow; Maninder Sandey, Assistant Professor, Department of   |
| Young A Lee                             | Consumer and Design Sciences  | Human Sciences               | Sustainable Product Design and Development Using Renewable Multi-layered Cellulosic Material as a Leather Alternate   | Changhyun Nam, Iowa State University   |
| Dallin Bailey                           | Communication Disorders   | Liberal Arts                 | Mental Rehearsal and Speech Motor Learning  | Marisha Speights Atkins (AU), Christopher Dromey (BYU), Jason Whitfield (BGSU), and Hannah Collins (AU)  |
| Jana F. Gutiérrez Kerns                 | Department of Foreign Languages and Literature                              | Liberal Arts                 | A Case Study in Civic Engagement as a Model for Task-based Language Teaching (TBLT) and Translation Studies (TS): Auburn University and Horseshoe Bend National Military Park | Mr. Eric Frey, Park Ranger, Horseshoe Bend National Military Park  |
| Jennifer L. Robinson                    | Psychology  | Liberal Arts                 | Neurofunctional topography of the hippocampus   | Jessica N. Busler, Ph.D., Meredith Reid, Ph.D., Julio Yanes, Ryan Bird, Jerry Muprhy, Sarah Etherton, Gopi Deshpande, Ph.D.  |
| Marisha Speights                        | Communication Disorders   | Liberal Arts                 | Automated Segmentation of Child Continuous Speech Samples via Blind Source Extraction   | Keith Gilbert, Speech Technology & Applied Research Corp., Lexington, Massachusetts; Joel MacAuslan, Speech Technology & Applied Research Corp., Lexington, Massachusetts; Alexandra Brooks, Auburn University |
| Melissa Blair                           | History   | Liberal Arts                 | “I have talked to you not as women but as American citizens”: Female Voters and the Gender Ideology of Presidential Campaigns, 1940-1960.”                                    |  |
| Michelle Sidler and Rusty Smith         | English, Rural Studio   | Liberal Arts                 | Communication is Key: Unlocking Home Affordability & Prosperity in Rural America  |  |
| Morris L. Bian                          | History   | Liberal Arts                 | Transforlution: Reinterpreting Changes in China’s Public Economy, 1928-2018   |  |
| Nicolas Ziebarth                        | Economics   | Liberal Arts                 | Firm Networks in the Great Depression   | Erik Loualiche (Minnesota), Chris Vickers (Auburn)   |

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| Rebecca Retzlaff                             | Political Science; Architecture, Planning, and Landscape Architecture; and Library   | Liberal Arts             | An Analysis of the Evolution of City Planning in Alabama and A Public Repository of City Planning Documents   | Charlene LeBleu, Landscape Architecture Program; Kasia Leouis, Library of Architecture, Design, and Construction; Tayler Hames, Community Planning Program; Yi Zhu, Landscape Architecture Program; Josh Cameron, GIS Consultant   |
| Ann Lambert                                  | Nursing  | Nursing                  | Promoting Safe Sleep: Outreach to Rural Hospitals in the Black Belt   | Ann W. Lambert, CRNP Associate Clinical Professor, School of Nursing<br>Chih-hsuan Wang, PhD Associate Professor, College of Education<br>Margot Fox, MSN, Assistant Clinical Professor<br>Tanya Johnson, MSN Associate Clinical Professor, School of Nursing  |
| Erica D. Kierce                              | School of Nursing  | Nursing                  | Utilization of the PHQ-9 and Pharmacogenetic Testing in Clinical Practice   | Dwan M. Vanderhoef, Vanderbilt University, and Laurie M. Connors, Vanderbilt University  |
| Katilya Ware                                 | Nursing  | Nursing                  | "Assessing Inclusiveness in the Learning Environment."  |  |
| Linda Gibson-Young and Libba McMillian       | Nursing  | Nursing                  | Effects of a school-based health intervention on a rural elementary school cohort   |  |
| Valarie Thomas                               | School of Nursing  | Nursing                  | Patient Education: Increasing Patients' Understanding of Prescribed Medication Regimen.   |  |
| Alexei Kisselev                              | Drug Discovery and Development   | Pharmacy                 | Targeting different active sites of the proteasome for the treatment of cancer  | The Kisselev laboratory  |
| Amal Khalil Kaddoumi and Youssef Mousa       | Drug Discovery and Development   | Pharmacy                 | Differential effect of APOE isoforms on amyloid-beta transport across the blood-brain barrier   |  |
| C. Edward Chou and Jeanna Sewell             | Department of Health Outcomes Research and Policy; , Department of Pharmacy Practice | Pharmacy                 | The Development and Implementation of a Pharmacist-Led Transitional Care Program for Uninsured Populations  | Shelby Means (PharmD student – second year, HSOP)  |
| Chuan Wang, Thamer Alqurashi, Jianzhong Shen | Drug Discovery and Development   | Pharmacy                 | Role of CXCR7 in control of myeloid cell proliferation in vitro and in vivo   | Department of Drug Discovery and Development, Harrison School of Pharmacy, Auburn University   |
| Jayachandra Ramapuram                        | Department of Drug Discovery and Development   | Pharmacy                 | Enhanced Cellular Uptake and Cytotoxicity of Liposome-Encapsulated Daunorubicin in Melanoma (B16BL6) Cancer Cells.  | Hamad Alrbyawi, Robert D. Arnold   |
| Suman Majumdar                               | Harrison School of Pharmacy  | Pharmacy                 | Exploring gene-environment interactions in socio-economically disadvantaged communities in Alabama: epidemiological, genomic, and epigenomic analysis of schizophrenia patients | Suman Majumdar <sup>1</sup> , Cherry Jackson <sup>2,3</sup> , Li Chen <sup>4</sup> , Jingjing Qian <sup>4</sup> , Savan Patel <sup>1</sup> , Sayak Charkravarti <sup>1</sup> , Timothy Moore <sup>1</sup> , Amit Kumar Mitra <sup>1</sup> , 1. Drug Discovery and Development, Harrison School of Pharmacy, Auburn University<br>2. Pharmacy Practice, Harrison School of Pharmacy, Auburn University<br>3. Department of Psychiatry and Behavioral Neurobiology, University of Alabama Hospital, Birmingham, AL<br>4. Health Outcomes and Research Policy, Harrison School of Pharmacy, Auburn University |
| Eduardus Duin <sup>a</sup>                   | Chemistry and Biochemistry   | Sciences and Mathematics | "Characterization by ENDOR and Mössbauer spectroscopy of different forms and reaction intermediates detected in (E)-4-Hydroxy-3-methylbut-2-enyl diphosphate reductase (IspH)"  | Sebastian Stoian (b), Nicolas S. Lees (c), Weiya Xu (a), Matthew O. Ross (c), Joshua Telsner (d), Brian M. Hoffman (c), Evert C. Duin (a); (a) Auburn University, Department of Chemistry and Biochemistry, (b) National High Magnetic Field Laboratory, (c) Northwestern University, Department of Chemistry, (d) Roosevelt University, Biological, Chemical and Physical Sciences.   |
| Elizabeth Hiltbold Schwartz                  | Biological Sciences  | Sciences and Mathematics | Integrative longitudinal analysis of metabolic phenotype and gut microbiota changes during the development of obesity   | Higgins, Keah <sup>1</sup> ; Hallowell, Haley <sup>1</sup> Woodie, Lauren <sup>2</sup> ; Greene, Michael <sup>2</sup> , and Hiltbold Schwartz, Elizabeth <sup>1</sup>  |

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| Martin Medina and Morgan Hill | Geosciences                                  | Sciences and Mathematics | "A Continuous 100 Thousand-year Stalagmite $\delta^{18}O$ Record from the Yucatan Peninsula: Implications for Caribbean Hydroclimate on Orbital and Millennial Timescales" | Stephen Burns - Department of Geosciences, University of Massachusetts Amherst, Amherst, MA<br>David McGee - Department of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology, Cambridge, MA<br>Josué Polanco-Martínez - Basque Centre for Climate Change, University of the Basque Country, Bilbao, Spain<br>Matthew DeCesare - Department of Geosciences, Auburn University, Auburn, AL<br>Chun-Yuan Huang - National Taiwan University, Taipei, Taiwan  |
| Bruce F. Smith                | Department of Pathobiology, AURIC and        | Veterinary Medicine      | Camelid antibodies to block the PD-1/PD-L1 immune axis   | Payal Agarwal, Ph.D., Department of Pathobiology, AURIC   |
| Chad D. Foradori              | Anatomy, Physiology, and Pharmacology        | Veterinary Medicine      | Kisspeptin and neuroendocrine regulation of growth hormone release   | Brian K. Whitlock <sup>2</sup> , Jay A. Daniel <sup>3</sup> , Arthur D. Zimmerman <sup>1</sup> , Melaney A. Jones <sup>1</sup> , Casey C. Read <sup>1</sup> , Barbara P. Steele <sup>1</sup> , Jeremy T. Smith <sup>4</sup> , Iain J. Clarke <sup>5</sup> , Theodore H. Etsasser <sup>6</sup> , Duane H. Keisler <sup>7</sup> , and James L. Sartini <sup>1</sup> .<br><sup>1</sup> Department of Anatomy, Physiology & Pharmacology, Auburn University, Auburn, Alabama 36849; <sup>2</sup> Department of Large Animal Clinical Sciences, University of Tennessee, Knoxville, Tennessee 37996; <sup>3</sup> Department of Animal Science, Berry College, Mt. Berry, Georgia 30149; <sup>4</sup> School of Anatomy, Physiology and Human Biology, University of Western Australia, Perth, Crawley, Washington 6009, Australia; <sup>5</sup> Neuroscience Program, Monash Biomedicine Discovery Institute and Department of Physiology, Monash University, Melbourne, Victoria 3800, Australia; <sup>6</sup> Animal Genomics and Improvement Laboratory, US Department of Agriculture, Agricultural Research Service, Beltsville, Maryland 20705; and <sup>7</sup> Division of Animal Sciences, University of Missouri, Columbia, Missouri 65211 |
| James W. Gillespie            | Pathobiology                                 | Veterinary Medicine      | "Nanophages for Targeted Gene Delivery/Regulation and Vaccine Development"   | Tatiana I. Samoylova (Scott-Ritchey Research Center/Pathobiology), Valery A. Petrenko (Pathobiology)  |
| Robert Judd                   | Anatomy, Physiology, and Pharmacology        | Veterinary Medicine      | Differential Effects of a High-Fat Diet and Niacin on Adipose Tissue Inflammation and Nonalcoholic Fatty Liver Disease in C57BL/6J and B6129SF2/J Mice                     | Han Fang, Zhuoyue Li, Emily C. Graff  |
| Rudiger Hauck                 | Pathobiology and Poultry Science             | Veterinary Medicine      | Activity of two alternative products against <i>Eimeria</i> spp. in chickens   | Madison Hamilton (Auburn University, Departments of Pathobiology and Poultry Science) Brigid McCrea (Alabama Cooperative Extension System) Kenneth S. Macklin (Auburn University, Department of Poultry Science)  |
| Xu Wang                       | Pathobiology, College of Veterinary Medicine | Veterinary Medicine      | Genome assembly and annotation of parasitoid jewel wasp <i>Nasonia oneida</i> and its Wolbachia endosymbiont   | Xiaozhu Wang (Department of Pathobiology, Auburn University) and John H. Werren (Department of Biology, University of Rochester); Xu Wang (Department of Pathobiology, Auburn University and HudsonAlpha Institute for Biotechnology, Huntsville, AL)   |
| Vinicia C. Biancardi          | Anatomy, Physiology, and Pharmacology        | Veterinary Sciences      | Angiotensin II and microglia TLR4 crosstalk contributing to neurogenic hypertension  | Francesca E. Mowry; Sarah C. Peadar   |