



# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## SYMPOSIA LIST BY DAY

6/23/2020

### SUNDAY, July 19, 2020 – ALL DAY

#### **ASAS-NANP Pre-Conference Symposium: Mathematical Modeling in Animal Nutrition: Training the Future Generation in Data and Predictive Analytics for a Sustainable Development**

- Dr. Gota Morota, Virginia Tech University – Statistical graphics and interactive visualization in animal science
- Dr. Dan Tulpan, University of Guelph – A brief overview, comparison and practical applications of machine learning models
- Dr. Walter Gerrits, Wageningen University – Modelling digestion kinetics: the next step in the evaluation of feed ingredients
- Dr. Emma Stephens, AAFC/AAC – Building models using system dynamics methodology

### MONDAY, July 20, 2020 – MORNING

#### **Animal Breeding and Genetics Symposium: The Future of Phenomics in Livestock Breeding (Sponsored by CSAS)**

- Dr. Yachun Wang, China Agricultural University – Genetic analysis of temperament and its correlation with production, reproduction, type, health and longevity in Chinese Holstein
- Dr. Mike Coffey, Scotland's Rural College (SRUC) – #Phenotypeisking
- Dr. Nina Krattenmacher, Institute of Animal Breeding and Husbandry, Keil University, Germany – Towards an increasing number and complexity of breeding goal traits in dairy cattle
- Prof. Raphael Mrode, International Livestock Research Institute (ILRI), Kenya – Phenomics and its potential impact on livestock development in low income countries: Innovative applications of emerging related digital technology
- Dr. Carina Visser, Department of Animal and Wildlife Science, University of Pretoria, South Africa – Can phenomics contribute to improved livelihood and food security in South Africa?
- Dr. Ricardo Ventura, Universidade de Sao Paulo, Faculdade de Medicina Veterinária e Zootecnia (FMVZ), Brazil – Audio information retrieval for describing gait patterns in Brazilian horses



# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## **Companion Animal Symposium: Food Fraud and Food Safety in Companion Animal Foods**

- Dr. Robert Hanner, University of Guelph – Food Fraud Prevention
- Dr. David B. Edwards, FDA-CVM – Pet Food safety: Truth in Labeling
- Bill Bookout, National Animal Supplement Council (NASC) – Pet Supplements: Is Fraud a Concern?
- Dr. Yi-Cheng Wang, University of Illinois at Urbana-Champaign, Food Science & Human Nutrition – Biosensors and Intelligent Packaging to Improve Food Safety

## **WSASAS Beef Symposium**

- Dr. Adam Summers, New Mexico State University – Beef heifer development: Managing nutrition to optimize fertility
- Dr. Reinaldo Cooke, Texas A&M University – Supplementing omega-6 fatty acids to enhance reproductive performance of beef cows
- Dr. Joel Caton, North Dakota State University – Maternal nutrition during early gestation: Impacts on developmental outcomes
- Dr. Joseph Dalton, University of Idaho – Nutrition and sexual development in bulls

## **MONDAY AFTERNOON**

### **Companion Animal Symposium: Feeding Behavior & Management**

- Dr. Aulus Cavalieri Carciofi, UNESP – Targeting food formulation considering nutrient intake
- Dr. Jill Villarreal, Harris-Stowe State University – Why kennel and cattery food preference trials may not predict pet preferences in home?
- Dr. Thomas Gettys, Louisiana State University – Dietary methionine restriction: An approach to treating obesity that does not involve food restrictions
- Dr. Kadri Koppel, Kansas State University – Consumer sensory cues in pet food selection
- Dr. Robert Pretlow, eHealth International, Inc. – What's causing obesity in pets and what can we do about it?



# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## **Comparative Gut Physiology Symposium: Gut Microbiome-organs Axes: Role in Ruminants and Monogastric Health and Performance**

- Dr. Dylan Dodd, Stanford University – Metabolic Foundations of Microbiota-Host Interactions
- Dr. Michael Surette, McMaster University, Canada – The Gut-Lung Axis: The Human Perspective
- Dr. Trevor Alexander, Agriculture and Agri-Food Canada – Gut Microbiome-Lung Axis: Beef Perspective
- Dr. Rodrigo Bicalho, Cornell University – Gut Microbiome-Repro Axis: Ruminants Perspective
- Dr. Ehsan Khafipour, Cargill, Diamond V – Gut Microbiome-Mammary Axis: Human and Dairy Perspectives

## **Forges and Pastures Symposium: Understanding Intake on Pastures: How, Why and A Way Forward**

- Dr. Michael Galyean, Texas Tech University – The Need for Forage Intake Measurements
- Dr. Eric J. Scholljegerdes, New Mexico State University – Choosing an external marker for measuring intake and digestibility in ruminants
- Dr. Robert Kallenbach, University of Missouri – Digital technologies ease the burden of pasture intake measurements: A new hope
- Dr. Paul Greenwood, Department of Primary Industries, New South Wales – Sensor-Determined Behaviors and Pasture Intake Estimation in Extensive Grazing Systems

## **TUESDAY, July 21, 2020 – MORNING**

## **Animal Breeding and Genetics Symposium: Advances in Genomic Analyses including GWAS and Long-term Effects**

- Miguel Toro Ibáñez, Universidad Politécnica de Madrid – On the estimation of genetic parameters from molecular data
- Dr. Ignacy Misztal, University of Georgia – Modeling changes of genetic parameters under genomic selection
- Li Ma, University of Maryland – Methods of genome-wide association studies and their applications in dairy cattle
- Juan Steibel, Michigan State University - GWAS for complex models accounting for populations structure with GBLUP and ssGBLUP
- Dr. Daniela Lourenco, University of Georgia – Increased fluctuations of genetic evaluations with genomic selection



# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## **Beef Species: Soil Carbon**

- Dr. Jocelyn Lavallee, Colorado State University – Formation, persistence, and function of soil organic matter: how recent scientific advances apply in agroecosystems
- Dr. Alan Franzluebbers, USDA-ARS – Cattle and Carbon on pastures – hearsay or evidence?
- Dr. Richard Teague, Texas A&M University – Regenerative grazing: restoring ecosystem function to improve farm profits

## **Companion Animals Symposium: Dairy Ingredients and Their Application in Pet Food**

- Dr. Emily Arentson-Lantz, University of Texas Medical Branch – Practical applications of whey protein in promoting skeletal muscle maintenance, recovery, and reconditioning
- Kun-Ho Seo, Konkuk University, Korea – Health benefit and safety of probiotics originated from kefir in pet food
- Louise Bennet, Monash University – Whey proteins in prevention and intervention of Alzheimer's Disease
- Sharon Donovan, University of Illinois Urbana-Champaign – Milk Fat Globule Membrane from Bovine Milk on Brain Development of Early Life
- Manabu Nakano, Morinaga Milk Industry Co., LTD – The use of lactoferrin and lactoperoxidase for oral health

## **Meat Science and Muscle Biology Symposium: Poultry and pork muscle defects and meat quality--consequences, causes, and management**

- Dr. Casey Owens-Hanning, University of Arkansas and Ria Jackson, Cobb-Vantress – Meat Quality Matters: Trends and Mitigation Strategies for Muscle Myopathies in the Broiler Meat Industry
- Dr. Jessica Starkey, Auburn University – Role of Skeletal Muscle Satellite Cells in the Broiler Chicken Wooden Breast Meat Quality Defect
- Dr. Alexander Stelzleni, University of Georgia – Utilizing Chicken Breast with Wooden Breast and White Striping in Processed Meat Products





# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## **Swine Species Symposium: Microbiome, Gut Health and Piglet Nutrition (Sponsored by CSAS in Collaboration with Swine Innovation Porc)**

- Dr. Vahab Farzan, University of Guelph – Gut microbiome, health, and growth performance in pigs
- Dr. Joshua Gong, Agriculture and Agri-food Canada (AAFC) Guelph – Gaps and tips in the development of probiotics for swine production
- Dr. Martin Lessard, AAFC Sherbrooke – Towards new feeding approaches for optimizing nutritional status, immunity and host-microbiota interactions in neonatal and weaned piglets
- Dr. Jérôme Lapointe, AAFC Sherbrooke – Impacts of different levels of dietary zinc oxide on mitochondrial energy metabolism and oxidative stress conditions in post-weaned piglets
- Dr. Daniel A. Columbus, Prairie Swine Centre – Functional amino acids to improve pig robustness

## **TUESDAY AFTERNOON**

### **Animal Health Symposium: Biosecurity Through the Lenses of Multiple Disciplines**

- Scott Merrill, University of Vermont – A systems approach to understanding biosecurity decision-making
- Lee Schulz, Iowa State University – Economic perspectives on biosecurity decision-making
- Timothy Sellnow, University of Central Florida – Communities of practices as preferred sources of biosecurity information in crisis situations
- Jeannette McDonald, TLCProjects, LLC – Educational tools promoting biosecurity through discovery learning

### **Horse Species Symposium: Microbiome Beyond the Gut**

- Dr. Eldin Jašarević, University of Maryland School of Medicine – Microbial origins in the developmental programming of offspring health
- Dr. Aaron Ericsson, University of Missouri Metagenomics Center (MUMC) – The gut microbiome and its influence on cognition and mental health: from zebrafish to horses
- Dr. Adam Moeser, Michigan State University, College of Veterinary Medicine – Early life factors shaping gut development and lifelong disease risk
- Dr. Dipti Pitta, University of Pennsylvania School of Veterinary Medicine – Understanding the role of the fecal bacterial microbiota in equine colic



# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## **Production, Management and Environment: Techniques for Livestock Production using Big Data, Artificial Intelligence, Smart Farming**

- Dr. Daniela Lourenco, University of Georgia at Athens – Genetics and Genomics Analysis in Livestock with Increasing Datasets
- Isabella Condotta, University of Illinois Urbana-Champaign – Precision Management of Animals: Image Processing and Computer Vision Applications
- Dr. Joao R. Dorea, University of Wisconsin-Madison – Harnessing the Power of Computer Vision System to Improve Management Decisions in Livestock Operations
- Dr. Tracy Jennings, Allflex Livestock Intelligence – Validation and Improvement of a Monitoring System Overtime and its Overall Capabilities

## **Ruminant Nutrition Symposium: Comparative Animal Micronutrient**

- Ramesh Selvaraj, The University of Georgia – Effect of trace minerals (25-hydroxycholecalciferol, Zinc and Manganese) supplementation on the immune responses of livestock
- Dr. Stephanie Hansen, Iowa State University – Vitamin C and transit stress in beef cattle
- Dr. Olivia Schroeder Genther, Purina Animal Nutrition, Land O'Lakes – Interactions between zinc, copper, and growth promoting technologies in beef cattle

## **WEDNESDAY, July 22, 2020 – MORNING**

### **Cell Biology Symposium: Best Practices for Omics Based Approaches in Animal Sciences**

- Dr. David Eckersall, University of Glasgow – Quantitative Proteomics in Animal and Veterinary Science: A Pipeline for Exploiting Advanced Analytical Technology
- Dr. Shengfa F. Liao, Mississippi State University – Application and Practices of RNA Sequencing for Understanding Transcriptional Regulation of Gene Expression by Dietary Nutrients or Feed Additives in Swine
- Dr. George Liu, USDA-ARS – Analyses of Inter-individual Variations of Sperm DNA Methylation and their Potential Implications in Cattle

### **Contemporary and Emerging Issues Symposium: Public Policy: New Ag Guide**

- Dr. Janeen Salak-Johnson, Oklahoma State University – The Ag Guide serves as a primary standard for animal scientists and AAALAC accreditation of Ag research programs
- Dr. Kelly Heath, University of Nebraska-Lincoln – How the IACUC uses the Ag Guide to ensure the best care
- Dr. Michael MacNeil, Delta G – Progress Report – Ag Guide 2020
- Dr. Gary Williams, Texas A&M AgriLife Research Station – Preparing a quality animal care and use protocol



# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## **Growth and Development Symposium: Improving the High-quality Animal-sourced Products**

- Dr. Joaquim Casellas, University Autonomous of Barcelona, Spain – Low-coverage whole-genome sequencing in local livestock breeds
- Dr. Manuel Juarez, Agriculture and Agri-Food Canada – Enhancing the nutritional value of red meats through genetic and feeding strategies
- Fabrizio Ceciliani, University of Milan, Department of Veterinary Medicine, Italy – The subclinical non-aureus staphylococcal mastitis in dairy cows: a lipidomics approach
- Dr. Marina Fortes, The University of Queensland, School of Chemistry and Molecular Biosciences, Brisbane, QS, Australia – Growth and pubertal development in tropical beef cattle

## **Nonruminant Nutrition Symposium: Amino Acid Nutrition in Monogastrics**

- Dr. Thomas Burkey, University of Nebraska-Lincoln – TBD
- Dr. John Htoo, Evonic – Amino acid nutrition in monogastrics: Going beyond the ideal protein

## **Production, Management and Environment: Application of Big Data, Artificial Intelligence, Smart Farming for Livestock Production**

- Dr. Alessio Cecchinato, University of Padova-Italy – Precision Phenotyping using Infrared Spectroscopy to Improve the Quality of Animal Products
- Roger Lyons, Werk Thoroughbred Consultants, Inc. – Making-Do When Big Data Isn't Big Enough: Limitations and pathways of possible development in the prediction of Thoroughbred racing performance as a breeding outcome
- Dr. Paul Greenwood, University of New England – Smart Farming for Extensive Grazing Ruminant Production Systems
- Dr. Ilan Halachmi, Volcani Center, Israel – Sensor Technology and Data Science Tools in Dairy Production: Individual feed efficiency, attenuating heat stress, health, and welfare aspects

## **WEDNESDAY AFTERNOON**

### **Beef Species Symposium: Liver Abscess (Sponsored by Elanco)**

- Dr. Brandon Reinbold, Elanco Animal Health – Updating the acidosis-rumenitis-liver abscess disease complex dogma of feedlot cattle
- Dr. Paul Morley, Director of Research VERO, West Texas A&M University – New insights on liver abscess syndrome in cattle using metagenomic investigations
- Dr. Ty Lawrence, West Texas A&M University – Bovine liver abscess complex: Likely causes and tested solutions



# 2020 ASAS-CSAS-WSASAS Virtual Annual Meeting & Trade Show July 19–23, 2020



## **Meat Science and Muscle Biology Symposium: Palatability of Beef Productions**

- Dr. Jerrad Legako, Texas Tech University – Beef Flavor Chemistry and How It Influences Sensory Perception
- Bridget Wasser, National Cattlemen's Beef Association – Palatability of Beef Products: A Perspective on Future Expectations
- Diana Clark, Certified Angus Beef – Branded Beef Program Response to COVID-19

## **Physiology and Endocrinology: Pregnancy Losses in Livestock**

- Dr. Vitor R.G. Mercadante, Virginia Tech University – Economic Consequences of Pregnancy Loss in Beef Cattle
- Ky G. Pohler, Texas A&M University – The Timing of Pregnancy Losses in Beef Cattle
- Dr. J. Lannett Edwards, University of Tennessee – Heat-induced Hyperthermia; Foe or Friend?
- Dr. Rodney D. Geisert, University of Missouri-Columbia – Early Embryonic Loss is an Important Mechanism for Maximizing Litter Size in the Pig

## **Ruminant Nutrition Symposium: New Frontiers in Ruminant Nutrition**

- Matthew Crouse, North Dakota State University – Micronutrients, One-Carbon Metabolism, and Epigenetics: Potential Developmental and Production Outcomes
- Dr. Shawn Archibeque, Colorado State University – Linking Nutrition, Production and Environmental Aspects of Ruminant Livestock Production
- Dr. T. G. Nagaraja, Kansas State University – Nutrition and the Ruminal Microbiome; Emerging Frontiers from an Old Friend
- Dr. Gerald Huntington, North Carolina State University – Past, Present, and Future of Protein Nutrition and N metabolism in Ruminants

## **Swine Species Symposium: Mortality in Pigs**

- Dr. Chris Hostetler, National Pork Board – Impact of pig mortality on U.S. pig producers
- Dr. Jason Ross, Iowa State University – Towards improving pig livability: Strategies to understand and mitigate sow mortality
- Dr. Mike Tokach, Kansas State University – Opportunities to enhance wean-to-finish swine survival
- Dr. Janet Remus, DuPont Animal Nutrition – Using nutrification to improve robustness in pigs