MONDAY, JANUARY 28

7:00AM-6:00PM Registration Open

8:00AM-11:00AM CPD #1 – Lightweight Metals in Agricultural Equipment
Instructor: Mesut Varlioglu, John Deere
Location: 3501 C
Aluminum, magnesium and titanium alloys are commonly used lightweight metals to reduce the weight, carbon emission and fuel consumption of the structural designs in aerospace and automotive industries. The objectives of this educational session are to explain the importance of lightweight designs in agricultural equipments, to increase the level of knowledge in the design, manufacturing, service performance of lightweight metals and discuss the major obstacles of using lightweight metals in designing cost-effective and structurally safe agricultural equipments.

8:00AM-11:00AM CPD #2 – CAN Bus
Instructors: Matt Darr, Iowa State University; Scott Shearer, Ohio State University
Location: 3501 A
TARGET AUDIENCE: Engineers with limited background in CAN systems, Researchers involved with machinery logistics.
LEARNING OBJECTIVES: a) Understand basic concepts and terminology of CAN bus systems, b) Utilize commercial hardware and software products to analyze and collect CAN bus data, c) Investigate CAN filtering and data management for machinery logistics evaluation, d) Understand the role of standards in industrial CAN system.
BENEFITS: CAN bus data systems are an integral part of all production ag machinery today. Data available over CAN networks provides tremendous value in assessing the logistics and productivity of ag machinery. This workshop is targeted towards engineers and researchers with a general background in ag vehicle electrical systems, but little prior knowledge of CAN systems. The workshop objectives are to provide an understanding of general CAN concepts, terminology, and implementation while also demonstrating commercial solutions for interaction with CAN systems. Specific topics to be covered include CAN message definition, processing and evaluating CAN data, overview of physical wiring and harness connections for capturing CAN data, sending data on CAN networks, understanding the limits of CAN systems, and the role of CAN standards in ag machinery. Commercial CAN data acquisition software will be demonstrated. Attendees are encouraged to bring along a laptop to run a trial version of the data acquisition software. Case study examples will demonstrate CAN use for biomass harvest machinery logistics, combine productivity analysis, and CAN based control system design.

8:00AM-9:00PM Committee Meetings

10:30AM-11:30AM Suppliers and Consultants Session
Design Project Presentations
Location: 3501 C
Does your company serve or is looking to serve the agricultural equipment industry? Does your company have a new or unique process or product? Come exhibit what your company has to offer at the Suppliers and Consultant’s Display at ASABE’s Agricultural Equipment Technology Conference (AETC) in Kansas City, MO. This conference leads up to the Ag Connect Expo and has attendees from equipment OEMs from throughout the United States and Canada.

11:00AM-12:00PM Electronic Poster Session
Location: 3501 E&F
Poster #1
Title and Presenter
1 Improvement and Evaluation of a Mechanical Harvester for Sweet Cherry
Peter A. Larbi, Washington State Univ, Prosser, WA (Peter A. Larbi, Manoj Karkee, Suraj Amatya, Qin Zhang, Matthew D. Whiting)
12:00PM-1:30PM  AE50 Recognition Luncheon  
Location: 3501-G-H Level 3 Great Hall

1:30PM-3:00PM  Tech Session #1 – AE50 Showcase #1  
Moderator: Brian Huenink  
Location: 3501 C
Each year the AE50 recognition awards honor companies offering the best engineered products for agricultural, food, biological and related systems. These companies continue to push the envelope of new equipment design through innovation. The AE50 products featured in this session were new to the marketplace in 2012, and all have the potential for a broad impact in their area of industry. This is an excellent opportunity to learn of new features incorporated into these products and share a portion of their journey to the marketplace. The session is open to all and will feature presentations on a sampling of those products receiving 2012 AE50 awards.

1:30PM  Introduction
1:35PM  BigBaler Series Large Square Baler  
Kevin Richman, CNH
1:55PM  TBA  
Claas
2:15PM  TBA  
Claas
2:35PM  TBA  
Claas

1:30PM-3:00PM  Tech Session #2 – Irrigation  
Moderator: Garrett Pommeranz  
Location: 3501 A
This session will overview standards, conservation, and mechanization currently influencing irrigated agriculture.

1:30PM  Introduction
1:35PM  Engineering Development of Valley VRI and Agronomic Sciences  
Jacob LaRue, Valmont Irrigation
1:55PM  Current Agricultural Irrigation Standards  
Travis Tsunemori, ASABE Headquarters
2:15PM  Enhancing Water Conservation and Crop Productivity in Irrigated Ag  
Kelly Thorp, USDA ARS
2:35PM  Regenerative Water Use with Mechanized Irrigation Systems  
Andy Smith, Reinke Manufacturing Company

3:00PM-3:15PM  Break

3:15PM-5:15PM  Tech Session #3 – AE50 Showcase #2  
Moderator: Brian Huenink  
Location: 3501 C
Each year the AE50 recognition awards honor companies offering the best engineered products for agricultural, food, biological and related systems. These companies continue to push the envelope of new equipment design through innovation. The AE50 products featured in this session were new to the marketplace in 2012, and all have the potential for a broad impact in their area of industry. This is an excellent opportunity to learn of new features incorporated into these products and share a portion of their journey to the marketplace. The session is open to all and will feature presentations on a sampling of those products receiving 2012 AE50 awards.

3:15PM  Introduction
3:20PM  ML Series Air Drill  
Adam Reid, Buhler Industries, Inc.
3:45PM  ABS Super-Steer for New Holland T7  
Chris Carrier, New Holland Agriculture
4:10PM  TBA  
John Deere
4:35PM  TBA
3:15PM-5:15PM  
Tech Session #4 – Custom Harvesting

Moderator: Chad Yagow
Location: 3501 A

Come join us to learn the ins and outs of custom harvesting. Representatives from both the customer and manufacturer segments will be represented providing information about day-to-day operation, customer support, available technologies, and the custom harvester community. Both grain and forage harvesting will be represented.

3:15PM  
Introduction

3:20PM  
John Deere Harvest Support Team
Mike Barnett, John Deere Harvester Works

3:45PM  
Self Propelled Forage Harvester Technology
Bob Armstrong, CLAAS

4:10PM  
Custom Harvesting Through the Eyes of a Nebraska Wheatie
Tracy Zeorian, US Custom Harvesters Inc.

4:35PM  
Harvesting the Crops that Feed the World
Kent Braathen, US Custom Harvesters Inc.

5:30PM-6:30PM  
Career Fair
Location: 3501 E&F

5:30PM-9:00PM  
Industry Reception
Location: 3501 G&H

TUESDAY, JANUARY 29

7:00AM-12:00PM  
Registration Open

8:00AM-9:00AM  
Distinguished Lecture
Moderator: Kevin Smith
Location: 3501 C

“Tractor Power for Implement Operation – Mechanical, Hydraulic, and Electrical – An Overview”
Authors: Dr. Joachim Sobotzik, Kenneth J. Stoss, Jody P. Roades, Dennis A. Bowman, Michael D. Kollath, Edwin R. Kreis

It is well understood that the main function of tractors is to provide drawbar power to implements either to through the single point connection known as the drawbar or through the 3 point hitch. Early tractors essentially replaced horses and other draft animals to do work. Also, over the years, tractors have been called upon increasingly to provide other forms of power transfer to power and control implement functions. This lecture looks at other power usages and requirements focusing primarily on mechanical means such as the PTO, tractor hydraulic systems, and more recently through transfer of electrical power.

A historical prospective is provided for each form of power. One of the themes developed is how tractor and implement manufacturers can exploit available tractor power to improve efficiencies of the tractor implement system that will be beneficial to the end user of the equipment. Also the advantages and disadvantages of each type of power transfer will be discussed. Also relevant standards and current practices will be also discussed as well as some future trends.

9:00AM-11:30AM  
Tech Session #5 – Tire Technology
Moderator: Neal Stoffel
Location: 3501 A

This session will consist of 4-5 suppliers of tires and/or traction devices to the agricultural/industrial market. They will present information on the present state of development of agricultural tires, tracks and further
Discuss the impact and testing of soil compaction on the design and development of agricultural machinery.

9:00AM  Introduction

9:05AM  Fighting Soil Compaction with Tire Technology and Central Tire Inflation
Ken Brodbeck, Firestone Farm Tires

9:30AM  Management of Compaction in Agricultural Fields
Randy L. Raper Ph.D, Oklahoma Agricultural Experiment Station

9:55AM  CLAAS Gen 3 Terra Trac System
Dr. Hagen Adam, CLAAS Industrietechnik

10:20AM  Advancements in Radial Tire Technology that Benefit Today’s Farmers
Bob Rees, North American OE Technical Manager - Agriculture

10:55AM  Titan Tire Works to Reduce Subble Damage
Scott Sloan, Titan International

9:00AM-11:30AM Tech Session #6 – Standards
Moderator: Kevin Wilkening
Location: 3501 C
This session will overview key standards development activities and regulations pertaining to agricultural equipment. This year’s session will once again include international perspectives as well as provide detailed updates on key North American initiatives.

9:00AM  Introduction

9:05AM  Evolving European Standards & Regs: The German Perspective
Norbert Alt, VDMA

9:30AM  Evolving European Standards & Regs: The UK Perspective
Keith Hawken, Agricultural Engineers Association

9:55AM  Air Quality Systems For Agricultural Cabs
Richard Job, Richard W Job Associates LLC

10:20AM  US Lighting and Marking Legislative Update
Nick Tindall, AEM

10:45AM  Standardizing the Format of Standards: A Sneak Peek at the ASABE Standards Template
Cale Boriack, CNH

11:30AM-1:30PM Luncheon – Keynote Speaker – Barry Nelson, John Deere
“Importance of Agriculture & New Technology”
Location: 3501-G-H, Level 3 (Great Hall)

1:30PM  AgConnect Trade Show Preview Day and VIP Event

WEDNESDAY, JANUARY 30
7:00AM-12:00PM Registration Open

8:00AM-10:00AM Tech Session #7 – Utility Tractors
Moderator: Travis B “Rusty” Unterzuber
Location: 3501 A
The utility tractor market is both a high volume and globally diverse market. These 30 to 75 kW tractors are used in almost every conceivable application with numerous implements and attachments under a full range of environments.

The purpose of this session is to provide an overview of the size and variability of this market including the range of technology to match each region. The discussion will include factors that determine what level of technology is accepted as well as the anticipated technology growth in emerging markets.

8:00AM-10:00AM Tech Session #8 – Livestock Handling
Moderator: Andy Lenkaitis
The Livestock Technology session will look at equipment used in feeding and manure handling of livestock facilities. Feed quality is critical to proper animal growth and development; manure handling methods have evolved to make efficient use of every nutrient being applied. Additionally, EPA will discuss environmental regulations affecting manure application and water quality. Livestock housing and advanced manure treatment will round out the panel.

8:00AM  Introduction
8:05AM  Feed Quality Technology at CLAAS
        Matt Jaynes, Claas
8:30AM  Manure Application Equipment and Technology
        Ben Puck, Puck Customer Enterprises
8:55AM  Livestock Facilities, Manure Transfer, Processing and Application
        Andy Lenkaitis, GEA Farm Technologies
9:20AM  TBA

9:00AM-4:30PM  AgConnect Trade Show
10:00AM-10:15AM  Break

10:15AM-12:00PM  Tech Session #9 – Supplier Showcase
Moderator: Neal Stoffel, Kondex Corporation
Location: 3501 A
AETC 2013 will again feature some of the world’s finest agricultural equipment component/systems manufacturers and distributors. These companies will be presenting the newest innovations and most up-to-date information on a variety of agricultural machinery systems of interest to attendees. The supplier companies presenting will also have tabletop displays of their products, literature and contact information. Don’t miss out on this opportunity to learn about the latest developments, from the world’s best agricultural OEM suppliers.

10:15AM  Introduction
10:20AM  CLAAS Industrietechnik Technology Overview
        Thomas Spiering, CLAAS Industrietechnik
10:45AM  MICHELIN® YieldBib™
        Meredith Rigdon, Michelin North America
11:10AM  ISOLynx Precision Ag Suite
        Djamel Khali, Ally Precision Industries LLC
11:35AM  WatchDog® Cellular Alert
        Mike Thurow, Spectrum Technologies, Inc.

10:15AM-12:00PM  Tech Session #10 – Farm Management Info Systems
Moderator: Joe Luck
Location: 3501 C
Farm Management Information Systems (FMIS): Many manufacturers offer these solutions. The goal of this session is to offer a balanced view of these solutions to include a users’ perspective. The uses will go beyond field guidance and control systems. It includes records management, business planning, cash flow projections, decision making, and equipment utilization.

10:15AM  Introduction
10:20AM  Data Management...expectations and needs at the farm
        John Fulton, Auburn University
10:45AM  CLAAS Farm Management System Approach
        Reinhold Maehler, Claas of America, Inc.
11:10AM  TBA
        John Mann, John Deere

7:00PM-9:00PM  AETC Planning Committee Dinner Meeting