**North Carolina ASABE State Section Meeting, October 26, 2018**

**158 Weaver Labs, NC State University Campus, Raleigh, NC**

7:30-8:00 AM – Registration

8:00-8:15 AM – Call to Order and Introductions – Richard Currin, President

Keynote Address

* 8:15-9:00 AM – “The Nebraska Tractor Test Lab – Past, Present and Future”, Roger Hoy, UNL Tractor Testing Laboratory

Updates on BAE Programs & Initiatives

* 9:00-9:15 AM – Brief Update on NC State University Biological & Agricultural Engineering Program, Garey Fox
* 9:15-9:30 AM – Brief Update on NC A&T State University Biological Engineering Program, Niroj Aryal, NC A&T State University
* 9:30-9:45 AM – NSF CREST Bioenergy Center, Abolghasem Shahbazi, NC A&T State University

Break – 9:45-10:00 AM

Big Data Applications in Biological & Agricultural Engineering

* 10:00-10:20 AM – “From Description to Prescription: The Role of Analytics in Data-Driven Resource Management” – Natalie Nelson
* 10:20-10:40 AM – "Multi-Scale Approach to Sustainable Animal Waste Management" – Mahmoud Sharara
* 10:40-11:00 AM – “The Machines are Talking: Big Data in Agricultural Field Operations” – Jason Ward
* 11:00-11:20 AM – “Drone Data – How much resolution is enough?” – Bobby Vick (Precision Hawk)
* 11:20-11:40 AM – “Challenges and Rewards of Acquiring High Frequency Water Quality Data” – François Birgand

Ethics

* 11:40-12:10 PM – North Carolina Board of Examiners for Engineers and Surveyors (David Evans)

Lunch with Student Club Updates – 12:10-1:30 PM

* 12:40-12:50 PM – Graduate Student Association
* 12:50-1:00 PM –  Alpha Epsilon
* 1:00-1:10 PM – Pack Pullers
* 1:10-1:20 PM –  ASABE Student Club at NC A&T
* 1:20-1:30 PM –  ASABE Student Club at NC State

1:30-1:45 PM - Break

1:45-2:30 PM – Business Meeting for NC State Section Members

2:30-4:30 PM – ASABE Student Club Poster Session & Research Poster Session

**Posters:**

1. “The design and implementation of the real-time water table management system in eastern North Carolina”, Ehsan Bagheri, NC State University
2. “Socioeconomic and demographic effects on influenza rates in North Carolina”, Dara Bradley, NC A&T State University
3. “Nutrient Concentration of Liquid Swine Manure by Vacuum Evaporation”, Alison Deviney, NC State University
4. “Evaluating the ecological function of restored streams in piedmont, North Carolina using the stream quantification tool”, Sara Donatich, NC State University
5. “Impact of preferential flows on contaminant transport through riparian buffers”, Dr. Lucie Guertault, NC State University
6. “Insights from intensive water quality sampling with high spatial-temporal resolution in a drained agricultural field in Eastern North Carolina, USA”, Wenlong Liu, NC State University
7. “Spatiotemporal reconstruction of historical swine CAFO spread in North Carolina”, Lise Montefiore, NC State University
8. “Fabrication and Evaluation of a Low-Cost Wi-Fi Soil Moisture Sensor”, Kaelin Saul, NC State University
9. “A novel heated optical fiber approach for high resolution measurement of soil moisture content without soil-specific calibration”, Mahmoud Shehata
10. “Mitigating environmental stress for enhanced broiler production performance and welfare”, Derek West, NC State University
11. “Evaluation of a landscape fabric based solar air heater in a pig nursery”, Li Yu, NC State University