

Fifth Annual Renewable Energy Conference



October 14th, 2016

Spring River Room, Reng Student Union



ARKANSAS STATE
UNIVERSITY

Agenda

8:30 am – 9:00 am

Registration and Breakfast, Alumni Lounge

Session I: 9:00 am – 10:30 am

Moderator: Rajesh Sharma

9:00 am Lynita Cooksey, Provost and Vice Chancellor for Academic Affairs and Research, Arkansas State University

Welcome address

9:05 am Timothy Burcham, Dean, College of Agriculture Engineering & Technology

Opening remarks and Introduction of Keynote speaker

9:10 am John Pratte, Dean, College of Science and Mathematics

Water, Water, Everywhere: A History of Hydropower

9:30 am Morrill Harriman, Mitchell Williams Law firm, Little Rock, AR

Follow The Money-Investment Trends In Renewable Energy

9:50 am James Talley/ Pete Marte, Hannah Solar, LLC, Atlanta, GA

Solar Development for Community Facilities

10:10 am Wayne Galli, Ph.D., P.E., Executive Vice President, Transmission and Technical Services, Clean Line Energy Partners, Houston, TX

High-Voltage Direct Current: America's Pathway to a Sustainable Future

10:30 am – 10:45 am

Break, Alumni Lounge

Session II: 10:45 am – 12:00 pm

Moderator: Steve Green

10:45 am Tami Hornbeck, Community Facilitator for Communities Unlimited and Members of the newly formed Delta Bioenergy Cooperative

Delta Bioenergy: Sustainable Energy, One Town at a Time

11:00 am Laura Tucker, Energy Coordinator, United States Department of Agriculture, Little Rock, AR

Rural Energy for America

11:15 am J D Lowery, Arkansas Electric Cooperative

Serving Rural Arkansas with Renewable Energy

11:30 am Warren Nevad, Director, TREEDC

Bringing Tennessee Renewable Energy to the Philippines

11:45 am Sandeep Pednekar, CEO, Renewable Energies Inc,

The future of Renewable Energy here..now

12:00 pm – 1:30 pm Lunch and Poster Session, Centennial Hall

12:30 pm Doug Whitlock, Chancellor, Arkansas State University, Jonesboro

Introduction of Luncheon Speaker

Luncheon Speaker: Mark Stodola, Mayor of Little Rock, AR

1:00 pm Visit conference exhibits – Heritage Plaza

Session III: 1:30 pm – 2:30 pm

Moderator: Greg Phillips

1:30 pm Lionel Hewavitharana, Ph.D., Southern Arkansas University, Magnolia, Arkansas; Kris Graves, Nick Avellino, Cody Martinek, Angelo Rosado and Addi Stone, University of Central Florida, Orlando, Florida

Design, Construction, and Testing of a Solar Energy Based Batch Grain Dryer-A Complete Senior Design Experience

1:45 pm Dustin Chudy, Arkansas State University, Jonesboro, AR

Prosperity Through Energy Efficiency and Renewable Energy

2:00 pm Song Feng, University of Arkansas, Christopher A. Craig, Montana State University Billings

Utility organization management of residential energy efficiency programs in the United States: The impact of climatic variability

2:15 pm Richard Segall, College of Business and Engineering Management Program, Arkansas State University, Jonesboro, AR

Energy Conservation and Economics by Assessing Water Quality of a Waste Treatment Plant

2:30 pm – 2:45 pm

Break, Alumni Lounge

Session IV: 2:45 pm – 4:00 pm

Moderator: Kevin Humphrey

2:45 pm Hyunju Jeong, College of Engineering, Arkansas State University, Jonesboro, AR 72467, Heidi L. Sieverding, and James J. Stone, Department of Civil and Environmental Engineering, South Dakota School of Mines and Technology, Rapid City, SD 57701, USA

Optimization model for biodiesel supply chain and infrastructure development in the Northern Great Plains region

3:00 pm Ashokkumar M. Sharma, Dept. of Engineering Technology, University of Arkansas at Little Rock, Little Rock, AR 72204, USA, Yuan Xue, Bioeconomy Institute (BEI), Iowa State University, Ames, Iowa 50011, USA, Xianglan Bai, Department of Mechanical Engineering, Iowa State University, Ames, Iowa 50011, USA

Low pressure catalytic pyrolysis of lignin using bifunctional catalysts

3:15 pm Turaj Ashuri, and Bruce Chehroudia, Department of Mechanical Engineering, Muhammad Khan, Department of Electrical Engineering, Arkansas Tech University, Russellville, AR 72801, USA

Real-time Optimization of Wind Turbine Energy Capture using Extremum Seeking Controls

3:30 pm Dr. Robert L. Straitt, CEM,CDSM MAREH, Nadine L. Straitt, Arkansas State University, Jacob Holloway, New Mexico State University-CES

Waste to Energy, The Other Renewable Fuel, Natural Methane.

Preserving the environment with a safe and clean fuel base that can meet the needs off an ecologically minded society

3:45 pm Peter Ako Larbi, College of Agriculture and Technology, Arkansas State University, Jonesboro, AR, and Manoj Karkee, Center for Precision and Automated Agricultural Systems, Biological Systems Engineering Department, Washington State University, Prosser, WA

A Study on Fuel Economy of a Mechanical Sweet Cherry Harvester

4:00 pm Conference adjourns

POSTER SESSION: Centennial Hall

- 1 *Investigation and Development of a Battery-Buffered Smart Load for Primary Frequency Control*
Ahmed Zurfi, Student Member, IEEE and Jing Zhang, Member, IEEE
Department of Systems Engineering, University of Arkansas at Little Rock, Little Rock, AR 72204, USA
- 2 *Nano structures for solar light-mediated hydrogen production*
Rajesh Sharma, Senior Member, IEEE and Samuel King
College of Agriculture and Technology, Arkansas State University, Jonesboro, AR
- 3 *Greenhouse Gas fluxes over Arkansas Rice Varieties*
Brett Hale, College of Agriculture and Technology, Arkansas State University, Jonesboro, AR
- 4 *Analysis of Feruloylated Arabinoxylan Oligosaccharides Isolated from Rice Bran Fiber*
Kan Takahashi¹, Thomas Teoh¹, Jianfeng (Jay) Xu^{1,2}, and Brett J. Savary^{1,2}
¹Arkansas Biosciences Institute; and ²College of Agriculture and Technology; Arkansas State University, Jonesboro, AR
- 5 *Thermostable Enzyme Technology for Improved Sugar Beet Biomass Processing*
Jose C. Tovar¹, Megan Cease¹, Jianfeng (Jay) Xu^{1,2}, and Brett J. Savary^{1,2}
¹Arkansas Biosciences Institute; and ²College of Agriculture and Technology; Arkansas State University, Jonesboro, AR
- 6 *Verification of Temperature Sensor Readings Obtained from Game and Trail Cameras*
Cyrus Dean Marbaniang*¹, Kumar Bade¹, Chin Nee Vong¹, Peter Ako Larbi*^{1,2}
Arkansas State University, College of Agriculture and Technology, Jonesboro, AR
- 7 *Preliminary study on relationship between NDVI from a crop sensor and AGRI vegetation index from RGB images in different crops*
Kumar Bade*¹, Cyrus Dean Marbaniang¹, Chin Nee Vong¹, Peter Ako Larbi*^{1,2}
¹Arkansas State University, College of Agriculture & Technology, Jonesboro, AR
²University of Arkansas, Division of Agriculture, Fayetteville, AR
- 8 *Sprayer Rate Controller Performance Test*
Chin Nee Vong¹, Peter Ako Larbi^{1,2}
¹Arkansas State University, College of Agriculture and Technology, ²University of Arkansas, Division of Agriculture
- 9 *Performance Investigations in using Biofuel in a Mini Gas Turbine*
Justin Vanhooose, Mahbub Ahmed, Lionel Hewavitharana, Dakotah Cooper, Gija Geme, Scott McKay
Southern Arkansas University, Magnolia, AR 71753
- 10 *Performance Investigations in Vertical Axis Wind Turbine*
Justin Vanhooose, Daniel McKague, Mahbub Ahmed, Lionel Hewavitharana
Southern Arkansas University, Magnolia, AR 71753

Sponsored by

College of Agriculture & Technology

Arkansas State University

Jonesboro, AR 72467

Co-sponsors



**Electric Cooperatives
of Arkansas**

We Are Arkansas



**Craighead Electric
Cooperative Corporation**

Your Touchstone Energy® Cooperative 

Jonesboro · Paragould · Walnut Ridge