CONFEREENCE PROGRAM DETAILS

Wednesday, 19 September 2012

6:00-8:00 pm  Meramec/Gasconade Rooms, Havener Student Center
Welcoming Reception

Thursday, 20 September 2012

8:00-9:00 am  St. Pat’s A Room, Havener Student Center
Welcome by Dr. W. Kent Wray, Provost, Missouri S&T
Plenary: A Two-Year Experience to ABET Accreditation
Thomas A. McGovern (St. Louis Community College)

9:10-10:00 am  Track I  K-12 Outreach  St. Pat’s A Room
Session Moderator: TBD
9:10 am  Robotics Outreach Programs in a College of Engineering
Eric Mead, Karen Reynolds, & Lawrence Whitman (Wichita State U.)
9:35 am  Roller Coaster Tycoon 3 as a Performance Based Learning Tool under Common Core State Standards for Middle School and High School
Melissa Miller, Randall Reynolds, & Ed Pohl (U. of Arkansas)

9:10-10:00 am  Track II  No Session  Missouri Room
Setup Time for Student Design Poster Session

9:10-10:00 am  Track III  Course Design  Silver & Gold Room
Session Moderator: TBD
9:10 am  A Comparison of Student Performance in an Online, Hybrid, and Traditionally Delivered Numerical Methods Course
Michael Reynolds (U. of Arkansas – Fort Smith)
9:35 am  Software Education for Changing Computing Technology
Benjamin Cooper (CMC Technologies Limited LLC) & Steve E. Watkins (Missouri S&T)

10:00-10:30 am  Break  Meramec/Gasconade Rooms
**Track II Student Design Poster Session Missouri Room**

Session Moderator: Douglas Carroll (Missouri S&T/ Missouri State U.)

* **Application of Inquiry-Based Learning in Summer Engineering Programs: Acid Hydrolysis of Sugars from Biomass**
  Amy McGraw, Edgar C. Clausen, Jamie A. Hestekin, & Ralph E. Martin (U. of Arkansas)

* **Synthesis of New Derivatives of Rhodanine Dyes for Dye-Sensitized Solar Cells (DSSCS)**
  Boufarer Tahar, Rahmouni Mostapha, Mir-Kasmi Souad, Djillali Karim (Saad Dahleb University of Blida, Algeria)

* **Selective Source AC/DC Power Supply**
  Charles Wright, Reza Ahmadi, Amshumaan Raghunatha Kashyap, Anagha Rayachoti, Alberto Berrueta Irigoyen, & Jonathan W. Kimball (Missouri S&T)

* **Design of a Motor Control Board for the NASA Lunabotics Mining Competition**
  Chris Farnell, Brett Sparkman, & Scott C. Smith (U. of Arkansas)

* **A Novel Electric Vehicle Drive System**
  Christopher C. Arnold & Kevin T. Tran (U. of Arkansas – Fort Smith)

* **Weight Reduction Methods for the SAE Aero Design Competition**
  Christopher James, & B. Terry Beck (Kansas State U.)

* **Design of an Antipodal Vivaldi Antenna for use in a Bi-Static Linear Array**
  Sarah Hatfield, Daniel Schultz, Kristen M. Donnell, & Mohammad Tayeb Ghasr (Missouri S&T)

* **Solar-Powered Game Camera Support System**
  David C. Macke Jr., Adam Reab, Tyler Allen, Jeffrey Keener, & Steve E. Watkins (Missouri S&T)

* **Laboratory Experiments for Introductory and Advanced VLSI Courses**
  Hui Geng, Daryl G. Beetner, & Yiyu Shi (Missouri S&T)

* **MMDAvatar – An Online Voice Chat Robot with 3D Avatar and Artificial Intelligence**
  Jianming Liu & Steven L. Grant (Missouri S&T)

* **Demonstration of the Benefits of Asynchronous vs. Synchronous Circuits**
  Justin Roark & Scott C. Smith (U. of Arkansas)

* **Testing the Susceptibility of a High-Speed Integrated Circuit**
  Ludovic V. Grivault, Matthew J. Gualdoni, & Daryl G. Beetner (Missouri S&T)

* **A New Approach to Student Design (Mars Rover Design Team)**
  Michael Bouchard & Kristen M. Donnell (Missouri S&T)

* **Electron Beam Coupling Efficiency in EBF**
  Rodney M. Clayton (Missouri S&T)

* **Energy Gathering Autonomous Mobile Robot**
  Taylor Clonts, Stephen Moerer, & Steve E. Watkins (Missouri S&T)

* **Pump Cavitation Demonstration Device**
  J. Brighter, W. Childs, D. Mobbs, & Z. Ross (Arkansas Tech U.)
10:30-11:45 am  **Track I Electronic Resources St. Pat’s A Room**  
Session Moderator: TBD  
10:30 am  
*Enhancing the Distant Classroom Experience using NUVIEW*  
Brett Meyer, Timothy Wei, David Jones, & Stuart Bernstein (U. of Nebraska-Lincoln)  
10:55 am  
*On Demand Lecture Content for Online Courses using Boogie Board Rip™ and Jing™ Screen and Audio Capture*  
Ronny Galloway (Pittsburg State U.)  
11:20 am  
*Possible Extension for Electronic Media in the Revised Applications*  
Takao Ichiko (Yamagata National U., Japan)  

10:30-11:45 am  **Track III Course Projects Silver & Gold Room**  
Session Moderator: TBD  
10:30 am  
*A Transient Experiment to Determine the Heat Transfer Characteristics of a 100W Incandescent Light Bulb, Operating at 48W*  
Ed Clausen, Lauren Cole, Lindsay Hoggatt, Jamie Sterrenberg, David Suttmiller, & Roy Penney (U. of Arkansas)  
10:55 am  
*Design and Testing of Wireless Power Transmission*  
Andrew Matthews, Cagatay Mitil, Byron Okine, Derek Marzolf, & W. J. Wilson (U. of Central Oklahoma)  
11:20 am  
*An Incremental Measurements and Data Acquisition Project*  
Lawrence Boyer (St. Louis U.)  

12:00 noon-1:30 pm  **Luncheon Meramec/Gasconade Rooms**  
Section Chair Theresa Swift (Missouri S&T)  

1:45-3:00 pm  **Track I Faculty Issues St. Pat’s Room**  
Session Moderator: TBD  
1:45 pm  
*Establishing a Faculty Development Focus at a Public Technological Research University*  
Diane Hagni & Harvest Collier (Missouri S&T)  
2:10 pm  
*How a Sabbatical can be used to improve Course(s) Instruction*  
Kevin Lewelling (U. of Arkansas - Fort Smith)  
2:35 pm  
*Student Satisfaction with ASEE Activities and its Impact on ASEE Student Membership*  
Adam R. Carberry (Arizona State U.), Dan Bumblauskas (U. of Missouri-Columbia), Alexandra Coso (Georgia Tech), & Ana Torres-Ayala (U. of South Florida)  

1:45-3:00 pm  **Track II Curricula Missouri Room**  
Session Moderator: TBD  
1:45 pm  
*Learning by Engagement and Empowerment – A Pragmatic Approach to Enhance Student Engagement in a Service Course and Developing Relevance of such a Course to their own Majors*  
Bijaya Shrestha (Missouri S&T)  
2:10 pm  
*Designing a Theme-based Introduction to Engineering Course Sequence*  
Kellie Schneider, Heath Schluterman, & Richard Cassady (U. of Arkansas)
2:35 pm  Applying a Structured Development Process to an Entrepreneurial-based Capstone Design Course
Clark Shaver, Crayton Caldwell, & James Lookadoo (Pittsburg State U.)

1:45-3:00 pm  Track III Methodologies Silver & Gold Room
Session Moderator: TBD
1:45 pm  Multimedia Cone of Abstraction – Process Burners Case Study
Charles Baukal, Jr. (John Zink Institute), Floyd Ausburn, & Lynna Ausburn (Oklahoma State U.)
2:10 pm  Assessment Practices for Team-based Learning in Sophomore-level Courses
Robert M. O’Connell (U. of Missouri-Columbia)
2:45 pm  A Reverse Case Study of Mechanical Failures
Jeffrey Thomas (Missouri S&T)

3:00-3:30 pm  Break Meramec/Gasconade Rooms

3:30-4:20 pm  Track I Distance Learning St. Pat’s A Room
Session Moderator: TBD
3:30 pm  A Look Back – The First Four Years of the MST/MSU Cooperative Engineering Program
Robert Egbert (Missouri State U.) & Douglas Carroll (Missouri S&T)
3:55 pm  Distance Education allows Small Liberal Arts Colleges to Offer ABET-Accredited Degrees in Chemical, Civil, Electrical, and Mechanical Engineering
Darrin Muggli (Benedictine College) & Brian Tande (U. of North Dakota)

3:30-4:20 pm  Track II eLearning Missouri Room
Session Moderator: TBD
3:30 pm  Assessment of an Individualized, Self-Contained System in Electrical Circuits Laboratory
Edward Carl Greco, Jr. & Jim Reasoner (Arkansas Tech U.)
3:55 pm  Incorporating Inquiry-based Projects into the Early Lab Experience
Ed Clausen & Shannon Servoss (U. of Arkansas)

6:00-6:30 pm  Banquet Reception Miner Lounge, Havener Student Center

6:30 pm  Banquet St. Pat’s A Room Havener Student Center
Conference General Chair Steve E. Watkins (Missouri S&T)

9:00 pm  Midwest Section Executive Committee
Silver & Gold Room Havener Student Center
Section Chair Theresa Swift (Missouri S&T)
Friday, 21 September 2012

7:30-8:00 am Midwest Section Campus Representatives Meeting  
Missouri Room Havener Student Center  
Section Campus Representative Chair  
Clark Shaver (Pittsburg State U.)

8:00-9:20 am Carver/Turner Rooms, Havener Student Center  
Plenary: *First things first. First an engineering student; then an engineer*  
Dr. Raymond B. Landis (Dean Emeritus, California State University, Los Angeles)

9:30-10:20 am Track I Learning with Video Carver/Turner Rooms  
Session Moderator: TBD  
9:30 am *Video Surveillance Analysis as a Context for Embedded Systems and Artificial Intelligence Education*  
M. Ryan Bales (Georgia Tech Research Institute) & Steve E. Watkins (Missouri S&T)  
9:55 am *Using Student-Produced Videos to Enhance Learning Engagement in a Chemical Engineering Thermodynamics Course*  
Douglas Ludlow (Missouri S&T)

9:30-10:20 am Track II Grading Missouri Room  
Session Moderator: TBD  
9:30 am *Using Moodle for Algorithmic Grading of Homework Assignments*  
R. Fithen (Arkansas Tech U.)  
9:55 am *My War on Cheating*  
Christi Patton Luks (U. of Tulsa)

10:20-10:40 am Break Meramec/Gasconade Rooms

10:20-11:55 am UAV Student Poster Session Meramec/Gasconade Rooms  
* Missouri S&T UAV Team  
David C. Macke Jr. & Steve E. Watkins (Missouri S&T)  
* University of Kansas Aerospace Engineering Flight Systems Research  
Alec Bowman, Chris Hedden, Gonzalo Garcia, & Ryan Lykins (U. of Kansas)

10:40-11:55 am Track I Global Learning Carver/Turner Rooms  
Session Moderator: TBD  
10:40 am *Solar Water Heaters for Showers and Sinks: An EWB-USA Project*  
Christi Patton Luks, Laura Ford, & Weston Kightlinger (U. of Tulsa)  
11:05 am *Teaching Pre-Engineering Education in the Global Environment using Professional Engineering Process*  
Marcus Chu & Ruth-Miriam Garnett (Capella U.)  
11:30 am *Global Engineering Program Mission Statement Development*  
Lisa Anneberg & Harold Josephs (Lawrence Technological U.)
10:40-11:55 am  Track II Nanotechnology Missouri Room
Session Moderator: TBD
10:40 am  
Teaching an Undergraduate Nanotechnology Course Online
Alexey Yamilov (Missouri S&T)
11:05 am  
Sustainability of Nanotechnology and Engineering Education
R. Asmatulu, W.S. Khan, M. Ceylan, & B. Zhang (Wichita State U.)
11:30 am  
Effects of Nanotechnology on Global Warming
R. Asmatulu, W.S. Khan, M. Ceylan, & E. Asmatulu (Wichita State U.)

12:00 noon-1:30 pm  Business Luncheon and Elections Meramec/Gasconade Rooms
Section Chair Theresa Swift (Missouri S&T)

2:00-3:30 pm  UAV Student Workshop Carver/Turner Rooms
Radio-Controlled (R/C) Model Airplanes
John Woods, Instructor (Tri-Lakes R/C Flying Club)