

Presentation Schedule
ASEE North Central Section Conference
 Ohio Northern University
 March 24th, 2012

Session I: 9:00-10:00

Session I-A Biggs-239

Moderator - Laurie Laird

9:00	Developing a Graduate Research Symposium: A Case Study in Engineering Sandra Christlieb and Katy Luchini-Colbry
9:20	Engaging K-12 Teachers in Engineering Innovation and Design Margaret Pinnell, Suzanne Franco, Sandi Preiss, Rebecca Blust, and Renee Beach
9:40	Development of a Forensic Engineering Course in Civil Engineering James J. Lynch

Session I-B Biggs-238

Moderator - Jon Smalley

9:00	STeM to STEM: A New Bachelor of Science Degree with a Major in Engineering Education Kenneth Reid
9:20	Teaching Finite Element Analysis in Undergraduate Courses Ahmed Abdel-Mohti and Mohammad Khasawneh
9:40	Redesign of a Nondestructive Evaluation Course for Blended Learning Norb Delatte

Session I-C Biggs-236 Student Session

Moderator - Bob Ward

9:00	A Low Power Wireless Signal Transmitter for Biomedical Micro-Sensors Boyu Dang and Tolga Kaya
9:20	A Review of Power-Generating Turbomachines Joel Bretheim and Erik Bardy
9:40	Eyes for the Blind Intelligent Cane Julia Noschang, Jennifer Smith, and David Warsinsky

Session I-D Biggs-235 Student Session

Moderator - Sami Khorbotly

9:00	Tensile Testing Biological Sample Grips Amber Cool, Brita LeClair, Jeffrey Mehlman, and Aubrie Stechsulte
9:20	CATE: Central Automated Tour Experience Johnathan Beckwith, Robert Lefief, Stephen Sherbrook, Matthew Williams, and Kumar Yelamarthi
9:40	Design and manufacturing of interpenetrating phase composites for vibration damping applications Marjan Moro and Virgil C. Solomon

Session I-E Biggs-207

Moderator - Srinivasa Vemuru

9:00	Effective Method for Solving Equivalent Elements in Electric Circuits Khalid Al-Olimat and Gregory Bucks
9:20	Elvis Has Entered Digital Circuits! Timothy Johnson, Andrew Heran, and Murat Tanyel
9:40	A Complete Set of Experiments for Communication Classes Firas Hassan

Poster Session: 10:00-10:30

Science Annex 207 (Contiguous with the Engineering Building)

<u>Water Purification Capstone</u> Ibrahim Al Hassan, Tyler Jepson, and Jimmie Ruffner II
<u>Hydroelectric Power Generated in a Manufacturing Facility</u> Breanna Daniel, Alison Garbash, Andrew Marshall, and Caldwell Reed
<u>Soil Electrical Resistivity Measurements in Undisturbed and Surface-Stripped Soils: A First Year Research Experience</u> Brandon Leyda, Brian Sayre, and Sandra Soto-Cabán
<u>Power Generating Bicycle</u> Benedetto Naples, Jonathan Sacco, Scott Tarasovitch, Laybn Hollis, and Kevin Cole
<u>Software Defined Radio using DSP TMS320C6713 – Receiving and transmitting with Noise Cancellation</u> Bhegin Ntagazwa and Subramainam Ganesan
<u>Volume of Oxygen Uptake Sensory System</u> Benjamin Pasley, Derek Simonette, Emre Selvi, and Richard Taylor
<u>BroncoBot: Multi-Tool Additive Manufacturing System</u> Andrew Tucker, Bryan Stolla, Bailey Cupp, Tipu Sultan, and Jorge Rodriguez

Session II: 10:30-11:30*Session II-A Biggs-239**Moderator - Laurie Laird*

10:30	CyberGreen: Hands-On Engineering Research in Sustainability and Supercomputing Dirk Colbry and Katy Luchini-Colbry
10:50	Electric Vehicle Drive Simulation with MATLAB/Simulink David McDonald
11:10	Use of Failure Case Studies in the Engineering Curriculum: Implementation and Assessment Paul A. Bosela, Norbert J. Delatte, and Joshua G. Bagaka's

*Session II-B Biggs-238**Moderator - Mohammad Khasawneh*

10:30	Graduate Course on Embedded System Design Using FPGA With Cryptography Flavor Chirag Parikh
10:50	Options in Speed Tracking Control for Automotive Testing David Mikesell and Anmol Sidhu
11:10	Time-Domain Reflectometry (TDR) in Graduate Courses Andrew Rusek, Subramanian Ganesan, Barbara Oakley, and Daniel Aloï

*Session II-C Biggs-236 Student Session**Moderator - Bob Ward*

10:30	Automated Parking Space Locator: RSM Kevin Petsch, Phillip Dotzlaf, Charles Daubenspeck, Nathan Duthie, and Adam Mock
10:50	Battery-Free Energy Scavenging Applications and Power Conditioning Circuit Robert Balma and Tolga Kaya
11:10	Piezoelectric Energy Harvester Design and Fabrication Justin Scaparo and Tolga Kaya

*Session II-D Biggs-235 Student Session**Moderator - Hui Shen*

10:30	Development of a Physiological Activity Monitoring Platform Stephen Sherbrook and Tolga Kaya
10:50	Transient Heat Transfer and Frostbite Nick Baker and Jeff Mehlman
11:10	Development of a Steam Table Verification Experiment Samuel Clarke

*Session II-E Biggs-207**Moderator - Paul Nutter*

10:30	An Introductory Psychrometry Experiment at Kettering University Mohammad F. Ali and Ahmad Pourmovahed
10:50	A Pulley System Apparatus for a Laboratory Experience in Dynamics Chris J. Kobus and Yin-Ping Chang
11:10	A Conceptual Approach to Undergraduate Dynamics Instruction: A Work in Progress Richard Hill and Kirstie Plantenberg

Session III: 1:50-3:10*Session III-A Biggs-239**Moderator - David Mikesell*

1:50	Teaching Engineering Students vs. Technology Students: Early Observations Robert Lipset
2:10	A New Course on Engineering History and Heritage Norb Delatte
2:30	A Newly Developed Advanced Energy Concentration Khalid Al-Olimat, Srinivasa Vemuru, David Sawyers, and Eric Baumgartner
2:50	Teaching Ethics Through Examples David Meredith

*Session III-B Biggs-238**Moderator - Ahmed Abdel-Mohti*

1:50	Incorporation of SME-Tooling University Online Curriculum in a Manufacturing Technology Program Paul Nutter
2:10	A Horizontal Shaft Apparatus for a Laboratory Experience in Dynamics Yin-Ping Chang and Chris J. Kobus
2:30	Adding an FPGA Component in the Digital Signal Processing Lab Sami Khorbotly
2:50	Courses in Programmable Controls for Engineering Technology William T. Evans

*Session III-C Biggs-236 Student Session**Moderator - Firas Hassan*

1:50	Design of a Flapping Wing Micro Air Vehicle Actuation System Nicholas S. Baker, Mark Hayes, Daniel Smith, and Ryan Damman
2:10	Traffic Light Implementation Using uC/OS- A Project in Real-Time Systems Course Gerald Jochum, Emmanuel Tuazon, and Subramaniam Ganesan
2:30	Testing Platform Katy Foco, Lindsey Szezygiel, Cody Speilmaker, Steve Petre, Kristina Lemmer
2:50	Webcam Mouse with Smart Base Dean Boomgaard, Bradley Buchanan, Nicholas Prawdzik, Bolong Zhao, and Qin Hu

*Session III-D Biggs-235 Student Session**Moderator - Jed Marquart*

1:50	Design, Fabrication, and Analysis of MEMS Three-Direction Capacitive Accelerometer Kevin Petsch and Tolga Kaya
2:10	Omnidirectional RC Robot Chosun Holliday, David Quintal, Matt Duthie, Asim Asiri, and Brian DeJong
2:30	Balancing Robot William Brown, Eric Moseman, Corey Van Sickle
2:50	CFD Simulation of Carotid Artery Stenosis - Simplified Model Allen Page and Wael Mokhtar

*Session III-E Biggs-207**Moderator - Eric Baumgartner*

1:50	Incorporating International Service into the First Year Engineering Curriculum Kenneth Reid, Stacy McClelland, Katherine Bowman, Joshua Bryan, and Marc Anderson
2:10	Developing an International Senior Design Experience Dan Budny
2:30	Living Learning Communities Influence on Teamwork Skills Joseph P. Moening and Paul J. Weber
2:50	

Session IV: 3:25-4:45*Session IV-A Biggs-239**Moderator - David Mikesell*

3:25	Why Did Students Select a New Engineering Education Degree Program? Kenneth Reid, Tyler Hertenstein, Graham Fennell, and James Hollman
3:45	LEEDing the Way: A Problem and Project Based Approach to Developing an Undergraduate Course in LEED Robert J. Korenic
4:05	The Time Has Come to Remove the Stigma of “Soft Skills” Craig Gunn
4:25	Conceptual Analysis Approach for Teaching and Learning Problem Solving Competencies Morris M. Girgis

*Session IV-B Biggs-238**Moderator - Robert Lipset*

3:25	Pervasive Computing for a Multi-Disciplinary Audience Kiumi Akingbehin
3:45	Problem Solving Styles of Engineering Technology Students: Expressions of Mindsets Roland K. Arter
4:05	Digital Manufacturing and Simulation Curriculum in a Manufacturing Technology Program Paul Nutter
4:25	

*Session IV-C Biggs-236 Student Session**Moderator - Firas Hassan*

3:25	Experimental Testing for the Cornering Stiffnesses of Bike Tires Bryan G. Joseph, Mark Archibald, and Peter Windes
3:45	Feasibility of Rapid Injection Mold Tools Sean Derrick, Charles Crouch, Joseph DeMenter, Brian Guenther, Leah VanEeuwen, and Jorge Rodriguez
4:05	Autonomous Water Quality Sampling Watercraft Abigail Mogren, Scott Schnelle, and Andrew Toms
4:25	

*Session IV-D Biggs-235 Student Session**Moderator - Jed Marquart*

3:25	CFD Study of a Darreous Vertical Axis Wind Turbine Md Nahid Pervez and Wael Mokhtar
3:45	Experimental Determination of Operational Pedal Cycle Frame Loads Paul Miles and Mark Archibald
4:05	A CFD Study of Wind Turbine Aerodynamics Chris Kaminsky, Austin Filush, Paul Kasprzak, and Wael Mokhtar
4:25	