

## Oral Presentations – Early Morning Sessions

Agassiz Room – Moderated by Dr. Josh Hewes

8:30 AM - **SAE Aero Design 2011.**

by Steven Szymeczek, Taylor Lang, Robert Fletcher, and Jason Robinson

9:00 AM - **ASCE Steel Bridge.**

by Aaron Krebs, Robert London, Erick Welch, and Wang Tang

Fremont Room – Moderated by Dr. Allison Kipple

8:30 AM - **Control of Thickness of Ferrofluid.**

by Jacob Sajinyan, Russell Nelson, David Ott, Matthew Harrison, Abdullah Alkishi

9:00 AM - **Control of Thickness of Magnetorheological Fluids Over Variable Surface Areas in Biomedical Engineering.**

by Joshua Wright, Maryrose Bisagna, Dana Duvall

Southwest Room – Moderated by Dr. Niranjana Venkatraman

8:30 AM - **Skystream 600 Testing.**

by Dan Tarin, Bassam Hawsawi, Bander Almouzra, Paul Chol, Abdul Alfaran

9:00 AM - **Portable Transient Detection System.**

by Aaron Hicks, Philip Martinez, Hashm Modir, Sultan Alenazi, Mohammed Almoslem

Meadows Room – Moderated by Dr. Dieter Otte

8:30 AM - **WebAWDM: A Web-Based SCREEN3 Program.**

by Cyle Lainson, Ryan Simmons, Chad Ellsworth

9:00 AM - **Bookmark Library Web Browsing Tool.**

by Mackenzie Boyd, Justin Hill, Forrest Guice

## Oral Presentations – Late Morning Sessions

Agassiz Room – Moderated by Dr. Josh Hewes

10:00 AM - **NAU Capital Assets Traffic Signal Evaluation and Geometric Alternative Review.**

by Cready Smith, Darren Watson, Dionisio Erasun, Stephen Doubek

10:30 AM - **The Design of a Timber Town Lattice Truss Bridge for Lowell Observatory to Promote Future Expansion.**

by Tanner Wytroval, Krizelle Mabuti, Charles McNamara, Brad Peterson

11:00 AM - **The Design of a Clean Energy Water Disinfection System for Third World Applications.**

by Jo-Anne Barcellano, Ashley Ullstrom, Marilla Lamb, Meshal Hussain

Fremont Room – Moderated by Dr. Tom Acker

10:00 AM - **HPVC Human Powered Vehicle Competition.**

by Hubert Gorka, Maxwell Wheeler, Caitlyn Henderson, Christopher Larson, Ali Albaiti

10:30 AM - **Sustainable Packaging Solutions.**

by Matt Smith, Simon Lockyer-Bratton, Drew Knuth, Miguel Davila

11:00 AM - **Design and Engineering of a Cleaner Burning Cook Stove for India.**

by Greg Scott, Jenny Baca, Jon Neal, and Chris Thompson

Southwest Room – Moderated by Dr. J. Cathy Klock

10:00 AM - **Three Phase Power Inverter.**

by Jesse Chaddock, Mike Doyle, Kevin Hemmings, Nathan Muramatsu, Shaun Shippey

10:30 AM - **Red Light Detection.**

by Scott McCloud, David Boateng, Joshua Parrish, Christoffer Vance, Kevin McMurdie

11:00 AM - **Implementation of a Dual Axis Solar Tracking Controller with Environmental Feedback.**

by Richard Reavis, Thomas Borkowski, John Lubben, Matthew Wyant

Meadows Room – Moderated by Dr. Kefei Wang

10:00 AM - **Telescope Target Scheduler.**

by Patrick Kelley, Yi Feng, Jacob Williams, Kyle Montgomery

10:30 AM - **GroveTrotter: Palm GPS Surveying Application.**

by Leah Shanker, Stephen Baier, Brandon Davis, Nathan Gross

11:00 AM - **Resource Manager Ombudsman.**

by Travis Addair, Zach Apodaca, Eric Hyer, Adam Tulkki

## Oral Presentations – Early Afternoon Sessions

Agassiz Room – Moderated by Dr. Rand Decker

1:30 PM - **Designing a LEED compatible rainwater harvesting system for urban gardening.**

by Frank Dubasik, Justine Chaco, Khalifa Alhaila

2:00 PM - **The Potential of Landscape Scale Treatments to Reduce Sublimation Losses from Critical Water Supply Snowpack in the Western United States.**

by Keri Williamson, Adam Bringham, Kevin Werbylo

2:30 PM - **2011 NAU-ASCE Concrete Canoe.**

by Taylor Layland, Matt Anderson, Eli Reisner

Fremont Room – Moderated by Dr. Constantin Ciocanel

1:30 PM - **Fiona's Bow.**

by Matt Joganic, Harvest Montemayor, Sam Zerbib, Fahad Alsubaiei

2:00 PM - **Wind Loading Analysis of Sedona Energy Labs' Dual Axis Solar Tracking System.**

by Benjamin Krebs, Justin Taylor, Lane Fisher, Doug Friedrichs

2:30 PM - **AirX Blade Angle Measurement Fixture.**

by Kenny Schipper, Tyler Everhart, Abdullah Alnoaimi, John Aza

Southwest Room – Moderated by De. Josh Hewes

1:30 PM - **An Engineered Design of Master Plan for Northern Arizona's Pioneer Museum.**

by Margeaux Anderson, Jordan Kurlin

2:00 PM - **Hydrologic & Hydraulic Analysis at Museum of Northern Arizona.**

by Sarah Christiansen, Troy Ross-Havens, Dustin Bonar, Travis Hardee

2:30 PM - **The Design of a Town Lattice Truss Bridge for Increased Tourism at Lowell Observatory on Mars Hill.**

by Amy Gardner, Tara Keams, James Bickert

Meadows Room – Moderated by Dr. Angie Moline

1:24 PM - **Student Powered Sustainability.**

by Kevin Ordean, Jane Stewart

1:36 PM - **Waste at Northern Arizona University: Reduce, Reuse, Recycle, and Rethink.**

by Melissa Phillips

1:48 PM - **The Effects of Wildfires on Decomposing Fungi In Ponderosa Pine Ecosystems.**

by Nicholas Fransioli, Catherine Gehring

2:00 PM - **Soil characteristics of *Dicranopteris linearis* groves invaded by *Psidium cattleianum* on the island of Lanai.**

by Zane de la Cruz, Maribeth Watwood, Karen Adair

2:12 PM - **Acting Globally, Thinking Locally: Sustainable Community Building in Costa Rica.**

by Randi Colbert

2:24 PM - **The Distribution and Abundance of Invasive Plant Species in Monteverde, Costa Rica: A Baseline Study.**

by Maggie Rios

2:36 PM - **Mexican Wolf Recovery in the American Southwest: The Big Bad Wolf Debunked.**

by Thomas Watkins

2:48 PM - **NAU Shoots for the STARS.**

by Dawn Weingarten

### **Oral Presentations – Late Afternoon Sessions**

Agassiz Room – Moderated by Dr. Ernesto Penado

3:30 PM - **Stiffening an Off-Axis Beam Compressor Mount for Improved Performance.**

by Derek Blash, Sarah Hoefker, Kyle Latz

4:00 PM - **Enhancing Efficiency of the Raytheon KillerBee Retrieval System.**

by Samuel Chief, Thoren Smith, Bryan Magee-Skinner, Genevieve Bennally

Fremont Room – Moderated by Dr. Rand Decker

3:30 PM - **Design of Four Season Passive Solar Greenhouse in Flagstaff, Az.**

by Roy Keith, Justin Miller and Wangyang Li

4:00 PM - **Redesign of a decaying and unmaintained private stretch of roadway in Sedona, AZ to ensure its functionality and public access.**

by Jeremy King, Lucas Wesnitzer

Southwest Room – Moderated by Dr. Allison Kipple

3:30 PM - **New Electro-Mechanical Robotics Kit for Team-Based Design Courses.**

by Justin Bool, Joshua Christopher, Abdulaziz Alquraini

4:00 PM - **EGR 286 Robotics.**

by Joshua Willis, Will Porter, Hateem Ali, Omar Hussain, Mohammed Alsahwan

Meadows Room – Moderated by Dr. Angie Moline

3:12 PM - **Flat-tailed horned lizard mark-recapture population surveys in El Centro, CA.**

by Chelsey Weaver, Donna Clinton, Andrew Trouette

3:24 PM - **Northern Goshawk: Prey Response to Forest Treatment.**

by Kyle Dutro

3:36 PM - **Monitoring *E. coli* contamination on beaches at Glen Canyon National Recreational Area.**

by Colleen Hunter, Mark Anderson, Erin Janicki, and Carolyn Hackbarth

3:48 PM - **Fire and grazing impacts on the Kaibab Plateau.**

by Lisa Buie, Lauren Mork and Christine Albano

4:00 PM - **Cultural Heritage Lost: A Forgotten Nature.**

by Jacqueline Mackey

4:12 PM - **Understanding Commercial and Residential Solar Projects.**

by Zane Ioli

4:24 PM - **Field Ecology in Community Genetics: Experimental Framework and Implications.**

by Ryan Jacobs, Dave Solance Smith

4:36 PM - **Methane Flux Response in the Presence of Nitrogen and Phosphorus Fertilizations Across a Retrogressive Semiarid Chronosequence.**

by Megan K. Nasto, Benjamin W. Sullivan, Roderic A. Parnell, Steve C. Hart, Bruce Hungate

4:48 PM - **Offsetting travel at NAU.**

by Kendall Neisess

5:00 AM - **Herpetological Surveys in the Prescott National Forest.**

by Meghan Liszewski