

Thanks to our judges for their generous time & expertise.

**Architectural Engineering**

Rachel Delventhal, AIA / LEED AP - Tobin & Associates, P.C.  
Jon Gardzelewski, Assoc. AIA / LEED AP -UW College of Engineering  
Noel Griffith, Jr. - Noel Griffith Jr., & Associate Architects  
Chet Lockard, Jr., AIA - UW Facilities Planning  
Brandon VanTassell, Assoc. AIA / LEED AP - Tobin & Associates, P.C.

**Chemical Engineering**

Clinton Butcher -HollyFrontier Refinery, Cheyenne, WY  
Dr. David Bell – UW College of Engineering and Applied Science  
Dr. Patrick Johnson - UW College of Engineering and Applied Science  
Dr. Gordon Harris - UW College of Engineering and Applied Science  
Dr. Joe Holles - UW College of Engineering and Applied Science  
Kevin Schilling, Class TA, UW

**Civil Engineering/Environmental**

Darrin Harris, 2011 AWWA/WEF Water Treatment Competition Winner  
Emily Huth, 2011 AWWA/WEF Water Treatment Competition Winner

**Civil Engineering/Structures**

Matthew Chase, Turbine Fdn. Engineer Towers-Vestas Technology R&D  
John Hanlon, PE, Structural Engineer - Denver, Colorado  
Dr. Jennifer Tanner, Assoc. Prof. – UW Civil & Architectural Engineering

**Civil Engineering (Transportation)**

Joe Henderson, P.E., Traffic Engineer/Principal - Sustainable  
Traffic Solutions  
Larry Ketcham, P.E., City Engineering - City of Laramie  
Tammy Reed, P.E., Project Engineer - TriHydro  
Claudia Torrence, P.E., Project Engineering - TriHydro

**Computer Science**

Pat Malone, Director of Software Architecture - Aristatek Inc.  
Kim Buckner, UW Computer Science Department

**Electrical and Computer Engineering**

Cameron Wright, Acting Head – UW Electrical & Computer Engineering  
Jerry Cupal, Professor Emeritus –Electrical & Computer Engineering  
Fred Benson, UW Alum, Chair - Department Advisory Committee,  
Retired from Rockwell Collins  
Walt Marshal, UW Alum, Retired from Aramco

**Petroleum Engineering**

TBD



# Senior Design Symposium

December 1, 2011

Engineering Building  
Rooms L52, 1062, 2101,  
2104 & 2105

Sponsored by  
Volpi/Cupal ECE Design Fund  
Rocky Mountain Power Foundation



## Senior Design Symposium Schedule

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### Presentations Times Vary by Department

|                                       |                 |                                           |
|---------------------------------------|-----------------|-------------------------------------------|
| Architectural Engineering             | L52             | 9 am (Poster Presentations)               |
| Chemical Engineering<br>CHE 4050      | 2101<br>by 1060 | 8 am<br>9am (Poster Exhibits)             |
| Civil Engineering<br>(Structures)     | 2105            | 3 pm                                      |
| Civil Engineering<br>(Environmental)  | 1062            | 8 am                                      |
| Civil Engineering<br>(Transportation) | 1062            | 1 pm                                      |
| Computer Science                      | 2104            | 8:30 am                                   |
| Electrical & Computer                 | by 1060<br>2105 | 8 am (Posters)<br>9:30 am (Presentations) |
| Petroleum Engineering                 | 2104            | 10:30 am                                  |

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### Posters and Exhibits First Floor Student Lounge (near 1060) & Room L52

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### Breaks (refreshments available) Room 1060

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### 12:00 pm Judges and Advisors Luncheon 1060

## Electrical & Computer Engineering

### Presentations - Room 2105

Coordinator: Dave Whitman

8:00 am	<u>Poster Sessions</u> – Student Lounge--near EN 1060
9:30 am	<u>DC Relay Control Simulation</u> Edward McComas & A.J. Wlaschin
10:00 am	<u>Personal Area Network for Safety Monitoring</u> Aaron Bassham & James Plocek
10:30 am	Break
11:00 am	<u>Time and Temperature Controlled Power Switch</u> Jason Johnson
11:30 am	<u>Automated Frost Free Hydrant</u> Clay Stocklin
12:00 pm	Lunch
1:00 pm	<u>Medication Reminder and Dispenser</u> Ye Feng
1:30 pm	<u>Communication Device for Hearing/Speaking Impaired</u> James Branscomb & Scott Rigg
2:00 pm	<u>Smokehouse Automation Design</u> Patrick McDowell & Ben Lampe
2:30 pm	<u>Cellular-Based Multimedia Alert Home Security System</u> Anthony Allen

## Architectural Engineering – Poster Presentations L52

Coordinator: Robbie Lockard

- 9:00 am Introduction - Robbie Lockard
- 9:15 Geotechnics in Architecture - Karl Lyons
- 9:30 Snowy Range Performing Arts Center  
Daniel Meeboer and Dustin Stallings
- 9:45 UW Contemporary Center for the Fine Arts - Travis Gunderson
- 10:00 UW Center for the Performing Arts - Dylan Kinney & Jacob Mielke
- 10:15 Break
- 10:30 UW's Fine Arts Cathedral - Kyle Bridges
- 10:45 UW Step Center for Performing Arts - Kenneth Coleman  
& Caleb Jennings
- 11:00 UW Performing Arts Center - Mahdokht Soltaniehha
- 11:15 UW Performing Arts Center - Nori Nozumi
- 11:30 UW Fine Arts Building Renovation - Josh Dach
- 12:00 Lunch
- 1:30 pm Geometry as Art - William Capps
- 1:45 UW Classical Arts Education & Performance Center - Richard Cisneros
- 2:00 UW Performing Arts Center Renovation - Amy Sharpe
- 2:15 Wilson Center for the Performing Arts  
Gregory Wilson & Taylor Wilson

## Civil Engineering (Environmental) Room 1062

Coordinator: Mike Urynowicz

- 8:00 am Introduction – Mike Urynowicz
- 8:05 am Reduction of Total Suspended Solids via Nutrient Removal  
Group Name: High Plains Design  
Brennan Bahnson, Grae Harper, Brian Ronick,  
Craig Walsh, Coleton Jones, Frank Lehnerz
- 8:30 am Total Suspended Solids Reduction at Broadmoor Park Properties  
Wastewater Treatment Plant Group Name: InterCivil  
Andy Schnorf, Brian Crandall, Erick Nunn,  
Faris Alqahtani, Greg Wilson

## Civil Engineering (Transportation) Room 1062

Coordinator: Rhonda Young

- 1:00 pm Introduction – Rhonda Young. Each group will present a different approach to the re-design of 15<sup>th</sup> Street between Garfield Street and Willett Drive in the City of Laramie.
- 1:15 pm Traditional Approach: Courtney Ewell, Andrew Hooten, Jordan Sheets and Ryan Welling
- 2:00 pm Roundabout at Grand: Carlos Casas, Philip Mann, and Evgeniya Tyson
- 2:45 pm Grade Separation at Ivinson: Jonathan Cockrell, Elizabeth Hollowed, Marissa Larson, and Timothy Schneider.
- 3:30 pm Implementation of UW Campus Plan: Alejandro Barrientos, Zachary Field, Mallory Hunt, and Shawn Thorson.

## Civil Engineering (Structures) Room 2105

Coordinator: Charles Dolan

- 3:00 pm Introduction – Charlie Dolan  
Design of Wind Turbine Tower Test Facility
- 3:05 pm Kadi Wood, Sara Dunne, Jeff Austin
- 3:20 pm Wade Burkett, Margaret Kimble, Meadow Ridley
- 3:40 pm Darby Hacker, Rob Phares, Phil Furiosi
- 4:00 pm Pietro Colongo, Dan Maurais, Tim Baumel, Fangzhou Dai
- 4:20 pm Johnny Davis, Greg Ranft, Jera Schlotthauer
- 4:40 pm Sarah Ebright, Angela Jones, Dane Hopkin

## Chemical Engineering – Poster Exhibits

CHE 4050 Unit Operations Lab II Coordinator: David Bell

9 am Poster Exhibits - Near Room 1062

### Chemical Engineering Room 2101

Coordinator: John Myers

- 8:00 Opening Remarks, Professor John Myers
- 8:15 Chemical Looping Combustion of Syngas - Team Ferrous Wheel  
Paul Bonifas, Rizan Fazily, Clark Newbold, Ying Wang  
Mentors: Dr. David Bell, Professor John Myers
- 8:45 Benzene Reduction in Gasoline - Team Frontier Cowboys  
Dylan Mair, Jordan Mette, Robert Slipp, Kyle Spencer,  
& Ben Walkley      Mentors: Clinton Butcher (HollyFrontier  
Refinery, Cheyenne), Professor John Myers
- 9:15 Microfluidic Raman Spectrometer Biosensor - Team Aqua Jones  
Nathan Fletcher, Sharlee Mahoney  
Mentor: Dr. Patrick Johnson
- 9:45 Ibuprofen Pain Patch - Team Pain Killers  
Team Members: Logan Gradisher, Analisa Stephens  
Mentors: Dr. Patrick Johnson
- 10:15 High Selectivity Para-Xylene via Toluene Methylation  
Team Pot-valiant Xerxes: Nathan Bennett, Sandeep  
Chandrasekaram, Dominique Schoech, Kyle Wemhoff,  
& Guangjun Wu      Mentor: Professor John Myers
- 10:45 The Implementation of Organosolv Pretreatment Into a  
Cellulosic Ethanol Plant - Team Biosolv  
Alyssa Hughes, Neil Neuberger, Shuai Tan, Kelsey Thrush  
Mentors: Professor John Myers, Dr. Patrick Johnson
- 11:15 Biobutanol Process Design - Team Butifuel  
Alec Cookman, Jennifer Graves, Kyle Hanson, Justin Martin,  
& Hui Zhong  
Mentors: Professor John Myers, Dr. Patrick Johnson
- 11:45 Closing Remarks, Professor John Myers

## Computer Science Room 2104

Coordinators: Jeff Van Baalen

- 8:30 am Introduction – Jeff Van Baalen
- 8:35 am In a Lonely Place  
Zachary Marius Hansen & Abdulsalam Alamari
- 9:05 am WareApp  
Dietrich Wambach, Jay Wuensch, & Neera Pradhan
- 9:30 am GreekedIn  
Zeb Fross, Paul Ogle, & Odion Oisamoje
- 10:00 am Red vs. Blue  
Mark Allen, Will Dowd, & Keith Ellington

## Petroleum Engineering Room 2104

Coordinator: Brian Towler

- 10:30 am The Niobrara Potential in Wyoming  
Team: Abdulaziz Alhubil, David Scadden, Joseph Lawson, Rachael  
Molyneux, Gabriel Grubac
- 11:15 am Plugging Wells with Bentonite (Plug Production & Field Trials)  
Team: Allan Tainsh, Peter Lemke, Shawn Cody, Yao Yao, Eid Al Hajri
- Noon Lunch Break
- 1:00 pm Plugging Wells with Bentonite (Lab Studies)  
Team: Yifan Zhang, Kendra Williams, Tracy Quance, Ahmed Elgohary
- 1:45 pm Simulation of Production in Silo Field  
Team: Gregory Williamson, Jonathan Daraie, Yang Jiang, Justin Dunn
- 2:30 pm Investigation of the Macando Well Blowout  
Team: Richard Newman, Andrew Baltes, Darrin Moe,  
Gabrielle Stuckenschneider, Yu Liang
- 3:15 pm Fracture Stimulation Investigations (Group 1)  
Team: Daniel Transtrom, Jacob Ness, Swayne Redinger,  
Mohamed Sharkar
- 4:00 pm Fracture Stimulation Investigations (Group2)  
Team: Alex Williams, Josie Skinner, Katie Barsness, Limin Fu