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Mississippi State University

X-cited!

Forum Covers Critical Energy Crisis Issues

Special points of interest:

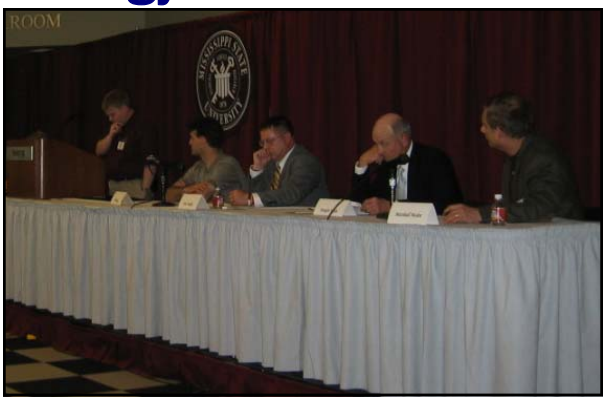
- *Last week's forum is discussed, see adjacent article.*
- *See what each thrust is doing, article below.*
- *Kevin Sutherland is featured as this week's student in the spotlight.*
- *We have a record number of Atta-Dawgs this week. Check out who's been working hard to make our team a success!*

Thursday's forum on transportation and the nation's energy crisis addressed several issues on the importance of making vehicles more fuel efficient, and how to make them more acceptable for consumers.

The forum began at 3 p.m. with an introduction by Dr. Michael Mazzola, followed by a presentation by Dr. Colin Scanes, Vice-President of Research at MSU on the work Mississippi State University is doing in this area.

Justin Crapps, a Challenge X student and the forum moderator, asked panelists such questions as "Is hybrid technology here to stay or is it a stepping stone toward a more efficient energy use," and "Looking ahead, how do you see these technologies migrating into the marketplace?"

David Oglesby, MSU Challenge X Team Leader, said, "This forum was important because it raised public awareness of the work going on to produce cleaner and more efficient vehicles."



Justin Crapps, a Challenge X team member, was moderator of the forum.

Panelists on the forum were; Bill Beggs, General Motors Powertrain Integration Engineer; Marshall Molen, Challenge X Principal Faculty Advisor; Kirk Shulz, Dean of MSU Bagley College of Engineering; Barrie McArthur, Vice-Chairman of Diversified Technology; Mark Zappi, Director of Technology Research and Application Laboratory in the MSU Swalm School of Chemical Engineering; Tom Vaught, Senior Program Manager of DRS Test and Energy Management; Dwight Wylie, Chief Environmental Engineer of Mississippi's Office of Pollution control; and John Rezek, Professor of Finance and Economics at MSU.

Thrust Update Area: What are they working on?

Vehicle Modeling and Controls
Currently, group is focusing on report 5 and also preparing for June competition.
Thrust Leader: Kiran Solanki

Mechanical
The mechanical group has finished everything pertaining to our pre-hardware inspection, which went well, and has begun working on report #5.
Thrust Leader: Brian Christian

Electrical
The battery group has almost completed the management scheme for the Pb-A batteries for the pre-hardware inspection. The safety procedures have been completed! Woo-hoo!
Thrust Leader: Phillip Conley

Powertrain
We are continuing our work on the motor mock-up and NOx reduction research. We have also been working on battery cooling solutions and the fuel system schematics.
Thrust Leader: Christopher Whitt

Outreach Program
Justin recently gave a presentation to two groups of area high school and junior high school students. Both presentations went well, although Justin forgot to open the can of coke he was using to illustrate pressure!

Speaking of pressure, putting on the forum took lots of work, but we are so excited it went well. The forum was covered in several newspapers and even garnered a television news spot.

Next we'll be starting on our final report for the year, due at competition!
Thrust Leader: Justin Crapps

Thanks to our newest sponsors!
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Upcoming Events

May 9 Design Report #5 Due

June 5-9 Year One Competition, Detroit, MI

Atta-Dawgs

- **Zach Rowland, David Oglesby, Kiran Solanki, Justin Crapps, Amanda McAlpin, Christopher Whitt, Matthew Tucker, Brian Christian, and Terri Christian** for coming in on weekend and late evening hours to help get the work area ready for the pre-hardware inspection.
- The Outreach Team would like to give a special thanks to **Will Jenkins, Ron Lewis, Tommy Thompson, Christopher Whitt, Brandon Witbeck, and Marshall Molen**. Without their help we would not have been able to run the forum smoothly.
- To **Philip Conley** for completing the electrical procedures!
- **Jonathan Hinds** for finishing up the mechanical fastener data.
- **Christy Burton** for compilation of safety procedures!

Student in the Spotlight

This column gives you a behind-the-scenes look at the students who are working on the Challenge X competition at MSU.

This week's student is Kevin Sutherland. Kevin has put in lots of time working on the computational fluid dynamics of the vehicle. This is an important part of our design, and that is why we have chosen him to be this week's student in the spotlight.

Name: Kevin Sutherland
Hometown: Colorado Springs, CO
Major: Pursuing a Bachelor's in Aerospace Engineering

Team members on Challenge X have a lot of good things to say about Kevin Sutherland, but that's nothing compared to what he has to say about Challenge X.

When asked what he most enjoys about Challenge X, Kevin has plenty to say.

"I'm an adrenaline junkie. It's the excitement, the anticipation of seeing our hard work turn into something material, something developing into a future technology or approach, the team building that occurs, the preparation for future employment and the priceless experience of developing skills that will make a better engineer in the future."

Kevin Sutherland (left) and Seth Myers inspect pieces which they will reproduce virtually.

Kevin's excitement for the project shows, and that is one of the most important qualities for working on a project like Challenge X.

"One of the largest lessons I have learned is that managing resources is a critical part to being efficient and working through deadlines. It is amazing how important team morale is in a project where seeing the end is not very clear and sometimes there is no motivation. It takes someone with dedication and inspiration to keep a team working on monotonous tasks necessary to conclude with results that are quite meaningful. Challenge X has allowed me to develop some skills within team management that I feel I did not have prior to working on this project."

Kevin's work involves analyzing the shell of the vehicle to ensure that the design has the least amount of aerodynamic drag, which could reduce fuel efficiency. Since fuel efficiency is one of the main goals of Challenge X, Kevin is as important to the competition as it is to him.

For newsletter suggestions or corrections, please contact Amanda McAlpin at amcalpin@cavs.msstate.edu.