OSU/Daimler Truck Research Laboratory

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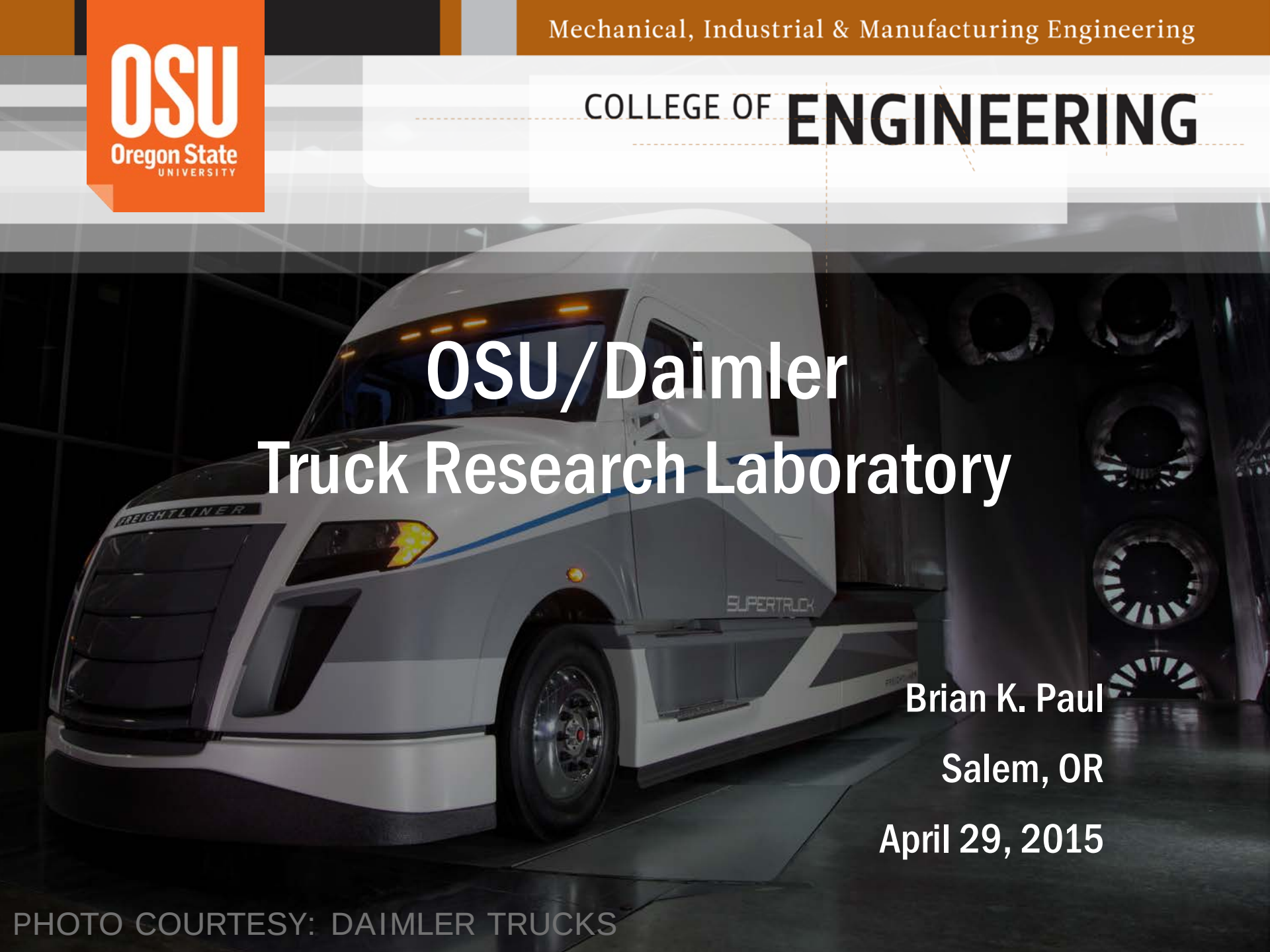
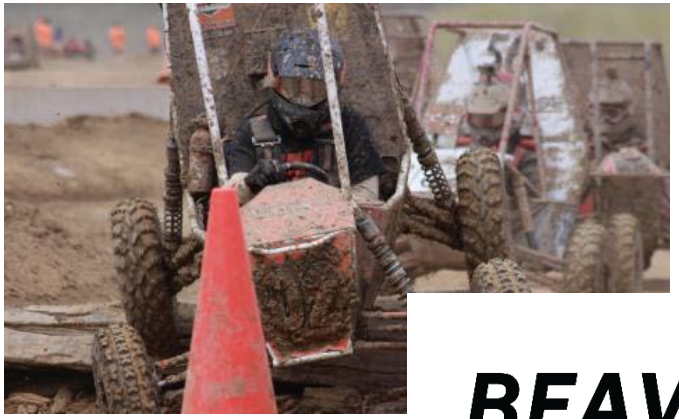


PHOTO COURTESY: DAIMLER TRUCKS

Society of Automotive Engineers

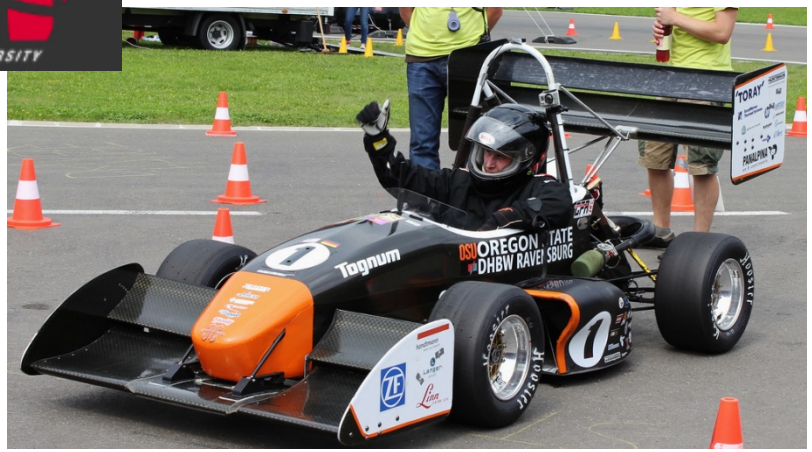


BEAVER RACING

SAE Baja Competitions Attended	Overall Placement
2014 Baja SAE UTEP	1st
2014 Baja SAE Illinois	2nd
2013 Baja SAE Washington	2nd
2012 Baja SAE Wisconsin	2nd
2012 Baja SAE Auburn	2nd
2012 Baja SAE Oregon	2nd
2011 Baja SAE Illinois	4th
2010 Baja SAE Washington	4th
2009 Baja SAE Oregon	1st
2008 Baja SAE Illinois	1st
2007 Baja SAE South Dakota SoM	2nd
2007 Baja SAE RIT	1st
2006 Baja SAE Midwest	1st
2006 Baja SAE West	1st
2005 Baja SAE Midwest	4th
2005 Baja SAE West	1st

GLOBAL FORMULA RACING
GFR
DHBW RAVENSBURG / OREGON STATE UNIVERSITY

SAE Formula Competitions Attended	Overall Placement	
2014 FSAE Michigan	1st	
2014 FS Germany	1st	16th
2014 FS Espania	1st	
2014 FS Austria	1st	3rd
2013 FSAE Michigan	25th	
2013 FS Germany	1st	18th
2013 FS Austria	17th	6th
2012 FSAE Michigan	1st	
2012 FS Austria	1st	23rd
2012 FS Germany	38th	10th
2011 FSAE Michigan	1st	
2011 FSAE California	13th	
2011 FS UK	15th	
2011 FS Austria	1st	17th
2011 FS Germany	1st	3rd
2010 FSAE Michigan	1st	
2010 FSAE California	9th	
2010 FS UK	16th	
2010 FS Germany	10th	
2010 FS Austria	1st	
2010 FS Italy	1st	



Background

DOE Super Truck-related research

- John Parmigiani (light-weighting using structural composites)
- Kagan Tumer (advanced cruise control)

Concept for Truck Research Laboratory

- OSU/Daimler summit in February 2013
- Opportunity to build on SAE programs and provide a pathway for motivated UG students to pursue truck research

Summer internship at Daimler (Summer 2014)

Donation of a Class 8 Cascadia truck (Fall 2014)

- Testbed for demonstrating project work

What we will do

Setup the Truck Research Laboratory

Action	Description	Requested Funds
Hire TRL Operations Manager	Manage laboratory space and work with faculty to grow industry and federal projects	$ 250,000
Recruit/hire graduate TRL fellows	Help the Operations Manager setup the TRL facility (2-3 students with faculty support)	$ 500,000
Facilitize and equip TRL	Outfit space for TRL to include: Facilities and test equipment	$ 750,000

Initiate research inside of the Truck Research Laboratory

Action	Description	Requested Funds
Setup TRL research program	1:1 match for research and educational programs	$ 500,000
	Total:	**$2,000,000**

Benefits

Provide a pathway for UG SAE students to

- Move into graduate school to pursue interests
- Acquire high-paying R&D jobs

Opportunity for OSU and Daimler to attract

- Top talent
- Federal grant dollars for advancing fuel efficiency research
  - Initial focus in modeling of aerodynamics and lightweighting
  - Future opportunities exist in controls for predictive cruise control, design optimization, thermal systems, energy systems and driving simulation

Opportunity for Oregon to export technology leading to significant reductions in carbon footprint

Summary

OSU and Daimler have a strategic, mutually beneficial and multidisciplinary relationship

- Daimler hires our students, provides internships, invests in research and provides philanthropic support to the College of Engineering and College of Business
- Research agreements are in place which will enable research programs to move forward quickly within the Truck Research Laboratory

OSU students are interested and ready to work on trucking-related research

OSU has the required expertise to advance truck-related research

With the proposed state investment, OSU will

- Establish the facilities to conduct research for the trucking industry
- Initiate research that will position us for future federal opportunities