PASETTER

Pennsylvania Association for Safety Education

Summer/Fall 2004 Issue

Conference 2005

Please join us for the 56th annual PASE conference. We will be staying at the Quality Inn in Bedford for another year due to the convenient location, and exceptional service offered by the hotel.

You will find in this issue a conference agenda and registration form. The agenda is currently being put together and will be updated throughout the next few months.

For those attending the 2004 conference, you will recall that the quality of the programs and workshops was outstanding. On the flip side, you will recall that there were some empty seats. It is our hope that those attending the conference in the past will spread the word and bring in some new faces and bring back faces we haven't seen in a while to the 2005 event.

If you should have questions about the event, please visit the PASE website at adtsea.iup.edu/pase. You can also call 800-896-7703.

Hope to see you there!

Dana Bowser
Editor, PASETTER Newsletter

Valuable information, conference updates and issues of the PASETTER are currently available at the PASE web site:

adtsea.iup.edu/pase

Inside…

Conference...2005

TENTATIVE AGENDA INSIDE

The 56th Annual Pennsylvania Association for Safety Education Conference will be held on April 28th – 29th at the Quality Inn - Arena in Bedford, Pennsylvania.

Rooms will be available at the Quality Inn at the following reduced rates:

Single - $52
Double - $58
Triple - $64
Quad - $70

Call 814-623-5188 to make your reservations & look inside of this issue for your tentative agenda and registration form!!!

2005 PASE CONFERENCE
(TENTATIVE AGENDA)
"Re-educating the Driver Educator, Volume 4"

THURSDAY, April 28, 2005

8AM – 1PM	REGISTRATION/EXHIBITS
8AM – 9:30AM	BOARD OF DIRECTORS MEETING
10AM – 11:30AM	OPENING GENERAL SESSION • WELCOME/INTRODUCTIONS, Chris Davis, PASE President • PRESENTATION OF COLORS, • PLEDGE OF ALLEGIANCE • NATIONAL ANTHEM - TBA • INVOCATION, Ronald Strapel, PASE Chaplain • OFFICIAL WELCOME - TBA • KEYNOTE SPEAKER - TBA • PROGRAM CHANGES
11:30AM – 12PM	EXHIBITS
12PM – 1PM	LUNCH (Lunch will be provided)
1PM – 2PM	WORKSHOP SESSION 1 (RED DOT) TBA WORKSHOP SESSION 2 (BLUE DOT) TBA
2:05PM – 3:05PM	REPEAT WORKSHOP SESSIONS 1 &2 (Blue and Red DOTS reverse workshops)
3:05PM – 3:30PM	BREAK/EXHIBITS
3:30PM – 5PM	GENERAL SESSION TBA
5PM – 6PM	EXHIBITS

6:30PM – 8:30PM	PASE BANQUET Invocation - Ron Strapel, PASE Chaplain Awards Presentation – Chris Davis, PASE President

FRIDAY, April 29, 2005

8AM – 11AM	REGISTRATION
7:30AM – 8:45AM	BUFFET BREAKFAST/EXHIBITS
9AM – 10:00AM	GENERAL SESSION TBA
10:00AM – 10:30AM	BREAK/EXHIBITS
10:30AM – 11:30AM	GENERAL SESSION (Continued)
11:30AM – NOON	EXHIBITS
NOON – 1:15	AMOS NEYHART LUNCHEON
1:30PM – 2:30PM	WORKSHOP SESSION 3 (BLUE DOT) TBA
	WORKSHOP SESSION 4 (RED DOT) TBA
2:30PM – 3PM	EXHIBITS/BREAK
3PM – 4PM	REPEAT WORKSHOP SESSIONS 3 & 4
4:15PM – 5:15PM	GENERAL SESSION PASE Business Meeting
5:15PM	CONFERENCE ADJOURNS

Information on Traction Control

Some of the biggest advances in automotive technology in the past 10 years have come in the area of safety. Spurred by improvements in microprocessor speed, miniaturization, and software development, the automobile continues to evolve. In addition to telematics-based services like OnStar, digital satellite radio and in-car e-mail, recent advances in braking technology have led to shorter stopping distances and increased control while driving in inclement conditions.

Traction control is yet another safety development that has reached the automobile during this period. A popular feature on many vehicles, traction control offers drivers the benefit of space-age electronics that improve a car's contact with the road.

But what is traction control, and how does it work?

In this month's Focus on Safety, we'll take a look at the inner workings of this cutting-edge technology and also discuss the ways it improves your driving experience and enhances safety.

When you first hear the term "traction control," you might think it has something to do with traction and control. "Duh," you're saying; "isn't that a little obvious?" Well, maybe, maybe not. The word traction refers, in general, to your car's ability to maintain adhesive friction between the vehicle (specifically, your tires) and the pavement. And yet there are different kinds of traction. For instance, there's one kind of traction when we brake, another when we accelerate, and still another when we turn. Which kind of traction are we referring to here?

Traction control deals specifically with lateral (front-to-back) loss of friction during acceleration. In other words, when your car accelerates from a dead stop, or speeds up while passing another vehicle, traction control works to ensure maximum contact between the road surface and your tires, even under less-than-ideal road conditions. For example, a wet or icy road surface will significantly reduce the friction (traction) between your tires and the pavement. And since your tires are the only part of your car that actually touches the ground, any resulting loss of friction can have serious consequences.

Traction control is part of a series of three braking technology developments that began appearing in vehicles in the mid-eighties. (Note: Many German vehicle manufacturers call traction control by its original German name: ASR traction control. ASR stands for "Acceleration Slip Regulation." It's the same technology we're talking about here, but with a fancier name that most Americans have never heard of.) In chronological order, these developments are: anti-lock brakes, aka ABS (1978), traction control (1985), and stability control (1995). All three technologies come from the laboratories of Robert Bosch Company in Germany, and all address the issue of improving contact (traction) between your car's tires and the road.

Traction control works at the opposite end of the scale from ABS -- dealing with acceleration rather than deceleration. Still, since many of the same principles apply to both systems, it might be best to visualize it as sort of ABS in reverse. *(continued on page 5)*

(traction control, continued from page 4)

ABS works by sensing slippage at the wheels during braking, and continually adjusting braking pressure to ensure maximum contact between the tires and the road. You can actually hear the system working (a grinding sound) and feel it (the pedal pulsing).

As we mentioned above, ABS and traction control operate similarly. In fact, the ABS control unit is the basic "building block" for traction control and stability control. By adding modules and sensors, the system can be expanded to include these newer technologies.

In the case of traction control, the basic ABS system -- as well as other components in the vehicle -- requires some modification. To begin with, the old-style accelerator cable is typically replaced by an electronic drive-by-wire connection (although some older systems still use a mechanical accelerator cable), meaning the mechanical hook-up between the accelerator pedal and the throttle ceases to exist. Instead, a sensor converts the position of the accelerator pedal into an electrical signal, which the control unit (similar to the one used in ABS) uses to generate a control voltage. The standard ABS hydraulic modulator is also expanded to include a traction control component. All these parts work together to activate the traction control system.

Let's say you're at a stoplight on wet pavement. The light turns green and you press too firmly on the accelerator pedal. There is slick asphalt under your tires and the wheels begin to spin. The traction control system instantaneously kicks in, sensing that the wheels have begun to slip. Within a fraction of a second, this data is fed back to the control unit, which adjusts throttle input and applies braking force to slow the wheels (some older systems also retarded engine spark). The wheels are thus prevented from spinning and the car maintains maximum traction.

It's really that simple. Again, think of it as ABS in reverse.

Article By Scott Memmer as found on Edmunds.com

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The PASETTER is created by article submissions provided by PASE members.
And, we are always on the lookout for articles.
You are encouraged to submit articles….
Remember… without you, the PASETTER doesn't exist.
If you would like to submit an article…enclose this completed form, with your article and mail them to:

Editor
The Pasetter
Highway Safety Center
R&P Building
629 Fisher Avenue
Indiana, PA 15705

OR…

Email your articles to dbowser@hsc.iup.edu

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Title of Article: _____

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DOT announces historic low highway fatality rate in 2003

Tuesday, August 10, 2004

[Reprint of the National Highway Traffic Safety Administration press release as found on Buckleupamerica.org]

The fatality rate on the nation's highways in 2003 was the lowest since record keeping began 29 years ago, the U.S. Transportation Secretary Norman Y. Mineta announced today. The number of crash-related injuries also dropped to a historic low in 2003.

"America's roads and highways are safer than ever," said Secretary Mineta. "The decreasing number of traffic fatalities and record low death rate on our roads shows that we are headed down the right road – one that leads to a safer America."

Secretary Mineta pointed to efforts by the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) that contributed to the reduction in the fatal accident rate, including campaigns to encourage safety belt use and discourage impaired driving, work with state legislatures to pass tougher safety belt and drunk driving laws, and rulemaking efforts to improve vehicle safety standards.

A total of 42,643 people died, and 2.89 million were injured in 2003. The fatality rate per 100 million vehicle miles traveled (VMT) was 1.48 in 2003, down from 1.51 in 2002. It was the first time the rate has dropped below 1.5. In 2002, 43,005 were killed and 2.93 million were injured.

"We at NHTSA are proud of the progress we've made and the success of the priorities we've established during this Administration," said NHTSA Administrator Jeffrey Runge, M.D. "But much of the credit goes to the committed professionals in the states and communities who implement the programs, and to safety professionals in the automotive industry who offer safer vehicles."

Alcohol-related fatalities also dropped significantly in 2003, the first such decline since 1999, as more states adopted laws that allowed them to prosecute drivers at .08 blood alcohol content (BAC) and above. 2004 marks the first year that all 50 states, the District of Columbia and Puerto Rico were able to prosecute drivers at .08 BAC.

In 2003, VMT increased to 2.88 trillion, up from 2.86 trillion in 2002, according to the DOT's Federal Highway Administration.

NHTSA's Fatality Analysis Reporting System (FARS) also shows that between 2002 and 2003:

--Motorcyclist fatalities increased from 3,270 to 3,661, a 12 percent rise.

--Rollover deaths among passenger vehicle occupants declined 3.3 percent from 10,729 to 10,376. Sport utility vehicle (SUV) rollover fatalities increased 6.8 percent from 2,471 to 2,639, even as SUV registrations increased 11 percent. Rollovers declined in passenger cars (7.5 percent; 4,794 to 4,433) and pickup trucks (6.8 percent; 2,755 to 2,569).

(continued on page 10)

(DOT announces…continued from page 9)

--Twenty-seven states had decreases in the total number of fatalities. The highest percentage decreases were in Colorado (-15 percent); Vermont (-12 percent); Connecticut (-10 percent); Ohio (-10 percent); Oklahoma (-10 percent); and West Virginia (-10 percent). The highest percentage increases were in the District of Columbia (+43 percent); Rhode Island (+24 percent) and Oregon (+17 percent).

--Passenger vehicle occupant fatalities dropped to 31,904 – the largest decrease since 1992. Declining fatalities in passenger vehicles are consistent with increases in safety belt use and more crashworthy vehicles.

--Passenger vehicle fatality rates per 100,000 registered vehicles declined for all passenger vehicle types except vans.

--Pedestrian deaths declined 2.1 percent from 4,851 in 2002 to 4,749.

--Fatalities in large truck crashes increased slightly from 4,939 to 4,986.

--In 2003, there was a decline in the number of unbelted fatalities, reflecting an increase in safety belt use. Still, 56 percent of those killed in passenger vehicles were not wearing safety belts. This underscores the need for states to adopt primary safety belt laws.

NHTSA earlier estimated that highway crashes cost society $230.6 billion a year, about $820 per person.

NHTSA annually collects crash statistics from 50 states and the District of Columbia to produce the annual report on traffic fatality trends. Summaries of the 2003 report are available on the NHTSA web site at the link below:

http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/PPT/2003AARelease.pdf

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To find out more about PLCB Alcohol Education services, contact

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Harrisburg, PA 17124-0001
Phone: 1-800-453-PLCB; TTY: 717-772-3725
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Website: http://www.lcb.state.pa.us/edu/
E-mail: ra-lbeducation@state.pa.us

Tiny radar could make driving safer

The entire functions of a radar system have been squeezed onto a single silicon chip about one fifteenth the size of a penny for the first time.

The miniature system has been created by researchers at the California Institute of Technology in Pasadena, US, who managed to fabricate all the sensing and communications components out of silicon. Their chip is capable of transmitting, receiving and directing high frequency microwaves.

"Until now radar has been a very expensive very large bulky item," says Ian Gresham, an automotive radar engineer at M/A-Com in Lowell, Massachusetts.

Gresham says the radar chip could mean luxury car features - such as radar-controlled parking-aids and obstacle-sensors that make driving in fog safer - could go mainstream because the systems will now cost hundreds rather than thousands of dollars.

If used in communication devices, the chip could also enable lower power, higher bandwidth wireless local area networks (LANs).

"The basic fundamental building blocks behind radar and communications are essentially the same," he explains. Both require the means to send and receive electromagnetic waves and to turn the waves into electrical signals. For radar the waves must be steered so that the size and angle of an object can be determined once it is detected.

Array of antennae

Traditionally, the transceiver that produces and receives the microwaves is steered mechanically with rotating plates. But the reliance on moving parts makes these systems, clumsy and unreliable and forces them to be bulky.

Recently electronically steered systems have been developed consisting of an array of antennae, each one producing an individual microwave signal. The antennae are arranged so their signals interfere to produce a single beam. The beam's angle depends on the relative phases of the contributing signals - by controlling the phase of each signal individually, the beam's angle is controlled without any moving parts.

These systems are more accurate and more reliable than their mechanical counterparts. "But we wanted something really small," says Ali Hajimiri, an electrical engineer at the institute.

"We came up with a completely new set of building blocks and architecture allowing us to do everything in silicon," he explains.

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(tiny radar, continued from page 12)

Regulatory hurdles

One example of this was replacing the phase shifter common to electrical transceivers with an oscillator. A phase shifter is a set of components that receives a signal and creates a phase difference by delaying that signal and then outputting it. But an oscillator is simply programmed to produce a signal with the correct phase shift directly - and it can be fabricated on the chip using photolithography.

"The most interesting aspect of this is that it is silicon-based," says Gresham. He says one reason this was possible are the leaps in speed that silicon chip technology has made over the past few decades.

Very high frequency microwaves can now be achieved with silicon. So the radar chip produces at a rate of 24 gigahertz - an order of magnitude more than Intel's state-of-the-art Pentium processor.

However, Gersham warns that there are still regulatory and technological hurdles to jump before mainstream cars and LANs can use the tiny radar system. Regulatory agencies tightly restrict which slices of the spectrum can be reserved for which types of communications, he cautions.

Article can be found at:
http://www.newscientist.com By Celeste Biever

2005 PASE Conference Registration Form

Name: _____ School/Business: _____

Address: _____

_____

Telephone: (_____) _____ Fax: (_____) _____

Email Address: _____

Spouse/Guest Name (if attending):_____

The 55th Annual **Pennsylvania Association for Safety Education** Conference will be held Thursday and Friday, April 28th & 29th at the Quality Inn - Arena in Bedford, Pennsylvania.
Sixty-five rooms will be available at the Quality Inn at the following reduced rates:

Single - $52 Double - $58 Triple - $64 Quad - $70

Call **814-623-5188** to make your room reservations. The following fees are in addition to your room costs.
Conference registration fees do not include the cost of your hotel room.

Membership Conference Registration
(Includes all meals) Total

Active (Early)	$130 (by April 1, 2005)	$_____
Active (Late)	$150 (after April 1, 2005)	$_____

Non-Membership Conference Registration
(Includes all meals)

(Early)	$160 (by April 1, 2005)	$_____
(Late)	$200 (after April 1, 2005)	$_____

Extra Tickets: (These meal tickets are available if you are bringing a Guest/Spouse; registered participants meals are included in their conference registration fee).

Complete Meal/Break Ticket	$55	$_____
Thursday PASE Banquet Only	$25	$_____

Membership: PASE dues are payable either before the Conference or at the Conference Registration Table.

Active	$ 25	$_____
Retiree	$ 15	$_____
Corporate	$ 200 (Exhibitors)	$_____

TOTAL AMOUNT ENCLOSED **$_____**

NOTE: As part of Act 48, we will be a provider for the in-service credit.
Please make registration remittance payable to **PASE, Inc**. and send to:
PASE Executive Director
IUP Highway Safety Center
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629 Fisher Avenue, Indiana, PA 15705

Silver cars are the safest on the road
In University of Auckland Study

Silver cars are much less likely to be involved in a serious crash than cars of other colors, suggests a new study of over 1000 cars.

People driving in silver cars were 50% less likely to suffer serious injury in a crash compared with drivers of white cars, the research in New Zealand found.

White, yellow, grey, red and blue cars carried about the same risk of injury. But those taking to the roads in black, brown or green cars were twice as likely to suffer a crash with serious injury.

Sue Furness, at the University of Auckland, led the study but says the team does not know why silver cars appear safer. "We think it may be due to a combination of light color and high reflectivity," she speculates.

She suggests that increasing the proportion of silver cars on the road might provide a "passive strategy" to cut car crash injuries.

"If there's proof that certain color are safer and easier to see in all road conditions that might be useful to people in terms of purchasing a car," says Roger Vincent, of the UK Royal Society for the Prevention of Accidents. But he adds: "A lot of people will buy things purely on fashion."

Engine size

In their study, Furness and her colleagues took into account the engine size, make and age of the car, as well the sex, age, socio-economic status and ethnicity of the drivers. They also controlled for road conditions and ambient light conditions.

But Vincent says other factors could be important, such as the way people view different colors, how many miles the car has on the clock and the background being driven against.

The data was gathered from reports of road crashes in the Auckland area between 1998 and 1999. Silver cars made up about 11% of the fleet analyzed and were the fourth most popular car color after white, blue and red.

Metallic finish cars, such as silver ones, are more expensive, but Furness does not believe this is an important factor. "From these controlled data it seems unlikely that the explanation for silver cars being associated with a lower risk of car crash injury is related to the price or 'quality' of the vehicle," she told New Scientist.

Journal reference: British Medical Journal (vol 327, p 1455)

Please visit Newscientist.com to view article By Shaoni Bhattacharya

Highway Safety Center
R&P Building
629 Fisher Avenue
Indiana, PA 15705

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