UCDAVIS

Supported by

SAE International™

Are you ready for the future in automotive transmission technology?

Attend the

International Continuously Variable and Hybrid Transmission Congress

September 23-25, 2004, San Francisco, California, USA

"Ride and Drive"

The best way to understand the benefits of CVT vehicles is to get behind the wheel, and that's exactly what you'll do at the 2004 International Continuously Variable and Hybrid Transmission Congress. For the first time in the event's history, registered attendees will participate in a "Ride and Drive" demonstration at the picturesque Infineon Raceway. CVT and CVT hybrid vehicles will "show their stuff" in these safe test-drives of stop-start and up-and-down-hill situations that would undoubtedly prove to be challenging for any type of vehicle. This unique experience will allow attendees to evaluate and compare the benefits of CVTs as well as understand CVT and CVT hybrid control under realistic driving conditions.

040917

SAE International™
400 Commonwealth Drive
Warrendale, PA 15096-0001

ADDRESS SERVICE REQUESTED

First-Class Mail
U.S. POSTAGE
PAID
Pittsburgh, PA
Permit No. 1731

2004 International Continuously Variable and Hybrid Transmission Congress

September 23-25, 2004
St. Francis Hotel • San Francisco, California, USA

The automotive transmission landscape is changing.

Are you ready?

UCDAVIS

Supported by SAE International™

2004 International Continuously Variable and Hybrid Transmission Congress

The automotive transmission landscape is changing.

Are you ready?

This Congress will bring together industry leaders, vehicle manufacturers, transmission engineers, and researchers for a hands-on look at the advantages, benefits, and challenges of implementing conventional continuously variable transmissions (CVTs) and CVT hybrids. Stay on top of the latest developments by attending or exhibiting at this important event.

Registration and Fees (US Dollars)

All attendees — including those who have submitted abstracts and/or papers — must register for the 2004 International Continuously Variable and Hybrid Transmission Congress.
Regular - $880 Student - $710

Gala Dinner

Following the "Ride and Drive," enjoy a gala dinner at the beautiful Andretti Winery in Napa Valley. Please note that the cost of this event is not included in the registration fee. For registered guests, the cost is $110 and includes transportation to the winery from the St. Francis Hotel or from the Infineon Track. For non-registered guests, the cost is $150 and includes transportation from the hotel. In the event of the dinner's cancellation, dinner payments will be refunded.

www.sae.org/cvt or **conferences.ucdavis.edu/CVT-HYBRID2004**
For registration questions only, call 1-530-752-0198.

Would your company benefit with exposure to this technical audience?

Visit **conferences.ucdavis.edu/CVT-HYBRID2004** for exhibiting opportunities.

AGENDA

Friday, September 24		
8:00 a.m.	Welcome, Purpose of Congress, Organization and Announcements	
	CVT Theoretical Sessions	**CVT Practical Sessions**
9:30 a.m.	**Theory of CVT Systems** • Mechanics of CVTs • Shifting concepts • Dynamics of CVTs	**New Concepts for CVTs** • Special oils for CVT traction • Development of six roller half-toroid CVT • Constant speed PTO using CVTs • New speed torque control design
1:00 p.m.	**Modeling And Control Of CVT Systems** • Efficiency modeling • Resonance in CVTs • Engine controls coordination	**Low Level Control Of CVTs** • Measurement and control of slip in CVTs • Model based control of CVT • Electro-mechanical ratio and clamping force concept • Shift and lock up for high torque CVT
3:30 p.m.	**Theory in CVT Applications** • Control of half-toroid CVTs • Operating range control • Model for chain forces in CVT systems • CVT applications for conventional and hybrid drive systems	**CVT Low Level Control** • Control of wide V-belt CVT dynamics • Control of chain CVT behavior • Modeling and control of electro-mechanical actuator for CVTs • Improving VDT belt efficiency using wear information
Saturday, September 25		
	CVT Theoretical Sessions	**CVT Practical Sessions**
8:30 a.m.	**New CVT Concepts** • New CVT geometries • Concepts for geared neutral IVTs • New low cost CVT systems • New spherical CVT	**Experimental Effects and Developments** • High torque belt development • High performance Luk component development • Development of clamping pressure for belt-chain CVT
10:30 a.m.	**New Concepts and Geometries** • New CVT belt-changing thickness • Design and performance of roller gear CVT • New push-belt concept • An inline CVT for large vehicles	**Rubber Belt and Other Configurations** • Development of a 3d simulation of dry belt CVT • New traction drive using spherical surface pairs • New Peri-cyclic CVT • Turbo Trak CVT concept
1:30 p.m.	**High Level CVT Control Concepts** • Model based speed ratio control of CVT • Vehicle control using multi-variate correlation for drivability rating • State of the art of CVT modeling • Impulse shifting for CVT control	**Hybrid Electric CVTs** • Power-split electric CVT gear structure • Dual mode electric CVT • Fuel consumption balance with Autark hybrid drive • CVT downshift for regenerative braking in HEVs