

SAEINDIA

INNOVATIVE TECHNOLOGIES FOR SUSTAINABLE MOBILITY

INTERNATIONAL
MOBILITY
ENGINEERING
**CONGRESS &
EXPOSITION
2009**

13 - 15 DEC 2009
CHENNAI TRADE CENTRE, CHENNAI

Event Schedule



AMALGAMATIONS GROUP
HOST SPONSOR



SAE International



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Overview

Date	Program	Venue
11-12-09	Toptech programs	Anna University, Guindy
12-12-09	Hybrid Solutions for Personal and Mass Mobility Diesel Engine and After-treatment Controls – Today's Technology and Future Trends	
13-12-09	Congress and Exposition	Chennai Trade Centre, Nandambakkam
14-12-09		
15-12-09		
16-12-09	Technical Visits	CVRDE, Avadi WABCO-TVS (I) Ltd, Amabathur Proving Grounds, Mappedu

Toptech Programs

Date: 11-12-09 and 12-12-09

(Friday and Saturday)

Topic:

Hybrid Solutions for Personal and Mass Mobility

Venue: Henry Moudslay Hall, Anna University, Chennai

Lead faculty:

Dr. Arun Jaura

Dr. Sudhakar Potukuchi

Mr. Yogesh Deo

(Courtesy: Eaton Corporation)

Topic:

Diesel Engine and After-treatment Controls – Today's Technology and Future Trends

Venue: Hall of Guinness, Anna University, Chennai

Lead faculty:

Dr. Anupam Gangopadhyay,

Dr. Uwe Lingener,

Mr. S. T. Venkatesan

(Courtesy: Automotive Infotronics / Continental)

December 13 -15, Chennai Trade Centre

Overview of Programs on 13-12-09 (Sunday)

Time	Convention Centre		SRM University	Ashok Leyland
	Hall A	Hall B	Technology Theatre	Technology Theatre
10:30 11:45	Inauguration of Congress and Exposition		No program	
11:45 14:00	SAEINDIA meetings			
14:00 14:30	Myers – Uyehara Endowment lecture			
14:30 15:20	Myers – Uyehara Paper Competition			
15:20 16:10	Prof BS Murthy Paper Competition			
16:10 17:00	Mrs Revathy Iyer Paper Competition			

Overview of Programs on 14-12-09 (Monday)

Time	Convention Centre		SRM University	Ashok Leyland
	Hall A	Hall B	Technology Theatre	Technology Theatre
09:00 09:30	Plenary Session Mass Transportation		No program	
09:45 10:30	Panel Discussion Mass Transportation and Affordability			
Short Break				
11:00 12:30	Advanced Engine Technologies (1)	Vehicle Dynamics and Handling & Dynamic Modeling	Emerging Fuels and Fuel Cells (1)	Automotive Electronics
Lunch				
13:25 15:00	Advanced Engine Technologies (2)	Safety and Crash	Emerging Fuels and Fuel Cells (2)	After Treatment and Emissions (1)
Short break				
15:30 16:30	Panel Discussion Sustainable Talent Management for Mobility		No program	
16:30 17:30	Panel Discussion Innovative Mobility Solutions for India			

Overview of Programs on 15-12-09 (Tuesday)

Time	Convention Centre		SRM University	Ashok Leyland
	Hall A	Hall B	Technology Theatre	Technology Theatre
09:00 10:15	Special Session Creating Values	No program		
10:15 11:45	Hybrid Electric Vehicles & Energy Storage Systems and Infrastructure	NVH and Cabin Comfort	Product Development Tools and Technologies & 3R	Automotive Testing and Instrumentation & After Treatment and Emission (2)
Short Break				
12:00 13:30	Advanced Engine Technologies (3) & Alternate Propulsion	Advanced Light Weight Materials & Automotive Infotronics and Communication	Vehicle Architecture & Off Highway Vehicles	Fuel Injection Systems & After Treatment and Emission (3)
Lunch				
15:30 16:30	Chandrayaan Story		No program	
16:30 17:30	Valedictory Session			

Poster Presentation:

Venue: Convention Centre First Floor Foyer

Time:

For dignitaries 14:00 to 15:30

For delegates 10:30 to 15:30

Technical Visits

Date: 16-12-09 (Wednesday)

Starting time: 9:00 am

Starting point:

SAEINDIA Southern Section Office
ISTE Professional Centre,
25, Gandhi Mandapam Road
Kotturpuram, Chennai 600 025

Places of visit

1. Combat Vehicle Research Establishment, Avadi

Design and development of battle tanks

2. WABCO-TVS Limited India, Ambathur

Lean manufacturing systems

3. ABS proving grounds, Mappedu

Live demo of electronic braking systems

Return time: 18:00

Finishing point:

SAEINDIA Southern Section Office

Detailed Schedule

Date: Sunday, 13th December 2009

Registration: 8:30 – 10:00

INAUGURATION OF CONGRESS & EXPOSITION

Venue : Exposition Hall

Time : 10.30 to 11.45

- | | | |
|-------|--------------------------|--|
| 10:30 | Invocation | |
| 10:32 | Lighting of Kuthuvilakku | |
| 10:40 | Welcome Address | Mr. MS Kumar
President, SAEINDIA |
| 10:45 | Curtain Raiser | Dr. V. Sumantran
Chairman, Steering Committee |
| 11:00 | Patron Address | Mr. N. Venkatramani
Patron, Mobility Congress |
| 11:10 | Special Address | Dr. James E Smith
President SAE International |
| 11:25 | Inaugural Address | Mr. Andrew T. Simkin
US Consul General, Chennai |
| 11:40 | Vote of Thanks | Mr. S. Selvamani
Chairman, Organizing Committee |

MYERS - UYEHARA ENDOWMENT LECTURE

Venue : Convention Centre (Hall A + Hall B)

Date : Sunday, 13th December 2009

Time : 14.00 –14.30

Myers - Uyehara Scholarship Competition

Time: 14.30 – 15:20

Paper Number	Title of Paper
M2009081	Fabrication of Knock Sensor Using PVDF for Automobiles
M2009039	Black Silicon Solar Cell Integrated Electric Car Enabled With Electric Charging
M20090102	Advanced Magnetic Suspension System

Prof. Murthy Scholarship Competition

Time: 15.20 – 16:10

Paper Number	Title of Paper
M20090252	A Design of Heat Pipe based Air to Air Charge Air Cooler for a Turbocharged Engine
M20090238	Performance and Emission Analysis of Biodiesel Blends on a Single Cylinder Diesel Engine using Ethanol as an Additive
M20090225	Experimental Investigation And Combustion Analysis Of A Diesel Engine Using Nerium Oil Methyl Esters As A Fuel

Mrs. Revathi Iyer Memorial Scholarship Competition

Time: 16.10 – 17:50

Paper Number	Title of Paper
M20090253	Zukunft Wagon: Design and development of a two wheel car stabilized by micro controlled Gyroscope
M20090115	Automatic Headlamps
M20090207	Aerodynamic Design Enhancement of Automobile Wings and Spoilers using CFD

Date: Monday, 14th December 2009

Registration: 8:30 – 9:00

PLENARY SESSION – 1

Venue	Hall A
Time	9:00 to 9:45
Topic	Mass Transportation
Speaker	Prof. Geetham Tiwari, IIT, Delhi

PANEL DISCUSSION – 1

Venue	Hall A
Time	9:45 – 10:30
Topic	Mass Transportation and Affordability
Moderator	Dr. V. Sumantran
Speakers	Mr.Cornforth, Sr.Vice President, Renault Nissan India Pvt. Ltd. Mr. Lohia,* OSD MRTS & E.O., Joint Secretary, Govt. of. India. Dr. Vinod Dasari,* Wholetime Director, Ashok Leyland Ltd. Mr. Siddarth Lal, Managing Director, Eicher Motors Ltd. Dr.Kopp Carsten , General Manager- R&D ,Bosch

* Confirmation awaited

TECHNICAL SESSIONS

Session No	3	Venue	SRM University Technology Theatre
Time	11:00 – 12:30	Date	14-12-09
Topic	Emerging Fuel & Fuel Cells		
Chair	Mrs. Shailaja Sharma		
Co-chair	Mr. Sudhakar		
SAE paper no	Title	Authors	
SAE 2009-28-0031	Effect of CO2 Content in Producer Gases on Performance and Emissions of a Supercharged Dual-Fuel Eng	Dr. Murari Mohon Roy, Eiji Tomita, Nobuyuki Kawahara, Yuji Harada, Atsushi Sakane	
SAE 2009-28-0032	Hybrid fuel blends- The alternative fuel for transport bus engine	Dr. R. Subramanian, G.Rajendiran, Dr.R.Venkatachalam, Dr.K.Mayilsamy	
SAE 2009-28-0033	Straight Vegetable Oil Run Diesel Engine – A Compromised Solution	Bhalchandra S. Deshmukh	
SAE 2009-28-0034	Experimental Investigation on Emission and Combustion Characteristics of Biodiesel and its Blends	Murali Manickam, Mithun Kadambamattam, Mathew Abraham	

Session No	4	Venue	Ashok Leyland Technology Theatre
Time	11:00 – 12:30	Date	14-12-09
Topic	Automotive Electronics		
Chair	Mr. Abhay Bhagwat		
Co-chair	Mr. Sivakumar		
SAE paper no	Title	Authors	
SAE 2009-28-0021	New Functional Safety Standard ISO 26262 and the Potential impact on the ECU development for the Indian Market	Lakshmi Meti	
SAE 2009-28-0022	Differential Speed Based Bend Lighting in AFS	Madhusudan Joshi, Hemant Singh, S.K.Kalia, Saurabh Dalela, Dinesy Tyagi	
SAE 2009-28-0023	Ammunition Status Display System for Main Battle Tank	Valluri Ravi Prasad, V. Balaguru	
SAE 2009-28-0024	Electronic Ignition Control of Four Stroke Single Cylinder Engine	V. Saravana Prabu	

TECHNICAL SESSIONS

Session No	5	Venue	Hall A
Time	13:25 –15:00	Date	14-12-09
Topic	Advanced Engine Technologies (2)		
Chair	Dr. P. A. Laxminarayanan		
Co-chair	Dr. Mahesh Babu		
SAE paper no	Title	Authors	
SAE 2009-28-0006	Investigation on Performance, Combustion and Emission Characteristics of a Turbocharged Low Heat Rejection DI Diesel Engine With Extended Expansion Concept	S.Stephen Bernard	
SAE 2009-28-0007	Performance of gerotor oil pump for an automotive engine - prediction using CFD analysis and experimental validation	R.Elayaraja, P.Lingeswaramurthy, S. Govindarajan	
SAE 2009-28-0008	Low end performance improvement by effective use of multiple injection strategy in common rail diesel engine	Hareendranath Dilunath, Nilesh Gajarlawar, Pundlik R. Ghodke	
SAE 2009-28-0009	Improvement of Fuel Consumption by the Two - Stroke Gasoline Engine Applied the Stratified Charge Auto-Ignition Concept	Kenji Nishida, Hisashi Sakuyama, Takahiro Kimijima	

Session No	6	Venue	Hall B
Time	13:25 –15:00	Date	14-12-09
Topic	Safety and Crash		
Chair	Mr. Chandramouli		
Co-chair	Dr. Venkataswara Rao		
SAE paper no	Title	Authors	
SAE 2009-28-0055	Design of the Occupant Protection System for critical Side Impact requirements	P. Chandra Mouli	
SAE 2009-28-0056	Analysis of Road Traffic Accidents on NH 45 (Kanchipuram District)	Ravishankar Rajaraman, Dr. Ahamedali, M. Hassan, Jeya Padmanaban	
SAE 2009-28-0057	Effect of load slope time (LST) and load adapter position (LAP) on side door strength of passenger car.	Ratnadeep Dewan, Vivek Kr Srivastava	
SAE 2009-28-0058	A model for the mechanical subsystem of an air brake system	Dinesh Sonawane, Shankar C. Subramanian	

TECHNICAL SESSIONS

Session No	7	Venue	SRM University Technology Theatre
Time	13:25 –15:00	Date	14-12-09
Topic	Emerging Fuel & Fuel Cells		
Chair	Mr. K. K. Gandhi		
Co-chair	Mrs. Rajalakshmi		
SAE 2009-28-0035	Improvement of performance and emission characteristics of a diesel engine with turbulence induced piston using biodiesel blends	K. Rajan, K.R.Senthil kumar	
SAE 2009-28-0036	Renewable and environment friendly oxygenated biomass fuel: JME-ethanol-diesel hybrid fuel blends for diesel engines	E. Rajasekar, Dr. R. Subramanian, Dr. N. Nedunchezian	
SAE 2009-28-0037	Theoretical investigation of the performance of vegetable oil operated CI engine for various equivalence ratio	S. Sundarapandian, G. Devaradjane	
SAE 2009-28-0038	Performance and emission characteristic evaluation of a single cylinder four -stroke diesel engine running on hydrogen and diesel in dual fuel mode under different EGR conditions.	Mr. Probir Kumar Bose, Mr.Rahul Banerjee	

Session No	8	Venue	Ashok Leyland Technology Theatre
Time	13:25 –15:00	Date	14-12-09
Topic	After Treatment & Emissions		
Chair	Dr. G Rainer		
Co-chair	Dr. Anupam Gangopadhyay		
SAE 2009-28-0014	Performance and Emissions of a Spark Ignition Engine Fuelled with Gasoline Adulterated with Kerosene	Bivek Baral, Robert Raine	
SAE 2009-28-0015	Emission Performance Improvements with Turbulent Metal Substrates on 2 & 3 Wheelers	Mr. K. V. R. Babu	
SAE 2009-28-0016	Spray Modeling for Lean NOx Trap After treatment System Design	Milind S. Kulkarni	
SAE 2009-28-0017	Design of positive crankcase ventilation valve for automotive gasoline engine – validation by simulation using CFD and by experiments	P. Jeya Prakash Singh, P.Lingeswaramurthy, B. Srinivasan	

PANEL DISCUSSION – 2

Venue	Hall A
Time	15:30 – 16:30
Topic	Sustainable Talent Management for Mobility
Moderator	Dr. M. Anandakrishnan
Speakers	Dr. N. Ravichandran, CEO, Lucas TVS Mr. D. Subramanian, CEO, Defiance technologies, Dr. I. V. Rao, MEO (Engg.), Maruti Suzuki, Mr. Shekar Arora*

*Confirmation Awaited

PANEL DISCUSSION – 3

Venue	Hall – A
Time	16:30 – 18:00
Topic	Innovative Mobility Solutions for India
Moderator	Mr. N. Venkataramani
Speakers	Mr. J. S. Chopra, President, Delphi TVS Mr. Chetan Maini, Managing Director, REVA Dr. John Absmier, Director, Asia Pacific – Delphi Mr. Bruno Valanzuolo, Chief Technical Advisor, Unido Dr. Arun Jaura, Vice President –Technology, EATON Corp.

Date: Tuesday, 15th December 2009

SPECIAL SESSION

Venue	Hall A
Time	09:00 – 10:15
Topic	Creating Values
Speakers	Dr. G Reiner, AVL Dr. David Schutt, SAE International Mr. Marathe, ARAI Mr. Kaushik Das, Chief Engineer, Eaton Corp. USA

TECHNICAL SESSIONS

Session No	9	Venue	Hall A
Time	10:15 – 11:45	Date	15-12-09
Topic	Hybrid Electric Vehicles & Energy Storage Systems and Infrastructure		
Chair	Mr. Damodaran		
Co-chair	Mr. Kaushik Das		
SAE paper no	Title	Authors	
SAE 2009-28-0043	Robust PID Controller with Computational Intelligent based Decision maker for BLDC Motor in Indian R	Poorani	
SAE 2009-28-0044	Design and Analysis of Power Train of a Series Hybrid Electric Car	Sridhara S.N, Anandan S.	
SAE 2009-28-0045	Development of a parallel hybrid electric vehicle	Ajay Kumar Gupta	
SAE 2009-28-0046	Diesel Hybrids - The logical path towards Hybridization	A. Srinivas, T. Kumar Prasad, T. Satish, Suhas Dhande, C. Nandagopalan	

TECHNICAL SESSIONS

Session No	10	Venue	Hall B
Time	10:15 – 11:45	Date	15-12-09
Topic	NVH & Cabin Comfort		
Chair	Dr. Raju		
Co-chair	Dr. Arunkumar Sampath		
SAE paper no	Title	Authors	
SAE 2009-28-0047	Characterization of Passenger Vehicle In-Cabin Noise Using OMA and Sound Quality Techniques	Chetan Jain, Muthu Saravanan, Deepak Panda	
SAE 2009-28-0048	Numerical Studies on the Effect of Cooling Vent Settings and Solar Radiation on Air Flow and Temperature Distribution in a Passenger Car	Q.H. Nagpurwala, Vivek P. Adhikari, Abdul Nassar	
SAE 2009-28-0049	Characterization and Reduction of Power Steering Hiss Noise in Passenger Car	Mr. M. Arunachalam, Mr. Santosh Jagtap, Mr. George Winney	
SAE 2009-28-0050	Simulation and Validation of Passenger Compartment Soaking and Cooling under Solar Load	Ashok Patidar, Shankar Natarajan	

Session No	11	Venue	SRM University Technology Theatre
Time	10:15 – 11:45	Date	15-12-09
Topic	1) Product Tools & Technologies		2) 3R-Reduce, Recycle & Reuse
Chair	Dr. Ramesh		
Co-chair	Mr. Akella Sharma		
SAE paper no	Title	Authors	
SAE 2009-28-0052	UV-Curable Primer-cum-Paint System for Mild Steels based on Sol-Gel Coating Technology	K.R.C. Somaraju, A. Jyothirmayi, Gururaj. S.T, R. Subasri, G. Padmanabham	
SAE 2009-28-0053	Laser Surface Hardening Of Crankshaft	S. M. Shariff, Manish Tak, S. Shanmugam, G. Padmanabham	
SAE 2009-28-0054	An Optimal Solution Through Lean Manufacturing Using Value Stream Mapping Towards Efficient Production for a World-Class Automobile Brakes Manufacturing Company	V. Satheeshkumar, M. Thiagarajan, C. J. Thomas Renald, G. K. Sathiyamoj	
SAE 2009-28-0001	Control System Development for Retrofit Automated Manual Transmissions	Bapiraju Surampudi	

TECHNICAL SESSIONS

Session No	12	Venue	Ashok Leyland Technology Theatre
Time	10:15 – 11:45	Date	15-12-09
Topic	1) Automotive Testing Instrumentation 2) After Treatment & Emission		
Chair	Dr. N. Karuppiyah		
Co-chair	Mr. R. Vasu		
SAE paper no	Title	Authors	
SAE 2009-28-0026	Reliability Engineering in Automotive Industry for the Local Market	Christian Lemm, Detlef Zerfowski	
SAE 2009-28-0027	Low cost approach to benchmark Kinematics & Compliance Data through Integration of MTS 329 and RV3 Sensor	Somashekhhar G. Mathad, Bhaskar Chaturvedi, Santosh Lalasure, Subramaniam L.	
SAE 2009-28-0028	Study of Flame Characteristics of a Gasoline Fuelled Spark Ignition Engine	K. A. Subramanian, Supriya Shukla, Manoj Athwe, M. K. G. Babu, L. M. Das	
SAE 2009-28-0018	Particulate characterization of Biodiesel Fuelled Compression Ignition Engine	Avinash Kumar Agarwal, Dhananjay Kumar Srivastava, Tarun Gupta	

Session No	13	Venue	Hall A
Time	12:00–13:30	Date	15-12-09
Topic	1) Advance Engine Technologies 2) Alternate Propulsion		
Chair	Mr. Matthew Abraham		
Co-chair	Dr. P. K. Banerjee		
SAE paper no	Title	Authors	
SAE 2009-28-0010	Database Constructions by LDA and PIV to Verify the Numerical Simulation of Gas Flows in the Cylinder of a Motored Engine	Tomio Obokata, Masaaki Kato, Tsuneaki Ishima, Makoto Kaneko	
SAE 2009-28-0011	Evaluating EGR Distribution Effectiveness of Intake Manifold By CFD Techniques	Sourabh Nandi, Aditya Mulemane	
SAE 2009-28-0019	Development of Bi-fuel CNG engine based passenger vehicle and Field Trials study in Indian condition.	Singh Jasbir, Kulshrestha Gaurav, Bhat Anoop, Agarwal Sunny	
SAE 2009-28-0020	A New Approach to improve Diesel Engine Efficiency	R. Sivasaravanan	

TECHNICAL SESSIONS

Session No	14	Venue	Hall B
Time	12:00–13:30	Date	15-12-09
Topic	1) Advanced Light Weight Materials 2) Automotive Infotronics & Communication		
Chair	Ananya Deb		
Co-chair	Prakash Bhonde		
SAE 2009-28-0012	Laser Welding of Advanced High Strength Steels for Tailor Welded Blank(TWB) Applications	B. Shanmugarajan, J. K. Sarin Sundar, G. Padmanabham	
SAE 2009-28-0013	Vehicular Damage Detection Using Strain Mode Shape	Sajal Roy, Naorem Giridhar Singh, Makarand Joshi	
SAE 2009-28-0025	Vehicle Rollover Crash Simulation using Deformable to Rigid Switching	Prabhakar Marur	
SAE 2009-28-0029	Accident Information System (AIS)	G. Kalivarathan, Aravind.C	

Session No	15	Venue	SRM Technology Theatre
Time	12:00–13:30	Date	15-12-09
Topic	1) Vehicle Architecture		2) Off Highway Vehicles
Chair	Mr. Anil Gupta		
Co-chair	Mr. Sathya Prasad		
SAE 2009-28-0059	Global Application Features of K12B, a New Gasoline Engine for Compact Vehicles	Michihiro Kato	
SAE 2009-28-0060	Exterior and Interior Styling of an Intercity Sleeper Coach Bus with Improved Aerodynamic Performance and Passenger Comfort	Sridhara SN, Arun R, Rakesh D	
SAE 2009-28-0061	Unmanned Earth Mover for Hazardous Operations	Alok Mukherjee, Bani Hazra	
SAE 2009-28-0051	Battle Tank Fuel Capacity Monitoring System	S .Parthasarathy, V. Balaguru	

TECHNICAL SESSIONS

Session No	16	Venue	Ashok Leyland Technology Theatre
Time	12:00–13:30	Date	15-12-09
Topic	1) Fuel Injection Systems		2) After Treatment & Emission
Chair	Dr. K. C. Vora		
Co-chair	Mr. Kiran		
SAE 2009-28-0040	Investigation of the LPG Induction Jet Angle With Injector Nozzle Angle in a Dual Fuel Diesel Engine Using CFD Technique	C. J. Thomas Renald, Dr. P. Somasundaram, V. Satheeshkumar	
SAE 2009-28-0041	Improvement of Atomization Characteristics of a Micro Nozzle Array Type Gasoline Injector	Mikiya Araki, Tomio Obokata, Tsuneaki Ishima, Seiichi Shiga, Masahiko MASUBUCHI, Tomojiro SUGIMOTO	
SAE 2009-28-0042	Combustion And Emission Characteristics of Diesel, B100 And B20 Fuel on a Thermal Barrier Coating on Piston Crown In Direct Injection C.I Engine At Optimum IOP and IT	Dhananjaya D A, Dr. Sudhir C. V., Dr. Mohanan P	
SAE 2009-28-0018	Particulate characterization of Biodiesel Fuelled Compression Ignition Engine	Avinash Kumar Agarwal, Dhananjay Kumar Srivastava, Tarun Gupta	

CHANDRAYAAN STORY

Venue	Convention Centre
Time	15:30 – 16:30
Topic	Chandrayaan Story
Speakers	Prof. Goswami, Director, Physical Research Laboratory Dr. Shivakumar, Director - ISRO Telemetry Tracking & Command Network (ISTRAC)

VALEDICTORY SESSION

Venue : Convention Centre

Time : 16:30 – 17:30

Welcome Address Mr. MS Kumar

President, SAEINDIA

Closing talk Dr. V. Sumantran

Chairman, Steering Committee

Valedictory Address Chief Guest – Dr. Madhavan Nair

Former Chairman, ISRO

Lifetime Achievement Award to

Mr. Sivasailam

Managing Director, Amalgamations

Vote of Thanks Mr. S. Selvamani

Chairman, Organizing Committee

DEWETRON DATA ACQUISITION SYSTEMS

DEWETRON systems are used in a wide variety of automotive testing and research applications. Our small, rugged chassis are ideal for use both inside the car and on the test stand. And the breadth of our signal conditioning choices means that just about every signal and every sensor can be connected to your DEWETRON system and recorded.

Special sensors like our DEWE-VGPS-200C allow dynamic brake/accel testing to be performed without a 5th wheel. And our ability to record from up to four CAN bus interfaces at the same time provides unprecedented power. And how about video from one or more cameras, recorded synchronously with your analog, CAN, and GPS data? That's DEWETRON.

Here are just a few of the automotive related applications that our systems are typically used for, followed by some links to specific products or configurations:

- Ride handling
- Driveability testing
- Engine test and combustion analysis (DEWE-CA)
- Dynamic brake and acceleration testing
- Environmental recording - ambient, chamber, wind tunnel
- Combustion analysis
- Research & Development
- Test track, performance testing

Vehicle dynamics:

- | | |
|--|---|
| <ul style="list-style-type: none"> ■ Standard tests <ul style="list-style-type: none"> ■ Brake test ■ Acceleration test ■ Steady circle test ■ ISO lane change test ■ Rollover (fishhook) test ■ Vehicle transfer function (sweep sinus steering test) ■ R&D Application tests <ul style="list-style-type: none"> ■ Road Load Data acquisition for the durability test ■ In connection with the test rig ■ Chassis test dynamic and static ■ FRF function with hammer and shaker excitation ■ Chassis stiffness test ■ Chassis test vs. software simulation ■ Engine tests in vehicle or on the test bed ■ With combustion analysis ■ Transmission tests ■ Load distribution (2WD, 4WD) ■ Torsional Vibration ■ current leakage test system (up to 200 current measurement channels) ■ GPS navigator test system (with video) | <ul style="list-style-type: none"> ■ Component tests <ul style="list-style-type: none"> ■ Shock absorber test system ■ Air condition test system ■ Brake noise test system ■ Tire pressure test system ■ Gear changing analysis system (manual transmission) ■ Wiper test / Mirror Test ■ Crash test <ul style="list-style-type: none"> ■ Component tests, Sensors, air bag ■ In-car passenger test with dummy's ■ Crash test for pedestrians ■ NVH test systems <ul style="list-style-type: none"> ■ In-car tests chassis vibration and noise ■ Components tests ■ Passby noise test ISO ■ Test bed applications <ul style="list-style-type: none"> ■ Durability tests with special trigger and video |
|--|---|

Recommended Usage:

- Ride Handling
- Engine Test
- Dynamic Brake & Acceleration
- Test Track/Performance
- Combustion Analysis
- Environmental Research
- Automotive Research

Online Information:

www.dewetron.info/automotive



Office at India

DEWETRON Instruments India Pvt Ltd,
4th Floor, Ceebros Arcade, Sardar Patel Road, Adyar,
Chennai-600020, TamilNadu, India
Tel: - 044-24430659/0661, Direct:- -044-6555 4591, Fax:- 044-24901988
Mobile:- +91-(0)-9444969444
E-mail:- ramesh@dewetron.com