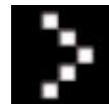


# Vehicle Dynamics International Awards 2008

THE JUDGING PANEL HAS VOTED AND THE SCORES HAVE BEEN TALLIED. WELCOME TO THE RESULTS OF THE INAUGURAL VEHICLE DYNAMICS INTERNATIONAL AWARDS!



In an increasingly demanding and competitive consumer market, a vehicle's ride and handling is an important element in a purchasing decision.

Auto engineers are under more pressure than ever to deliver the optimum ride. Brand reputations can be made or broken on the back of a vehicle's ride and handling technologies. The Vehicle Dynamics International Awards acknowledge such efforts, rewarding not only automotive engineers, but also the companies that supply and service their efforts.

To put together this inaugural set of awards, we did a number of things:

First, we recruited a jury of respected international automotive journalists (see panel overleaf), many of whom are contributors to *VDI*, and all of whom are very well informed in the field of vehicle ride and handling technologies.

Next, we asked vehicle manufacturers and supplier companies to highlight to us any innovations or developments they would like us to consider. Every new vehicle introduced to any one market from November 1, 2007 to November 1, 2008 was eligible.

From the nominations received, and with input of its own, the *VDI* editorial team selected a shortlist of nominations, four in each category, to be judged by the full jury. Then we added up the scores to find the winner and a highly commended runner-up in each category.

The Vehicle Dynamics International Awards will become an annual event. So remember, when you're busy launching new cars or technologies in 2009, or find yourself working for a talented, inspirational leader, don't forget to tell us about it!

**Graham Heeps, editor**

VEHICLE DYNAMICS  
AWARDS INTERNATIONAL  
2008

**DYNAMICS TEAM OF THE YEAR**

- Winner  
**Ford**
- Highly commended  
**Audi (pictured)**
- Also shortlisted  
**Prodrive**  
**Renault Sport**



**Dynamics Team of the Year**



Ford of Europe has become synonymous with dynamic excellence, so it's perhaps no surprise to see the Blue Oval as the winner of Dynamics Team of the Year. But winning this award was not a formality for Ford, and ever-improving Audi pushed its rival all the way to the trophy, before finishing in the Highly Commended runner-up position. Nor should the remaining two nominees be forgotten: both Prodrive and Renault Sport have a deep-rooted commitment to vehicle dynamics excellence that shows up time after time in the companies' products.

Ford's Dynamics Team of the Year accolade is not restricted to engineers on one continent. Having established something of a powerbase in Europe, Ford has been sharing vehicle dynamics expertise and processes with its other divisions around the world. In Australia, for example, the FG Falcon is winning plaudits; EPS makes its Ford North America debut in the revised Fusion; and in 2010 US customers will receive the Fiesta. Not only is Fiesta (whose ride and handling team is pictured below) a great small car when size and energy efficiency are more important than ever, but its accessible dynamics ensure that customers in global markets from the USA to China will be able to save the planet with smiles on their faces.

The man at the head of Ford's dynamics team, executive technical leader vehicle dynamics, Pim van der Jagt (inset), was delighted with the award: "I think that with the new Fiesta, Ford has proved once again its outstanding expertise in vehicle dynamics," he said. "We are very happy to get such positive feedback from the media, not only for Fiesta but also for the new Ka. We are very proud of this award in particular because the jury consists of such a great number of international experts. I'm confident that our team will continue to do everything to maintain this high level of vehicle dynamics performance with our upcoming products."



**Development Tool of the Year**

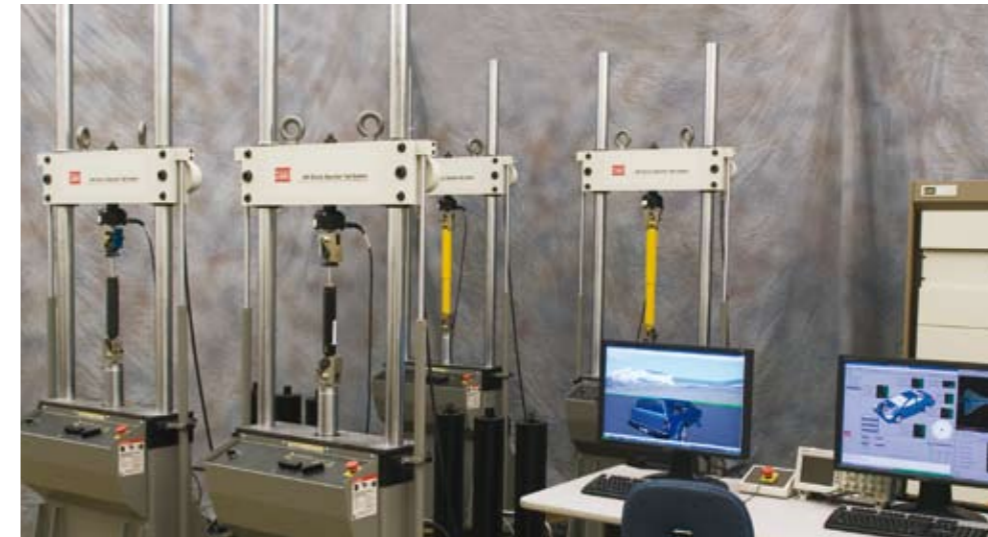
Another category with real diversity on the shortlist was Development Tool of the Year, where a damper test rig, a GPS datalogger, a kinetics and compliance measurement system, and software for chassis controls design were all in the running.

In the event, the judges backed the Mechanical Hardware-in-the-Loop (mHIL) Four-Corner Damper System, a joint nomination by Nissan Motor Company in Japan and US test equipment specialist MTS Systems Corporation. Under the system (shown below), four physical dampers are placed in load frames and integrated with a vehicle model to execute simulated vehicle maneuvers. This capability supports the tasks of CAE validation, troubleshooting, and pre-tuning before vehicle prototypes are available. mHIL benefits include reduced development time and cost, reduced test cycle time, reduced rework, and improved vehicle performance. "During the preparation phase mHIL damper testing revealed several unknowns that were solved before integrating our dampers into a vehicle prototype, reducing vehicle testing by at least one month," explained Youichi Sakai of Nissan Motor Company in Japan. "At Nissan, we will reduce vehicle prototypes, but there will always be system prototyping with mHIL."

Commenting on the verdict, judge Adam Gavine, editor of *Automotive Testing Technology International*, said, "In an era where suppliers and car makers are looking to cut development time and costs, it's clear that the MTS mHIL Four-Corner Damper testing technology is proving to be a critical tool for test engineers and dynamicists at Nissan."

**DEVELOPMENT TOOL OF THE YEAR**

- Winner  
**Four-Corner Damper System with mHIL – MTS/Nissan**
- Highly commended  
**VB20SL3 – Racelogic (pictured)**
- Also shortlisted  
**SPMM 4000 HS – Anthony Best Dynamics**  
**MapleSim – MapleSoft**



**THE JURY**

**Juergen Zoellter,** freelance writer, Germany  
"I have the best job on earth!" says Zoellter, who contributes articles to more than 30 publications, including the German titles *Focus*, *Welt am Sonntag*, *Autobild* and *Autozeitung*, and *Car&Driver* in the USA, for which he is European correspondent.

**John Miles,** vehicle dynamics engineer and journalist  
From garage mechanic to F1 racer, and motoring journalist to respected chassis engineer, Miles has done it all in his 40 years in the auto industry. It was during his time as a dynamicist at Lotus that the company became known for its contract engineering work on chassis projects. He now works at Multimatic while continuing to share his expertise with the readers of *Vehicle Dynamics International*.

**Kim Wolfkill,** publisher, *MSN Autos*, USA  
Wolfkill held the positions of online editor and senior editor in seven years at *Road & Track*. Since 2006 he has been publisher of *MSN Autos*, based in Seattle. Wolfkill has raced karts at an amateur level, and GT/Touring cars professionally, competing three times in the 24 Hours of Daytona sportscar endurance race.

**Mike Sutton,** associate editor, *Ward's Auto*, USA  
Sutton is an associate editor for Southfield, Michigan-based Ward's Automotive Group, as well as managing editor of the *Ward's Engine & Vehicle Technology Update*. He serves as an in-house specialist in vehicle powertrains, dynamics and electronics at Ward's, and is an experienced high-performance driver.

**Graham Heeps,** editor, *Vehicle Dynamics International*  
Heeps came to motoring journalism five years ago after a passion for cars and an ambition to write got the better of a career in software development. At the helm of *Vehicle Dynamics International* since 2005, he has also been editor of *Professional Motorsport World* since its launch in 2006.

**Adam Gavine,** editor, *Automotive Testing Technology International*  
Although he has been a lifelong fan of James Bond cars ever since seeing *Goldfinger* as a boy, Gavine appreciates the fruits of every car maker's labors. On board for the very first issue of *Vehicle Dynamics International*, the Scotsman contributes to *VDI* alongside his roles in charge of *Automotive Testing Technology International*, *Crash Test Technology International* and *Tire Technology International*.

**Graham Johnson,** Managing Director, UKIP Media & Events  
Johnson was the launch editor of *Vehicle Dynamics International* in 2003 and continued to lead the magazine until mid-2005, when he became managing director of UKIP Media & Events, *VDI*'s publisher. A car enthusiast and club racer, he is still an occasional contributor to *VDI* and sister publication *Professional Motorsport World*.

**Matt Davis,** freelance writer, Italy  
Italy-based, USA-born Davis has been in motoring journalism for 13 years. In an ideal location to cover the latest products from Italy's supercar manufacturers, Davis is highly respected by news outlets worldwide, including *Auto Express*, *Genroq*, *Gente Motori* and *Auto Week*, not to mention *Vehicle Dynamics International*.

**Mike Maqda,** freelance writer, USA  
Hugely knowledgeable about anything with horsepower, *Vehicle Dynamics International*'s man on the US west coast keeps a close eye on the country's automotive and racing scenes.

**Brian Cowan,** freelance writer, Asia & Pacific  
The New Zealander is a fan of everything with wheels and an engine. A motoring journalist with decades of experience, he is a regular contributor to *Vehicle Dynamics International* and its sister titles.

**Michael Scarlett,** freelance writer, UK  
As a very experienced former *Autocar* staffer and European Car of the Year juror, Scarlett takes a keen interest in all things technical and contributes to every issue of *Vehicle Dynamics International*.

**Jonas Jarlmark,** technical editor, *Automobil*, Sweden  
Jarlmark juggles his commitments as a freelance vehicle dynamics engineer with freelance writing, principally as technical editor of Sweden's *Automobil* magazine. Formerly technical director of the Flash Engineering team in Swedish Touring Cars, his biggest job in 2008 has been as SEAT Sport driver Rickard Rydell's race engineer in WTCC.

**Dean Slavnich,** editor, *European Automotive Components News*  
Slavnich joined the editorial team of *Vehicle Dynamics International* when he came to UKIP Media & Events in 2005 from *Automotive Engineer*, the magazine of the UK's Institute of Mechanical Engineers. As editor of *European Automotive Components News*, Slavnich keeps a keen eye on the latest technologies and trends in the chassis components market.

**CAR OF THE YEAR****Winner****Nissan GT-R****Highly commended****Ford Fiesta** (pictured)**Also shortlisted****Chevrolet Corvette ZR-1****Suzuki Splash/Opel Agila****Car of the Year**

Picking a winner in the Car of the Year category was one of the hardest of our judges' tasks. The fact that excellent ride and handling performance can be found in vehicles of all sizes and levels of performance only adds to the difficulty of the task, for it dictates a shortlist populated not only by fast, exotic machinery, but also by newly launched everyday vehicles, such as the Suzuki Splash and Ford Fiesta, that are notably good to drive.

In the end, the battle was between two very different vehicles, the Fiesta and the Nissan GT-R, with the GT-R emerging victorious. It's not the lightest or most elegant of sports cars, but the jury decided that what the GT-R lacks in subtlety, it makes up for in all-round ability.

A host of high-tech dynamic technologies such as active torque management (back-to-front and side-to-side) and Bilstein DampTronic adaptive dampers, have helped the Nissan to take the fight to the European supercar establishment. "As track tests have revealed worldwide, the GT-R is a revelation for Nissan," observed jury member Matt Davis, a US freelancer based in Italy. "I was expecting a sloppy US musculer wrestling match behind the wheel, but what I got from the outstanding dedicated all-wheel-drive chassis was very close to an Audi R8. The three-mode suspension on the Bilstein DampTronic needs a little work, but nonetheless I was happily stunned."

Speaking on behalf of the development team, Simon Croft of Nissan International commented: "To be presented with this Award from those specifically reporting on vehicle dynamics validates our many hundreds of hours testing around the world at various circuits and on challenging road conditions. Like previous versions of the legendary GT-R, our latest model to bear the iconic three letters is a showcase for Nissan's engineering. We know we have developed an extraordinary car, a technological flagship for Nissan that demonstrates our passion for cars. We can feel proud our work has been truly appreciated."

**Supplier of the Year**

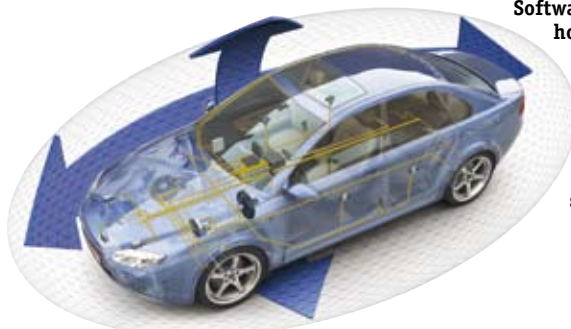
A showcase for the companies that supply the components and technologies that allow chassis engineers to do their job, this category became a contest of four highly respected nominees. All gave the judges compelling reasons to win their vote.

Over the past year, Brembo has made several acquisitions and announced a big rise in profits for the first half of 2008. ArvinMeritor, meanwhile, has a raft of high-tech new ride control products coming to market under the 'smart systems' banner.

TRW Automotive was Highly Commended, a reflection of the fact that, despite tough industry conditions, it's still performing much better than many of its North American Tier 1 contemporaries, and launching a range of affordable new technological developments.

But the Supplier of the Year trophy was awarded to Robert Bosch. Still growing, still profitable, and still at the forefront of chassis technology development, Bosch's latest developments include a focus on the integration of active and passive safety systems, a yaw rate sensor currently under development that is half the size of the previous model but with the same accuracy and response time, and a new version of parking assistant that will work with hydraulic power steering.

Awards judge Juergen Zoellter gave this verdict: "In 2008 Robert Bosch GmbH took over Innovations Softwaretechnologie GmbH in order to get the know-how for a better IT-based integration of automotive systems for the future. That's an essential strategy for the future, I believe. More generally, the cars of today can be powered by smaller and more efficient drivetrains, due to innovative Bosch technologies. There is no similar player in the worldwide automotive industry with such successful solutions."

**SUPPLIER OF THE YEAR****Winner****Robert Bosch****Highly commended****TRW Automotive** (pictured)**Also shortlisted****ArvinMeritor****Brembo**

**DYNAMICIST OF THE YEAR****WINNER**

John Heinricy, General Motors

**Highly commended**

Wolfgang Helbert, Ford Europe

**Also shortlisted**

Jack Cooper, Dodge

Michael Lugert, Hyundai-Kia

**Dynamicist of the Year**

It's always inspiring to work for great people, and the message coming loud and clear out of General Motors' Performance Division is that there is nobody those engineers would rather work for than John Heinricy, GM's director of High Performance Vehicle Operations.

Heinricy was first nominated for this award by his own engineers. One said, "Although John is an executive within GM, which comes with a lot of responsibility, he can often be found working directly with the product during critical

phases of a program. Whether it be riding damper tuning iterations with the development engineer, or working directly with the chassis controls engineer to hone the exact feel he wants from the stability calibration, John's evaluation and tuning skills are very sharp and well respected."

Under Heinricy's leadership, the Chevy Cobalt SS, HHR SS, and Cadillac CTS-V have all been launched in the past 12 months. All have been praised in the media, and with Heinricy behind the wheel, all have set class records on the Nordschleife.

The judges agreed that Heinricy deserved the award in 2008. "Few engineers have had such an impact on so many people as this winner," commented Kim Wolfkill, publisher of MSN Autos. "Not only is he the director of performance vehicle operations for a major auto maker, he's also an accomplished professional racer who brings both passion and expertise to any projects he oversees."

A delighted Heinricy commented, "I'm honored to receive the Dynamicist of the Year award. Leading a high-performance vehicle team has been particularly rewarding for me. As all chief engineers in our industry know, it takes a terrific and talented team to develop high-performing cars. And, it also requires a true racing spirit, in which that team strives to be the best it can be. Our GM Performance Division was responsible for getting 19 vehicles into production – as well as many racing wins – over the past several years. This award validates the team's hard work."

**Innovation of the Year**

Open to OEMs and suppliers alike, the Innovation of the Year category attracted a broad range of nominations.

As the judges' scores rolled in, a close contest for category honors developed between Bishop Steering Technology's ActivRak variable-rate steering systems, and another well-received steering innovation, this time on the rear axle: Renault's impressive 4Control 4WS technology.

But it was Bishop's simple but clever, mechanical substitute for the vehicle dynamics component of active steering that took the title. ActivRak is a variable ratio steering rack that quickly reduces the steering ratio off center. The system is incorporated into the Direct Steer technology already seen in Mercedes-Benz's SLK, SL, and CLC models. In the first half of 2009 it will also be released on the new Mercedes-Benz E Class, then progressively rolled out across S-, M- and R-Class models through 2009 as the next stage of its implementation on all Mercedes models in the next three years.

For jury member Jim McCraw, it was simplicity that won the day: "It is a simple, elegant solution to a very complex problem," he explained, "one that works without computers and algorithms and add-ons. In dynamic terms, it works to make the vehicle feel more sporty in the corners and more stable on the highway, without cost or complication penalties." Fellow juror Brian Cowan concurred: "The best steering systems have always been based on pared-to-the-bone simplicity. ActivRak is a fine example of that tradition."

**INNOVATION OF THE YEAR****Winner**

ActivRak – Bishop Steering Technology

**Highly commended**

4Control – Renault/Renault Sport Technologies (pictured)

**Also shortlisted**NexTrac active 4WD – BorgWarner  
TPI indirect tire pressure monitoring – NIRA Dynamics