



# AUTO+ WOMEN IN MOTOR SPORT

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## WOMEN'S WORK

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## FULL SPEED AHEAD

Delphine Biscaye on Venturi's quest for electric land speed glory





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Welcome to the sixth edition of FIA Auto+ Women in Motorsport.

It's been another season of superb motor sport action and one in which women have featured prominently, both on and off the track. Nowhere is that better illustrated than in our interview with Delphine Biscaye, an electronics engineer who helped the Venturi car company to an historic land speed record for electric vehicles at the famous Bonneville Salt Flats in the USA recently.

In this issue we also detail the progress of FIA Women in Motorsport-supported driver Lucile Cypriano in the VW Scirocco R-Cup and, as the series raced its final ever round, we look back at the successful partnership between VW and the Commission.

Finally, as the FIA Women in Motorsport Commission approaches its fifth anniversary, its President Michèle Mouton reflects on the Commission's achievements to date and looks ahead at the exciting times in prospect for women in motor sport.

We hope you enjoy this edition of our newsletter and as always we welcome your feedback.

Your AUTO+ WIM team

Michèle Mouton Interview

## An Ongoing Mission

As the FIA Women in Motorsport Commission approaches the fifth anniversary of its foundation, its President, Michèle Mouton, reflects on what has been achieved so far and outlines the commission's future goals

**The Women in Motorsport Commission is approaching its fifth anniversary. When it was launched, what were the goals and how has the initiative developed over that time?**

Our objective remains the same today as when the Commission was launched in 2009: to strengthen and encourage the participation of women in all areas of motor sport. As with any new project it takes time to formulate a strategy and I think it's fair to say that 2010 was largely a planning year. We have definitely gathered momentum year-on-year, but there is still a lot of data to be collected to give us a clear picture of the position of women in the sport today.

**Has the Commission met the immediate goals it set out to achieve?**

I think that over the past couple of years we have really made headway but it is always a work in progress. Initially we decided to focus on the promotion and awareness of women competitors in karting, racing and rallying but since then we have broadened that objective to include engineers, volunteers and officials. We now have Commission members who are experts in all these fields and their own personal experiences are giving us a valuable insight into what we need to do to encourage more participation in these areas.

**With female drivers such as Susie Wolff, Michela Cerruti and Keiko Ihara testing F1 cars, winning races and finishing on world championship podiums do we still need a commission to promote women in motor sport? Are there still obstacles to be overcome?**

Susie, Michela and Keiko are great ambassadors for what women can achieve, but while we continue to see more young girls get involved in the sport and succeeding, there are still very few at the highest level.

It was, however, excellent to see Mikaela Åhlin-Kottulinsky recently become the first woman to win a round of the Volkswagen Scirocco R-Cup outright. And it is not just about driving; there are many varied roles within the sport and we have to promote this fact. I think there is still some perception that motor sport is a man's world and this is far from the case.

When I look at all the different formulas and championships, there are many young women working in the sport, but because they are not drivers they are not in the limelight. We need to increase the awareness of what women are quietly achieving.

I believe that if our sport can show more feminine presence in all areas it will inspire more women to join. I don't have to look very far into the world of rallying to see

women working in all areas, and women working in top organisational positions too. Like anyone, they have worked hard to succeed in their chosen field and have a passion for what they do.

**As the Commission has developed, have the major issues that need to be tackled changed? Have your investigations revealed new information about the success or otherwise of female participants in motor sport?**

One of our biggest tasks is to collate data from around the world to ascertain the true facts about women in motor sport. As you can imagine, this is an enormous job but we are gradually building up a database.

We have the most valuable resource in our hands – the FIA's national sporting authorities – and many of these ASNs have nominated national representatives to help us with this work. But, as I said, it is a big job, it will take time and even then it will continue to evolve.

**The holy grail is obviously to see a woman race at the highest levels in F1, sportscars or rallying, but is it more important to see a greater number of women taking part in motor sport at grassroots level – in club competition or at national level?**

I think the most important thing is to encourage people to do what makes them happy and to promote what is available to everyone. Yes, of course I would love to see a woman drive in Formula One or compete at the highest level in one of our other world championships but it will take time and this will only come when someone has the passion and determination at grassroots level.

It's important that we get people into our sport at a young age, and not just girls. You only have to look at the top drivers and you see they have progressed through the formulas from karting. It's not just a mission for the Women in Motorsport Commission to encourage more girls, but it is something the FIA as a whole is looking at seriously with its ASNs.

I am personally convinced that it is only with a higher number of girls involved in motor sport that we will have a chance to see some succeeding. Compare the proportion of men competing and how many succeed with the proportion of girls trying and you will understand why we still don't have enough women at the top in all disciplines.

**There are some regions where motor sport itself is struggling to gain a foothold. How difficult is it then to establish a healthy motor sport environment for women in regions where motor sport in general is not well developed?**

Naturally it is difficult to encourage women when there is

little or no motor sport culture in a country. We have to remember we are an international Commission though and it is not our role to go into a country and establish that culture. We want to encourage and demonstrate what is possible with determination and belief.

**What have been the major landmarks of the Commission's journey so far?**

Our first Women in Motorsport International Seminar in Paris back in 2012 was a great step for us and brought together our national representatives from around the world. It was really inspiring and a great opportunity to discuss the issues that women face around the world.

At the same time we launched our Ambassadors programme and I am proud that these successful women represent us in many different areas on a global basis.

At the beginning of this year we were also invited by the Qatar Motor and Motorcycle Federation to be partners in a regional seminar in Doha, which brought together representatives from within the MENA region (Middle East and North Africa).

That was a fascinating exchange of experiences and ideas and it was a great initiative by Nasser Khalifa Al Atya, the President of QMMF and FIA Vice President for Sport in the Middle East.

We are also very pleased the FIA signed the Brighton Declaration on Women and Sport, underlining our Federation's commitment to supporting equality. The signing took place at the 6th International Working Group World Conference on Women and Sport in Helsinki in June and the Commission was also in attendance during the whole conference.

These types of networking opportunities are also a big benefit as we can all learn from each other to help raise the involvement of women in sport, as a whole.

From a purely sporting perspective, we are delighted to have created opportunities in various disciplines, but we could not have done this without invaluable support from Volkswagen Motorsport and the CIK-FIA.

**Obviously the loss of Commission Ambassador María de Villota was a big setback and tough for everyone involved.**

The loss of María was deeply saddening and I find it difficult to put into words the profound impact she had on so many people. She had great enthusiasm and determination as one of our Ambassadors; she really wanted to be part of our campaign and had great passion for it. María was a truly remarkable young woman taken from us all far too early.

**The Commission has had some success in helping young female racers in karting and also through the VW Scirocco Cup. Are there plans for more of this type of involvement in the future?**

We are always looking for opportunities, especially with manufacturers and organisations that can really help us make a difference. The CIK-FIA has helped us into the karting world and our four years with Volkswagen Motorsport in the Scirocco R-Cup have unquestionably helped drivers progress up the motor sport ladder. They have been invaluable opportunities and we are constantly working to find new partners who can help us reach our goals.

**What are the future plans for the commission? What action would you like to see being taken in the next five years?**

We will continue building on our original objectives but one of our biggest goals would be to get involved in a worldwide selection for a fast young driver. The idea is very much in its infancy at the moment, but we have to have ambition!



Michèle Mouton with the late María de Villota, "a remarkable woman taken from us too early".



Commission-supported racer Michelle Gatting with Williams F1 driver Susie Wolff.

## The Commission in action

The FIA Women in Motorsport Commission began life in Monaco in December 2009 when the World Motor Sport Council ratified the creation of a commission to create a sports culture that "facilitates and values the full participation of women in all aspects of motor sport".

The Commission's first meeting, with Michèle Mouton as its President, took place in Paris on the 26th April 2010, with Mouton saying: "Women already have their place in motor sport; they have proved it. But for many years people have asked me why there have been no women following in my footsteps. I really hope the Commission can help answer that question and that we can attract and support women in all areas of our sport."

Nineteen members were appointed to the Commission, including then DTM racer and current Formula E driver Katherine Legge and current Sauber F1 Team Principal Monisha Kaltenborn.

In 2010, the Commission handed out its first karting award to Dutch junior Beitske Visser. Now 19, Beitske has built up a successful motor sport career and currently races in the Formula Renault 3.5 series, regarded as one of the chief Formula One feeder series.

In 2011, the next recipient of Commission support was Lucile Cypriano. Lucile received a funded drive in the 2011 CIK-FIA Karting Academy Trophy. This year she won a shootout with 11 other female competitors for a Commission-supported drive in the junior category of the Volkswagen Scirocco R-Cup. As featured elsewhere in this issue, Cypriano ended the season in fifth place in the class.

The Commission's relationship with VW stretches back to 2011 when Dane Maiken Rasmussen became the first girl to drive under the Women in Motorsport banner in the one-make R-Cup touring car series.

Fellow Dane Michelle Gatting was the next selected for the

series, in 2012. After a solid first year in Volkswagen's touring car series, the Commission continued its support for the 2013 season and a very successful season saw Gatting finish fifth in the championship overall, with four podium finishes to her credit.

The Commission held its first international seminar in June 2012 in Paris. Established with the intention to facilitate the full participation of women in all aspects of motor sport, the seminar brought together national representatives from around the globe for a two-day symposium aimed at exchanging ideas and initiatives to promote women's roles in motor sport.

The seminar coincided with the launch of the Commission's Ambassadors programme, featuring Sauber chief Kaltenborn, Williams development driver Susie Wolff, former F1 test driver María de Villota and then IndyCar racer Legge.

The Commission was rocked later that year when De Villota was seriously injured in a testing accident and again late last year when the Spanish driver died due to the long-term effects of her injuries.

This year two new Ambassadors were appointed to the programme, three-time Le Mans-winning race engineer Leena Gade, and F1 Steward Silvia Bellot.

The Commission this year staged its first regional seminar in Qatar, organised by QMMF and with over 50 representatives in attendance.

Finally, this year, Michèle Mouton attended the 6th International Working Group World Conference on Women and Sport, in Helsinki, Finland, where, on behalf of the FIA, she signed the Brighton Declaration on Women and Sport.

The Declaration, which has been signed by more than 400 organisations worldwide, provides the principles that should guide actions intended to increase the involvement of women in sport at all levels and in all functions and roles.

Volkswagen Scirocco R-Cup

# Cypriano ends successful VW Scirocco R-Cup Junior campaign in fifth place



FIA Women in Motorsport Commission-supported driver Lucile Cypriano has branded Volkswagen's Scirocco R-Cup as "a great experience" after she finished her debut season in fifth place in the Junior Cup standings.

At the end of the six rounds and 10 races of the championship, the 18-year-old Frenchwoman finished the season with 265 Junior Cup points, one point behind fourth-placed Marc Coleselli. The Junior Cup trophy was won by Nicolaj Møller Madsen with 353 points. Cypriano ended her debut season in the series in 12th place overall.

After 17 years of competition, Volkswagen brought its one-make touring car series to a close at Hockenheim last month, with Cypriano being joined in the entry list by 22-year-old Swiss driver Jasmin Preisig, Germany's Doreen Seidel (29) and 21-year-old Swedish racer Mikaela Åhlin-Kottulinsky, the series leading female driver, thanks in no small part to the achievement of becoming the series' first female winner at the round at Germany's Norisring.

Åhlin-Kottulinsky began the final weekend in eighth place in the standings overall, with 184 points. Lucile, meanwhile, went to Hockenheim in 11th place overall with a total of 144 points.

Cypriano's weekend got off to a difficult start with 18th place in practice and the same position after qualifying.

"I'm obviously quite disappointed about this result," she said after the session. "I really tried my best to set a good lap time, but I just could not improve despite all my efforts. We can't get the performance on the car, I don't know why exactly."

"It is even more frustrating that the qualifying went way better on this same circuit during the opening round of the season, as I was competing in my very first race."

The race began in better fashion, with Cypriano moving up through the field. Her race was compromised, however, when she collided with Preisig and both spun. Despite sustaining significant damage to her car, Cypriano was able to continue and eventually



Volkswagen Scirocco R-Cup

finished 19th, a result she said was disappointing.

"My start was good, but the incident with Jasmin obviously cost me a lot of time," she said. "I was able to get back on track and overtake two cars but then the gap to the cars ahead was too big. There was a lack of performance anyway, and I could not get a good result this weekend, even with the contact."

Lucile therefore ends the season in fifth place in the Junior Cup standings and 12th overall. Åhlin-Kottulinsky, meanwhile, finished as the highest placed female driver, despite finishing the race behind Cypriano in 21st position. She ended the championship in ninth place overall. The series overall was won by South Africa's Jordan Lee Pepper.

Afterwards Cypriano said that her first season in touring cars had taught her a lot.

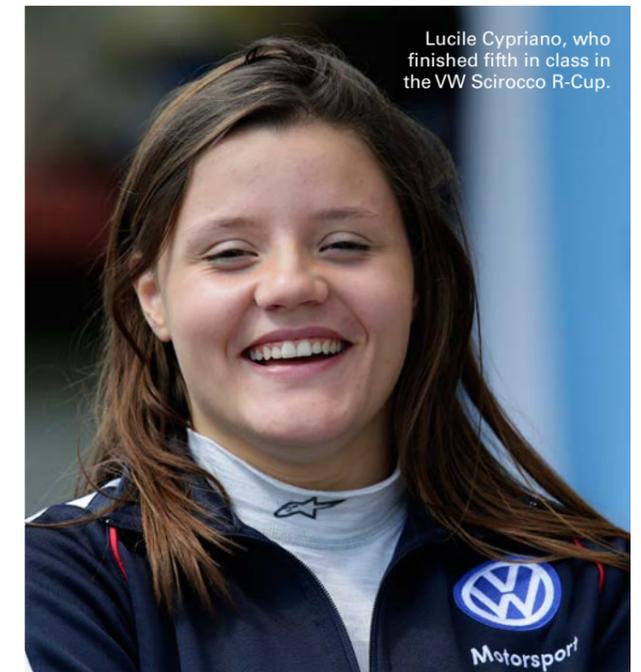
"My season in the Volkswagen Scirocco-R Cup was really a great experience, and I learned a lot," she said. "I discovered racing in saloon cars, with a lot of tough battles across the field, after being used to racing in single seaters."

"I also met a lot of motor sport people in Germany and I had the opportunity to race during DTM weekends, with a lot of spectators in the grandstands, which is a great experience for any young racing driver. I would like to thank the FIA and the selection committee of the Women in Motorsport Commission for offering me this great opportunity this season."

The final race of the 2014 Scirocco R-Cup season brings the curtain down on Volkswagen's Scirocco R-Cup. The company began its one-make programme in 1998 with the ADAC Volkswagen Lupo Cup (originally known as the ADAC Volkswagen Touring Junior Cup in its first year). This continued through to 2003, before being

replaced with the ADAC Volkswagen Polo Cup.

From 2010 the company replaced the Polo series with the Scirocco R-Cup.



Lucile Cypriano, who finished fifth in class in the VW Scirocco R-Cup.

## Mouton pays tribute to 'highly successful Volkswagen partnership'

The FIA Women in Motorsport Commission enjoyed a long and fruitful relationship with Volkswagen's touring car series, with drivers such as current Porsche Supercup driver Michelle Gattin getting a first taste of saloon car racing through the Commission's partnership with the gas-powered, environmentally friendly VW Scirocco R-Cup.

With the series now ended, FIA Women in Motorsport President Michèle Mouton thanked Volkswagen for its partnership over the years.

"From the early days Volkswagen Motorsport has been an enormous supporter of the FIA Women in Motorsport Commission and we can't thank them enough for this," she said.

"Because the Scirocco R-Cup was a one-make series everyone was on a level playing field with the same equipment and opportunities, so it was an ideal platform to demonstrate talent," she added. "Also, with Junior, Pro and Legends categories, the drivers were not only competing in their own class, but they had the opportunity to race against far more

experienced drivers, which is a great way to benchmark performance."

"Since 2011, Volkswagen Motorsport and the Commission have supported three drivers – Maiken Rasmussen, Michelle Gattin and Lucile Cypriano – and we have been very happy with their development."

"Additionally, the Cup attracted a number of other girls and 21-year-old Swede Mikaela Åhlin-Kottulinsky became the first woman to win one of the races outright this year. That was a great achievement."

Mouton concluded by saying that while the Scirocco R-Cup partnership is now ended she is hopeful of further collaboration with Volkswagen in the future.

"Our partnership with Volkswagen Motorsport has been a highly successful and really concrete action for the FIA Women in Motorsport Commission," she said. "And while the curtain has now fallen on the Scirocco R-Cup, I very much hope we can continue to collaborate in some way with such an influential and important manufacturer as Volkswagen."

FIA World Endurance Championship



Keiko Ihara and her OAK Racing team-mates celebrate third place in the LMP2 category at the 6 Hours of Fuji.

# Ihara becomes first lady of the World Endurance Championship podium

FIA Women in Motorsport Commission member Keiko Ihara made history last month when she became the first woman to score a podium finish in the FIA World Endurance Championship, with third place in the LMP2 category at her home round the 6 Hours of Fuji.

Driving for the OAK Racing squad, Ihara and her team-mates Gustavo Yacaman and Alex Brundle set the second fastest LMP2 time in qualifying on Saturday but owing to a fault with the engine air restrictor's diameter found during post-qualifying scrutineering checks, the trio gave themselves a tough task in the race after being moved to the back of the grid for a 27th-place start.

However, despite the penalty, Yacaman and Brundle opened the race with impressive stints that elevated the team to fourth in their category and 12th overall.

Four hours into the event, Brundle pitted and Ihara took over. She matched the times set by immediate rival Sergey Zlobin in

the number 27 Oreca 03R-Nissan. Ihara kept the team in touch with the major points positions and when Zlobin received a stop and go penalty she claimed third place.

When Ihara pitted at the end of her double stint the team lost a place to Zlobin but in the final hour, Yacaman was able to regain third spot and the team duly took the LMP2 podium finish and ninth place overall.

Describing the feeling of standing on the podium in front of her home crowd as the first woman to achieve such a result in the WEC, Keiko said: "Got it! It's taken three years to get the WEC podium, but finally I got it! I was so happy and I want to say a big thank you to the OAK Racing staff and of course to all our supporters."

The Japanese racer admitted that following her double stint, in which she stabilised the team in third place, the final stint, with Yacaman chasing down Zlobin, was a nerve-racking experience, especially when the Colombian's first attempt to

FIA World Endurance Championship

overtake the Oreca-Nissan car resulted in a minor collision and a spin.

"I was praying that we'd have no trouble and if that happened I just had to believe in my team-mates," she said. "Gustavo was pushing very hard in the last stint and when our rival car hit the left rear of our car in a high speed corner and they spun, well, I just went pale watching that. I was praying no damage to the car. But Gustavo recovered well and luckily there was no damage. I was so nervous all the way to the flag."

Asked if she felt the result is a vindication for the hard work she and the team have put in this season, she said: "Yes. I joined OAK Racing this year and I have to say there is a nice working environment for women in the team. The team has given me a great opportunity and we trust each other, so it's fantastic to score a podium with a team that not only has a female driver but also a female mechanic."

Commenting on the significance of being the first woman to claim a podium finish in the WEC she said: "I think it's great to show the next generation of drivers that female racers can stand

on the podium of the world's highest categories.

"I will be honest, though, and say that it has been very hard to reach this point," she added. "I faced lots of obstacles such as gender, race and age in participating in motorsports in the world.

"Particularly, it was quite tough to get support as a female driver in a motor sport culture that is dominated by men. However, a lot of people understood my passion to race and gave me great support, including the FIA's Women in Motorsport Commission and also the ASNs of many countries. Through this type of action I think people's perceptions are changing and we are making a better environment, one in which women can play an active part."

Finally, with one podium finish in the bag, the Japanese racer is determined to climb on to the rostrum again in the future.

"Of course I'd like to get the highest place of the podium of WEC," she smiled. "And I definitely want to continue to spread the passion for motor sports."

Women in Motorsport Programme

# Madagascar makes progress



The Women in Motorsport programme of Madagascar's Fédération du Sport Automobile is going from strength to strength according to the initiative's founder and Secretary General Sandy Solofonirina.

The programme last year had 10 licensed female racers, ranging in age from 17-45 and according to Solofonirina has now instigated a number of new schemes to improve the female racers' competitiveness.

"We work towards well-being to achieve great performance," says Solofonirina.

"For this, WIM offers fitness session to all licensees (male and female) every week. Also, WIM organises basketball or football tournament amongst clubs.

"We also offer driving training for women and youngsters," she adds. "WIM also organises small competitions, approved by the ASN, to give opportunities to

all to practice and get the best driving habits."

The initiative's Secretary General also says that it is making contact with other ASNs in Africa in order to promote the agenda of increased female motor sports participation.

"Being on an island, we are somehow isolated and are limited in means," she says. "Therefore, we plan to work with African ASNs to promote Women in Motorsport in the continent."

The WIM programme is also keenly involved in road safety promotion across Madagascar.

"WIM would like to be an ambassador of road safety," concludes Solofonirina. "We would like to get the message across all the villages where rallies pass in Madagascar. We would like to educate pedestrians, bikers and drivers on road safety."

## Land Speed Record



## Land Speed Record

## Charging into the unknown

From chasing speed records on the salt flats of Utah to the pursuit of clean transport across the icy wastes of Antarctica, electric vehicle engineer Delphine Biscaye's career with Venturi Automobiles is proof that motor sport can lead to a world of possibilities...

### How did you find your way into motor sport?

No one in my family was involved in motor sport but most of my friends had their first motorcycle at 16 years of age and were very interested in cars. I guess that's when the idea that I could work in the automotive industry came up. Then I discovered motor sport through Formula One and rallying and decided I wanted to be part of it.

And that's exactly what I told the examiners during the interview required for the mechanical engineering school I applied to. However, they replied that everybody else attending the interview had the same desire! They said I had very little chance of succeeding but that only doubled-up my motivation!

I worked very hard to get the best placements and I contacted – nearly hassled – several Le Mans Series and F1 teams and finally got my entry card in Formula One with Williams. I worked a year and a half there, in both the KERS (Kinetic Energy Recovery System) and suspension departments. Unfortunately, I couldn't get a permanent job, so I moved on.

### And that's when you joined electric car company Venturi?

Yes, I joined Venturi Automobiles in December 2009 as a Research and Development Engineer. I quickly moved into project management and am now the Project Manager of two of the company's Global Challenges – the VBB-3 land speed record program, and the Antarctica project.

### The VBB-3 project is an attempt to set the outright land speed record for an electric vehicle. What was the status of the project when you joined?

Our President, Gildo Pallanca Pastor, has always expressed his wish to demonstrate the capabilities of electric vehicles and following his goal Venturi started to work with the Ohio State University (OSU) in 2009 and beat two world land speed records in 2009 and 2010 respectively with the Buckeye Bullet 2 (a fuel-cell powered vehicle), and the Buckeye Bullet 2.5 (a battery powered streamliner).

When I joined the program in early 2011 it was right at the beginning of the VBB-3 project: the discussion had just started between the OSU and Venturi to design and develop a brand new full electric and four-wheel driven streamliner aiming to break the 400mph barrier.

### How has the projects developed in the time since you joined?

It took us a year-and-a-half to design the complete vehicle, from chassis to suspension, electronics, driver safety cell, battery pack and electric powertrain. Another six months were needed to build and assemble the streamliner, which left us very little time to test it on a circuit – where the length and quality of the track makes it impossible to go above a 100mph – before going to Bonneville [in Utah, USA] in September of 2013 where we wanted to test the car and try to beat our own record of 307mph [495kph].

Unfortunately, some terrible weather prevented the attempt

and we could only test on the nearby Wendover Airfield runway, where we established our base camp, as the Salt Flat was completely flooded.

We knew that no tests or record-breaking attempts would be possible before August 2014 and so we decided to use those 12 months to test, modify and improve several main parts of the vehicle such as the suspension, the vehicle control code as well as the electric powertrain.

**It sounds unbelievable but 12 months later the record attempts were again hampered, by even worse weather. Indeed, it was the worst the region had seen for some decades with portions of the track under 25cm of water. However, you did manage to set one new record. Tell us about the frustrations but also the reward of setting a new record?**

We arrived in Bonneville in August... at the same time as a huge storm, which turned the Salt Flat into a real lake... again. I think there are no words to express the frustration we felt at this moment.

Speed Week was cancelled by the SCTA (Southern California Timing Association) for the first time in 32 years, and for us it meant no test was possible before our private FIA event scheduled for the following week.

Gildo decided the team should stay and wait, hoping the Salt Flat would dry enough in 10 days. The FIA and the ACCUS-USAC organisers were very kind and did their best to enable us to run for the first time on the salt with this brand new vehicle.

With only three days to run on the Salt Flat instead of the 12 initially planned, we couldn't test everything we wanted to before making a few attempts, and therefore we didn't reach the full power and speed capabilities of the vehicle. However, we still set a new FIA homologated world speed record in this category (electric vehicles over 3,500 kg) with 212mph and a top speed of 270mph. This result, even if lower than expected, was a great reward to the work achieved by the team during the past years and the nerve-breaking past weeks; and it did freshen up our motivation to come back and go even faster!

### What's the future for the project now? Will there be another record attempt next year?

The development work on the powertrain we started last year is still going on and we plan to be back on the salt flats next summer to break the 400mph barrier.

### How far do you think the technology involved can be pushed?

The battery and electric powertrain technology used in the VBB-3 is already very innovative with a battery pack composed of 2,000 lithium-ion power cells capable of supplying more than 2MW to two very compact electric motors (one powering the front axle, the other the rear one).

The development and improvement work started in 2013 should allow us to push the electric motor technology even further, reaching

Land Speed Record



The Venturi electric land speed record in Utah with the VBB-3.

a power of 1000 kW and a maximum torque of 1400 Nm per motor.

**Are there 'real world' applications for the technology or is it a theoretical exploration?**

The goal of this program is not only to demonstrate that electric vehicles can be as reliable, powerful and as fast as ICE-powered vehicles, but also to develop the technology used for road and 'real world' applications. The land speed record program is often characterised as a technological laboratory and we try to re-use the experience it provides in our own sports and race vehicles like the America or maybe in our Formula E car.

**The land speed record attempt isn't the only project you're involved in. Tell us a bit about the Antarctica Project.**

It aims to design and develop a 100 per cent electric vehicle which could be used by scientists in Antarctica, thus on tyres or snow tracks, allowing them to take samples in protected and restricted areas.

The main challenge is to make an electric and battery powered vehicle work under extremely cold temperature conditions. The temperature can go down to -40°C during summer and to -70°C in winter, whereas the nominal battery operational temperature is usually close to 25°C with a minimum operation temperature of -10°C (at which the efficiency is very degraded).

**How close have you got to solving that puzzle?**

We're finishing the first prototype and should be able to begin

testing this month. I worked on the mechanical design, development and assembly, while our electronics team worked on the display, charging system, wiring and controller. It's been over two years in development, so we can't wait to see it running.

**What are the plans for testing?**

The aim of this prototype is to test the battery and electric powertrain, their control and cooling/heating systems. We will make several tests in the Southern Alps in France, where temperature can easily go down to -20°C.

The next phase of the project will be to make modifications and then test a new version (with final chassis and bodywork which are not present at the moment) in Northern Europe, in conditions very close to Antarctica.

Once this second phase is complete and the vehicle is proved reliable, we will be able to send a prototype to Antarctica; this will hopefully take place during winter 2016-2017.

**What are the best aspects of your job? What motivates you to continue with it?**

I think what I like the most is that I have been able to work on various projects and every one of them has been a real challenge. I particularly want to see the VBB-3 achieve what it has been designed for: pushing the limits of EVs, breaking a new record and approaching – if not beating – the ICE-powered vehicle record of 459mph.

Finnish Drifting Championship

# Mental focus training helps Finnish racer Krisse Aalto to drift



Currently not a discipline codified by the FIA, Drifting is a hugely popular form of motor sport, in which a significant number of competitors are female. While originally an underground sport, drifting's highly competitive, well organised championships are now prompting drivers to adopt ever higher levels of professionalism, as Finnish drifter Krisse Aalto can attest.

With word getting out about the talent of the 29-year-old from Vaasa, Finnish ASN the AKK took Aalto under its wing, organising a programme of training with AKK Rally Coach Tuomo Nikkola and the ASN's Driver Academy expert in physical and mental training Tero Puustinen.

"I had competed in equestrian sports, where it was all very target-oriented and methodical and a lot of time was spent in training. Changing to motor sport I got confused and realised I needed help to progress," said Aalto, who drives a modified 1994 Toyota Soarer.

"The essential thing was that Krisse had that will to develop as a driver, to work at it and train to make progress. That is the key

to it all. Without a deep-seated will in an athlete it is very difficult to achieve results," added Nikkola.

"We first set a target to enhance her mental performance," he continued. "We started off by analysing what was good and what needed improvement, in her attitude and ways of thinking. Then we started to mould her weaknesses into strengths. Krisse was open to new ways of thinking and that's why she quickly got the handle on developing mental performance. The results could immediately be seen in her first race after our initial session together."

Aalto took the lessons learned to a later round of the Finnish Drifting Championship in Virtasalmi Motopark and admitted that the training had been valuable.

"Even after such a short co-operation I've noticed a big improvement," she said. "It is great that I now have people to turn to and whose professionalism I can count on."

"With physical and mental training, a new diet and the support of these coaches my motor sport career will step up to a new level. I am really grateful for this opportunity and I believe that coaching will help me towards results I could so far only dream of."

Aalto and Puustinen have continued to keep in touch in order to progress her training.

"We have continued the training by keeping in touch by phone," said Puustinen. "A new goal has been the optimisation of diet, both during and outside of race weekends. I have given her clear practical guidelines for these and Krisse immediately started adhering to them. The efficiency of this combination of mental- and nutritive training was proved in Estonia's NEZ Drifting round, where Krisse was quite supreme, winning the ladies' class easily and also beating most of the men."

According to Nikkola the next step is to work on Krisse's physical strength and stamina. "Enhancing her physical performance is the next step in the scheme."

Puustinen added: "We'll get properly started with that after the last Finnish Championship round. With the qualities she has so far amassed Krisse will already challenge Finland's leading drifters for victory in forthcoming races. In the future, coaching will mould her into an all-round strong driver, who can even throw the gauntlet at the sport's international stars."

*Original text by Anu Haapalainen, photos: FakeMustache Media*

24 Hrs Series

# Top-three finishes for ladies at the Barcelona 24 Hours race



Laia Sanz and team-mate Francesc Gutierrez accept their trophies flanked, on the right, by Lucile Cypriano who finished third in class.

FIA Women in Motorsport Commission-supported racer Lucile Cypriano and former trials riding champion and Dakar competitor Laia Sanz scored podium finishes in their respective classes at the gruelling Barcelona 24 Hours race in September.

The race at the Circuit de Catalunya formed the sixth round of the 24H Series for touring cars, GTs and 24hr Specials and both Sanz and Cypriano took part in the event in SEAT Leon cars, Laia Sanz with a SEAT Leon Cup Racer and Lucile Cypriano with a SEAT Leon Supercopa, with SEAT's Head of Motorsport, Jaime Puig – himself a member of the FIA Women in Motorsport Commission - watching from the pits.

Sanz and her team-mate Francesc Gutierrez made up the only two-car squad in their class but despite the challenge of racing half a dozen or more stints each, the duo, racing for Monlau Competición, finished in first place in the A3T class and were 12th overall in a race won by the four-man team of Jiri Písarík, Jaromir Jirik, Matteo Malucelli and Peter Kox.

“It’s been incredible, because the goal was to finish and

before the race we already knew it would be difficult, being only two pilots with many hours of driving to cover,” said Sanz afterwards. “To finish the race, finishing 12th overall and to win our category is almost unbelievable. The effort and the sacrifice of these 24 hours has been rewarded.

“Curiously, the first stint was the most difficult, because of the heat,” she added of conditions in which temperatures inside the car reached 60°C. In addition, it was tough psychologically because I got out of the car dehydrated and that scared me because I thought that all of the stints might be like that. But it didn’t work out like that and everything got increasingly better and the car was superb.”

Cypriano, meanwhile, finished third in the same class. Teamed with Martin Gotsche, Peter Larsson and Lars Olsson, the French teenager finished the race with 569 laps of the Circuit de Catalunya on the board, 11 down on the five-man Drivex team’s Volkswagen Scirocco GT24 and 24 adrift of Sanz and Gutierrez in the winning SEAT.

FIA European Rally Championship

# Stratieva takes European Rally Championship Ladies’ Trophy

Bulgaria’s Ekaterina Stratieva has won the 2014 FIA European Rally Championship Ladies’ Trophy saying that sealing the win has made nearly a decade of effort worthwhile.

The 31-year-old has been a regular on FIA European Rally Championship events in recent seasons and narrowly missed out on the title to Australia’s Molly Taylor last year.

However, a hat-trick of class wins this year and the absence of chief rival Inessa Tushkanova from the Cyprus round meant Stratieva that could not be caught despite there being two rallies remaining, in Switzerland and Corsica.

“After almost 10 years in motor sport it’s amazing to win this trophy,” said Stratieva, a former art and design student. “But I must thank some very important people, without whom this would not have been possible. My parents have been amazing to me and I have to say a big thank you to Marco Tempestini. He has helped me out so much and also introduced me to my co-driver Carmen Poenaru.

“The guys from his team have done so much to help me as

well,” she added. “Big thanks also to the Ministry of Sport in Bulgaria and all my other partners. And, last but not least, my co-driver Carmen. She has always been there on the road to me winning the ERC Ladies’ Trophy.”

Stratieva tackled seven ERC rounds during the season, using a Citroën C2 R2 and a Subaru Impreza.

“This year has not been easy,” she admitted. “I did a lot of mistakes with the Subaru but it was great on Barum Czech Rally Zlín that we did our job by scoring maximum points. I was ready to fight with Inessa in Switzerland for first place. Now after we win I hope to find the money to be in the ERC again next year with all the people I know there and all the fans.”

Tuskhanova, from Ukraine, Czech Martina Danhelová, and Belgium’s Melissa Debackere have all won rounds of the ERC Ladies’ Trophy in 2014.

Stratieva had further reason to celebrate in September when she became the first rally driver for 15 years to receive Bulgaria’s athlete of the month award for her ERC Ladies’ Trophy triumph.



Ekaterina Stratieva in action and on her way to winning this year’s ERC Ladies’ Trophy.

FIA World Rally Championship

# Plotting the right course

Keeping an almost 400km-long FIA World Rally Championship event on track and trouble-free is no easy task but it's one that Marina Duñach, Deputy Clerk of the Course at RallyRACC Rally de España says is all down to teamwork



### How did you get involved in motor sport?

It was actually by chance. I was working at the Marketing Department of the RACC when the rally became part of the World Championship in 1991. As I spoke English and French they came to me and asked me whether I would like to help out with the rally. I said yes and helping out became my new job. I immediately loved it.

### Why rallying?

Once in the Sports Area of the RACC I had the chance to get involved in all of the events organised by the RACC, such as rallying, Formula One and MotoGP. Rallying was definitively what I liked most. I was immediately hooked.

### How did you progress to the role you have now?

I started from scratch, with loads of enthusiasm and eager to learn. I was lucky to be able to work with the best teachers ever in the world of rallying in my country: Aman Barfull, Ramon Corominas and Nuria Port. I owe them every little thing I know about this sport.

I started at the rally secretariat then became CRO, followed by Assistant to the Clerk of the Course, Teams and FIA Coordinator and in 2009 I became Deputy Clerk of the Course. I also acted as a Steward at several events.

### What are the chief responsibilities of the Deputy Clerk of the Course?

It is basically relieving the Clerk of the Course of the tasks related to the organisational aspects of the event, so that he can focus on the running of the rally, and to assist him whenever he has major decisions to take, based on the information we have.

### What's involved in the run-up to an event like Rally de España?

There are countless aspects involved in preparing for an event like this. From the definition of the route, which involves talking to town and city councils, to organising venues, staff, volunteers, drawing up documents, such as regulations and rally guides. It is difficult to list everything that needs to be done!

### Once the event is underway how important is teamwork in the safe running of a rally?

Teamwork is key if you want to have a safe and smooth rally. We all need to rely on each other. We spend countless hours together, so we have to understand each other well. Everyone has a specific task but it is only with the support and assistance of the others that you can make sure that everything is perfectly taken care of.

Over the years we have been able to build a team of highly professional people, a group of rally friends. I'm not only talking about the core team at the RACC, but also about the volunteers that help us on the road, people who love rallying as much as I do.

FIA World Rally Championship

### Where are you based during the event itself, who is there with you and how hard is it to monitor everything that's happening on a stage?

During the event I am at the rally HQ, in the Clerk of the Course's office, right next to Race Direction. I'm available full-time and obviously my phone is always with me. We also have assistants to take care of paperwork and to delegate the tasks that come up during the staging of the rally. As I said, it's all about teamwork.

### What's been the most pressured or intense situation you've ever faced in your time as Deputy Clerk of the Course for Rally de España or in motor sport as a whole, and how did you deal with it?

The worst are obviously unexpected things. A clear example is difficulties with crowds of spectators, which might lead to a stage being cancelled for safety reasons.

It happened several years ago. I remember our staff going out in the middle of the night to remove cars that were obstructing the stage. From then on we changed our procedure completely. The roads leading to the stage are closed from midnight and there are people driving around to make sure that the roads remain clear for the next day.

### Is it still a thrill to work on an event like this or does it become routine?

A rally is never routine. It is always thrilling.

### What does the future hold?

My greatest wish would be to build a great and successful World Rally Championship with the help of the FIA, the promoter, the manufacturers, the organisers, the media and all the fans.

Women of Australian Motor Sport

# WAMS makes its presence felt at Asia Pacific World Women & Sport conference

The Women of Australian Motor Sport (WAMS) arm of the Confederation of Australian Motorsport recently attended the Asia Pacific World Women & Sport conference in Sydney, where Vice Chairperson and racing driver Samantha Reid presented a talk entitled 'The inclusion of women in a traditionally male dominated sport, without dilution of the sports brand'.

Presenting alongside 16 of Australia's leading sporting, government, social media and business experts, Reid spoke about the uniqueness of motorsport as one of the few sports in which women compete in the same arena as men.

Other topics addressed included methods for engaging and inspiring women in sport, appealing to a female audience, the mandatory appointment of women to the board of sporting bodies and the importance of using sport for social good.

"Motor sport represents a highly unique offering for women in sport," she said. "It is heavily male dominated and traditionally had a reputation for being a boys' club. While there is a small minority of women out there performing exceptionally well and proving they have what it takes to make it to the top in any role in the sport, we still have a long way to go before the sports brand will change. It is likely to be a generational change, but we need to start now to ensure the longevity of the sport."

