

feature

diversity in professional racing

Women

Maureen McVail, Founder and Chief Innovation Officer of MORacing, in her Porsche—and her safety helmet—ready to race.

in the Driver's Seat

By Kimberly Scata, PhD

AWIS member since 2001

Throughout history, discontented and determined women have not just sat by, idling. They have protested and banded together, time and again. For example, as a result of their tireless efforts, women activists succeeded in getting the Nineteenth Amendment ratified in 1920, which granted them the right to vote. More quietly but significantly, in 1971 thirty-five women scientists gathered together to create the Association for Women in Science (AWIS), with the mission of advocating on behalf of women in STEM, and they have worked to do so ever since.

Similarly, in the world of racing today, women are celebrating, supporting, and promoting each other's successes and show no signs of braking their progress. What follows is a sampling of stories about these high-octane women.

Making History

In the history of the Indianapolis 500, only nine women have qualified for and competed in the prestigious race. In

2021, Paretta Autosport was the first ever majority-woman team to qualify for the Indianapolis 500, earning their spot for this year's race in May. Team principal and CEO Beth Paretta put together the team of drivers, spotters, engineers and mechanics — 70% of whom are women — and trained them in roughly four months.

Lead driver Simone DeSilvestro of Paretta Autosport, making her sixth start at the Indy 500, had to withdraw after finishing 170 of the race's 200 laps when her car experienced brake problems. Despite this disappointment, CEO Paretta remains committed to increasing diversity in professional racing, and she hopes that the visibility of her accomplished team will inspire women to pursue careers in auto racing.

Pursuing a Passion

Maureen McVail, who is Founder and Chief Innovation Officer of MORacing, also avidly promotes the empowerment of women through motorsport



McVail, passionate in her love of cars, relishes in sharing her knowledge and enthusiasm with other women.



McVail—in a sentiment shared by many of the women in the article—enjoys the camaraderie shared while spending time with other car lovers. In October 2020, Maureen organized the SHE Leads Road Rally. Women in race cars travelled from Philadelphia, PA to Seneca Falls, NY. Their goal was to drive change in celebration of the 100th anniversary of women's suffrage.

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McVail, shown with one of the eight race cars she has owned, is eager for more women to experience the thrill of racing whether in the driver's seat or as a knowledgeable spectator.

opportunities. Her enthusiasm is boundless as she encourages women's participation in all auto racing roles: as drivers, crew members, and spectators.

McVail's interest in cars began when she was eleven, after her parents bought an old Mercedes. In 1999 she purchased her first Porsche. She says, she "took it to the racetrack, where it belonged." She became hooked on "driving on tracks where racers drive."

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McVail's biggest challenge has been to persuade men to view her as a peer and to take her interests seriously. In 2000 she finally met some men who recognized and supported her eagerness to learn about cars.

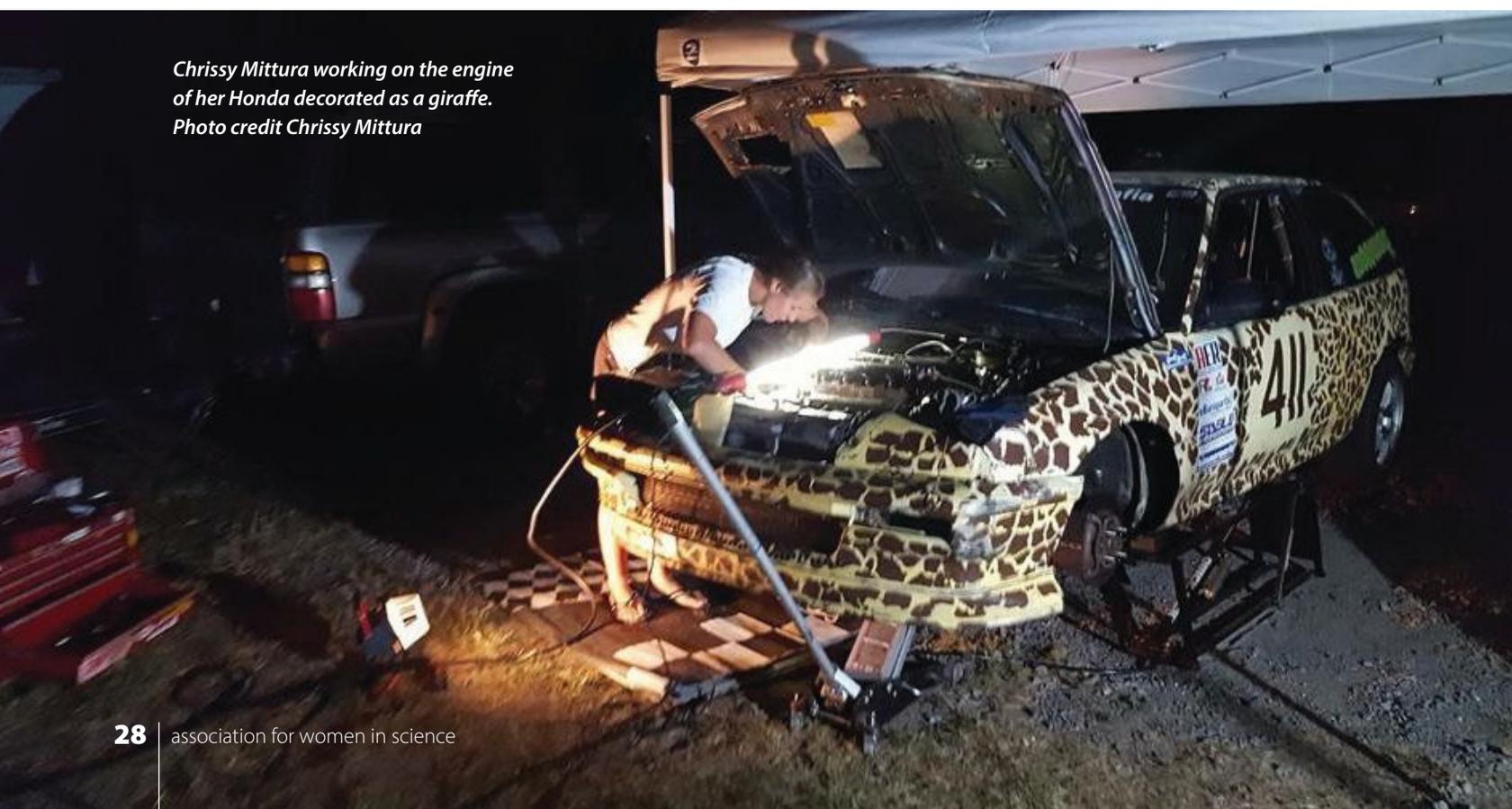
eagerness to learn about cars. She now frequently spends Tuesday nights working on cars with them.

In 2019 she left her job at Drexel's Institute for Women's Health to become a mechanic's apprentice. McVail encourages other women who might be interested in acquiring these skills to go for it: "If a middle-aged woman can do it, so can you!"

Competing Confidently

Sabr e Cook, whose competitive spark ignited when she started racing go-karts as a child, has found motorsports to be incredibly expensive. She asserts that

Chrissy Mittura working on the engine of her Honda decorated as a giraffe. Photo credit Chrissy Mittura





Decorating the cars is part of the fun of the 24 Hours of LeMons races. Photo credit Chrissy Mittura

getting sponsorships is difficult, even for men. Despite this challenge, she likes breaking barriers and proving people wrong.

In 2019 she was chosen for the prestigious W-Series, an all-female, single-seater racing championship. The W-Series, by mandating that cars be mechanically identical, focuses on the talent of the driver and serves as a mentoring organization that aims to lure more top-notch women into competitive racing.

Because she is competitive by nature, Cook wants to be judged for her driving skills, not for her gender. That being said, she does believe that women bring some unique skills to racing. For example, she notes that women approach decision-making differently from men. In addition, she asserts that women tend to be more patient, make smarter choices, are more physically resistant to vertical and lateral G forces, and are better at dissipating heat. These characteristics are advantageous for endurance racing.

After receiving her bachelor's degree in mechanical engineering from the Colorado School of Mines, Cook was named the 2018 U.S. winner of a prestigious training program with Infiniti Engineering Academy, which is co-run by Infiniti and Renault F1. Her long-term goals are to drive and to work as an engineer with Indy Cars.



Maureen inspires a future race car driver.

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Controlling Costs

While the expense of Indy and Formula 1 cars is a barrier for many people, there are alternative racing options. For example, Chrissy Mittura races “cheap cars” in “24 Hours of LeMons” endurance races, which focus on fun and safety. The term cheap, however, is definitely relative. The LeMons races use old street cars valued at roughly \$500. For example, Mittura converted her 2007 Mazda 3 hatchback into a racing car. The cost to adapt these cars to meet safety standards at high speeds, however, can be quite expensive.

As a Safety Compliance and Training Supervisor for AmeriGas by day, Mittura takes safety very seriously. Mittura, her husband, and two friends spend time fixing the car and ensuring that it measures up to safety standards. She reminds the team to comply with safety measures as they work on the car. She acknowledges that she prefers racing to the repair work, but she and her team do this work themselves to keep costs in check.

Traveling to the races is also costly since these weekend competitions are held in far-flung locations. However, she enjoys catching up with racing friends at these events, sharing meals and stories with them.

Mittura wants to be taken seriously as a driver and has worked hard to gain the respect of other participants. She sees herself as an ambassador to the sport and serves as a friendly, helpful, inviting, and knowledgeable presence at these endurance races.

Navigating Rough Terrain

Shannon Fleming Czarnota’s interest in motosports started as a child when she attended her dad’s motocross competitions and was further fueled when she began riding dirt bikes herself. Motocross involves riding a



Lori Johnson supervises as a member of AWIS-PHL removes the lug nuts from the tire. Credit Maureen McVail

specialized motorcycle on a course of open and rough terrain, which makes racing especially challenging, both mentally and physically.

With her dad as her coach and mechanic, she began competing in motocross with increased dedication when she was 13. Czarnota placed in the top ten for each of the five years she competed at Loretta Lynn’s Amateur National Motocross Championship (her best finish was fourth overall).

Unfortunately, women’s motocross eliminated their pro circuit in 2019, due to a lack of qualified riders. Without

To Learn More:

Paretta Autosport: <https://www.parettaautosport.com/team>

MORacing: <https://www.moracing.net/>

Sabré Cook racing: <http://www.sabrecookracing.com/>

W-Series women’s racing: <https://wseries.com/about-w-series/>

Endurance racing in cheap cars: <https://24hoursoflemons.com/>

Beginner’s guide to motocross: <https://americanmotorcyclist.com/beginners-guide-to-motocross/>

Porsche Club HPDE: <https://www.pca.org/drivers-education>

Ladies, Start Your Engines: <https://www.ladiesstartyourengines.com/>

Girl Gang Garage: <https://girlganggarage.com/all-female-builds/>

a professional option in motocross, Czarnota ended her racing career. Still, she says that motocross taught her discipline and determination, skills that will serve her throughout her life.

Finding Alternate Pathways

There are many opportunities for women who don't want to race, but who do want to be in the driver's seat. Varsovia Fernandez enjoys driving fast, but she decided a while back that racing isn't for her. Seven weekends per year, she attends the Porsche Club's high performance driver's education (HPDE) classes, which "are designed so that participants can improve their driving abilities and acquire a better understanding of vehicle dynamics and driving safety." HPDE programs consist of classroom instruction and driving time that teaches students how to get the best performance out of their car. Driving is done on a closed course, which allows participants to operate their vehicles at high speeds safely. Other organizations, such as the BMW Car Club of America and the National Autosport Association, also offer HPDE programs.

Fernandez emphasizes that HPDE is for anyone who would like to improve their skills. Participants learn about tires, brakes, the physics of driving, forces pulling the car, and safety—all lessons applicable to everyday driving.

She observes that women are more analytical and careful during the classes: "Men put the seat belt on and start driving. Women are interested in understanding why and how the car behaves, and they are more precise in their driving."

Welcoming Other Women

Instructor Lori Johnson focuses on women's curiosity and desire to understand how a car works, in her class, Ladies, Start Your Engines. She believes in empowering women to perform their own light car maintenance.

In Autumn 2019 the Philadelphia AWIS chapter participated in one of Johnson's hands-on presentations. The class was entertaining and informative, as Johnson is both a skilled teacher and a highly knowledgeable mechanic. She ably demonstrated how women can benefit from engaging in an analytical approach to problem-solving. By way of example, she discussed the notoriously difficult challenge of removing lug nuts when you change a tire. She explained that if you approach the problem by standing on the lug wrench and using your body weight to loosen and later tighten the lug nuts, it becomes much easier. She also talked about giving women the language they need

to communicate and understand technical jargon, thereby making a trip to an auto repair shop less intimidating.

Johnson, who received a degree in women's studies from Temple University before training as a mechanic, outlined some of the issues women face in nontraditional roles in the automotive world. For example, some male customers refuse to have a woman work on their car. Women are often relegated to simple tasks, rather than given more challenging and rewarding repair work. And, not surprisingly, women often earn less than their male counterparts. The result of such discrimination is the same type of "leaky pipeline," or attrition, encountered by women in STEM fields.

In addition to classes like "Ladies, Start Your Engines," Johnson shared other opportunities to learn about cars in female-friendly environments. The Girl Gang Garage, located in Phoenix, Arizona, sponsors all-women builds, which they have perfected to offer "a premier training and educational opportunity for women of all ages and experience levels." The hands-on experience allows women of all ages to learn or to improve their automotive skills while building a car.

Women interested in auto mechanics and motorsports have an increasing number of welcoming outlets for learning about and participating in the world of cars. Johnson offers inspiring words that seem relevant to the women of AWIS: "Women have a lot of power; we should use it correctly to make change." It's exciting to see the shifts occurring in the racing world and related industries. I hope these stories about women who are automotive leaders encourage more women to make their own inroads. ✪

Author's note: The author would like to thank the women interviewed for this article.



Kimberly Scata received a B.S. in biology from the College of William and Mary and a PhD in molecular biology and genetics from the University of Pennsylvania. Scata served as the President of the Philadelphia Chapter of AWIS in 2019–2020, and she is currently a member of the AWIS Chapter

Advisory Committee. She is a great believer in the power of STEM programs to harness the innate curiosity of young children, and she is always eager to help promote women in the sciences.