



THE SPARTAN RACER

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NOVEMBER 2019



Team Updates

Design Period Ends; Manufacturing Begins

After plenty of vehicle testing, data analysis, computer aided design, and lap-time simulation, the team finalized non-aerodynamic design changes for the upcoming 2020 season. SR-20 will be the third and final vehicle utilizing the current platform. Without a doubt, it will be the fastest car in team history.



Welding, welding, welding!



Skidpad at MIS 2019

Competition Registration

The team is excited to announce that SR-20 will be competing as Car 38 at FSAE Michigan in May! Additionally, State Racing will venture into new territory, with confirmed registration for both FSAE North in May, and the brand new competition, FSAE California, in June! SR-20 will compete as Car 26 and Car 77, respectively, for the latter competitions.



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Featured Team Members

Name: Andrew McNamara
Roll: Ergonomics Lead
Hometown: Petoskey, MI
Major: Mechanical Engineering
Class Standing: Sophomore
Years on the Team: 2



Why did you choose to attend Michigan State University and join MSU Formula Racing?

I knew that I wanted to pursue a degree in mechanical engineering, and when I saw that MSU had a distinguished Formula SAE team, I was eager to join. The challenge that this activity provides is unparalleled and provides great experience, so I'm confident that I made the right choice.

What is your favorite memory from the team so far?

My favorite moment was watching SR-19 drive for the first time. All of the long hours and hard work definitely paid off!

What do you find most challenging about being a member of the team?

Managing my time between school during the day and formula during the night has been challenging.

What is your dream job upon graduation?

Right now, my dream job entails working on either the primary structures or engines of automobiles or aircraft. If possible, I'd like to work at Ford in their performance division, Boeing, or Lockheed Martin. All three are always on the cutting edge of technology, and I'd like to work with them someday.

Name: Robert Walston
Roll: Dyno and Calibration Lead
Hometown: White Lake, MI
Major: Mechanical Engineering
Class Standing: Sophomore
Years on the Team: 2



This upcoming competition season, what are you most excited for?

Not only do we have a very solid team that's building what will be the fastest car to date, but the fact that I will be able to see how I personally affected the performance of the vehicle in competition will be truly amazing.

What do you find most challenging about being a member of the team?

I believe that the most challenging part of being on the team is time management. Since we're all very passionate about coming out to the shop, sometimes it becomes hard to juggle school and other non-formula activities. However, like most everyone else on the team, I think that I've found a good balance for all of my responsibilities.

What are some of your favorite hobbies or activities outside of the formula racing team?

If I'm not studying for school or at the shop, odds are I'm doing standup jetski freestyle. I compete across the country during the summer and do shows at fairs and races such as the Detroit River Days and Pittsburgh's Three River Regatta. During the winter I snowboard and snowmobile and have an annual sled trip with some of my friends.



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Featured Team Alumni

Name: Jonathan Bianchi

Hometown: Sterling Heights, MI

Degree: BS Mechanical Engineering

Years on the Team: 2013-2016

Roles: Powertrain Member (2013-2014)

Electrical Team Lead (2014-2015)

Project Manager (2015-2016)

How did you contribute to the advancement of Michigan State Formula Racing?

One of my main goals as Project Manager on the team was to accelerate our vehicle timeline and get as much driver seat time as possible. This was a huge push from both the engineering and management side of the team to finalize designs and source the raw materials for manufacturing and final assembly. We were able to complete first drive three months ahead of previous year's first drive – and this has stuck with the team ever since.

What is your favorite memory from your time on the team?

My favorite memory from the team was seeing the racecar speed across the line for the first time at FSAE Michigan in 2014! After all the long hours and hard work from everyone on the team, finishing competition was unlike anything else and an unforgettable moment.



What is your current professional role?

Currently, I am a Sr. Firmware Validation Engineer at Tesla. I focus on powertrain/motor validation and work heavily with the development teams to test any changes being made from hardware to software.

How did your experience as a member of the formula team help shape your future?

Being a member of the MSU Formula Racing team really helped lay the foundation for my career and passion for automotive engineering. The technical experience, engineering challenges, and professional atmosphere helped me find and excel in my career.



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Name: Axiom Materials, Inc.

Location: Santa Ana, California

Axiom Materials is a progressive composite materials manufacturer founded with the intention of combining a quality prepreg, adhesive, and ancillary composite products platform with customer-focused service and forward-thinking design. Their reputation for agility and flexibility sets them apart from others in the industry, and the MSU Formula Racing Team is lucky to have them as a sponsor!

Recently, Axiom donated aerospace grade film adhesive to the team, which will be used to construct the 2020 primary structure, a carbon fiber and aluminum, honeycomb-core monocoque.



Name: 3Dconnexion

Location: Munich, Germany

We want to thank our newest partner, 3Dconnexion, for their donation of several 3D Space Mice. Productivity has increased exponentially since their arrival, and they'll be used by our team's design leads for years to come!

3Dconnexion 3D mice deliver a level of natural and intuitive control of 3D models and environments that is unattainable with a traditional mouse and keyboard. Using a 3D mouse, team design leads are able to work as if they're holding the digital model in their hand. 3Dconnexion is committed to driving design innovation by ensuring an intuitive and natural connection to today's 3D applications.



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Name: Hexion

Location: Columbus, Ohio

Hexion produces the best in specialty chemicals and performance materials and provides the technical expertise to customize them to your exact needs. The result? Specific solutions, not generic products, leading to thousands of breakthroughs that improve businesses' bottom lines and customers' lives.

Hexion made a very generous donation of high-quality laminating resin that will be used to construct this year's aerodynamic package. We can't thank them enough for contributing to the success of the aerodynamics team.



Name: Toray

Location: Tokyo, Japan

Toray is the world's leading manufacturer of PAN-based carbon fibers. In the aviation sector, Toray prepreg is used in the tail of the Boeing 777 and the fuselage and wings of the Boeing 787, while sporting goods and car manufacturers also make use of it in things like golf club shafts, fishing rods, bicycle frames, and automotive components.

The chassis team will be using Toray's donation of prepreg carbon fiber to construct the monocoque for SR-20. Toray is a long-standing partner of our team, and we are very grateful for the opportunity to construct our vehicles using their advanced, high-strength carbon fiber.



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