



NEW JERSEY INSTITUTE OF TECHNOLOGY SOLAR CAR TEAM



Sponsorship Package 2017-2018

ABOUT US

The Solar Car Team at New Jersey Institute of Technology (NJIT) is building the university's first-ever, full-size, solar-powered electric vehicle. This multidisciplinary project provides a real-world systems engineering experience for students of all majors across all departments at NJIT. In July 2018, the Solar Car Team will compete in the 2,000-mile "American Solar Challenge," a competition to design, build, and drive solar-powered cars in a cross-country time/distance rally event -- and we need your support!

OUR MISSION

The mission of the New Jersey Institute of Technology Solar Car Team is to research, design and construct our first solar powered race car to compete with other universities. Our team emphasizes the development of each component and provides experience for future career opportunities by utilizing sound technical skills in engineering design and business.



Dear Prospective Sponsor,

Thank you for considering a partnership with the NJIT Solar Car Team. Every donation we receive helps bring our team closer to crossing the finish line at the 2018 American Solar Challenge.

The mission of the Solar Car Team is to complete the design and construction of NJIT's first ever full-size solar electric vehicle, which we will compete on the worldwide stage.

We founded the NJIT Solar Car Team in March 2017, after communication with the Electrical and Computer Engineering department. This multidisciplinary project engages students in the practices of systems engineering, research, and the development of sustainable energy technologies. Our team consists of passionate, motivated undergraduate and graduate students from over twenty different fields of study across all departments at NJIT.

By partnering with the Solar Car Team, you will be helping:

- Support innovation in the sustainable energy research field**
- Support civic engagement and student growth**
- Utilize donated materials in community service activities through our projects promoting STEAM education to high school students**
- Connect with our student community of technology and design students who demonstrate important values like motivation, civic engagement, and teamwork**

Already, we are incredibly proud of how far our team has come in under a year, and, with the dedicated and innovative students we have at NJIT, we know that we will only get better.

We look forward to racing with you.

**Ivan Mitevski and Jefferson Guerrero
Co-Founders and Project Directors of NJIT Solar Car Team**

OUR TEAM

ELECTRICAL TEAM

The electrical team is responsible for designing the intermediate systems that will allow for proper interface between each electrical subsystem required for the car's operation. The electrical team is broken into electrical sub-teams who work together to make sure system designs meet operational requirements while also satisfying the provisions to pass competition inspection.

MECHANICAL TEAM

Mechanical team designs components for the suspension, steering, brakes, body, and chassis assemblies, while also analyzing their stresses in 3D CAD to ensure safety for the driver and efficient weight to structural rigidity ratio to help maximize overall vehicle power efficiency. The Mechanical Team is also in charge of all vehicle aerodynamics calculations, and the construction of their various designs.

SOLAR CELLS TEAM

The Solar Cell team is responsible for the design and layout of the solar array, supplementary array, the charge system, and most importantly, the connections to the battery system. The team seeks to employ a novel approach in the solar array system by utilizing high efficiency solar panels backed with an additional solar array to be used exclusively during checkpoints.

BATTERY TEAM

The battery team is responsible for designing, constructing, and protecting the battery pack for the solar car. The main objective is to design a battery pack that will safely and efficiently deliver the power needed by the rest of the car.

TELEMETRY TEAM

Telemetry team works on the internal network of the car as well as developing the UI for the driver. They optimize the car by interpreting all the data that is produced by key components of the car by utilizing modern microcontrollers such as Arduino and Raspberry Pi, as well as communication modules like LoRa to structure our network.

MARKETING AND FUNDRAISING TEAM

The team is responsible for the propagation of all information about the NJIT's Solar Car Team. Often working closely with other subteams, the marketing team is in charge of raising the funds for the project, running all of the team's official pages, and creating media to generate interest and excitement about the project.

OUR VEHICLE PRODUCTION BUDGET

Mechanical:

Materials	\$1,030
Chassis	\$10,840
Body Components	\$15,745
Components	\$3,810

TOTAL: \$31,425

Electrical:

Motors & Controllers	\$32,450
Sensors	\$67
Power Regulation	\$650
Auxiliary Battery	\$710
Lighting	\$1,082
Chassis Wiring	\$566

TOTAL: \$35,525

Battery:

Battery Packs	\$2,059
BPS	\$4,481
Fans	\$33
Battery Enclosure	\$580

TOTAL: \$5,183

Solar Cells:

Solar Panels	\$2,000
Solar 150/145 MPPT	\$3,200
TOTAL: \$5,200	

Telemetry:

Discrete Sensors Testing	\$100
GUI	\$444
Vehicle Sensors Comm.	\$909

TOTAL: \$1,453

Competition Fees:

Initial Entry Fee	\$1,500
Track Registration	\$3,000
Road Registration	\$3,000

TOTAL: \$7,500

Logistic Fees:

Car Shipment & Trailer	\$15,000
Lodging	\$12,000
Team Uniforms	\$1000
Emergency Funds	\$10,000

TOTAL: \$38,000

GRAND TOTAL:

\$124,286

Reasons to Sponsor the NJIT Solar Car Team



GREEN ENERGY

This project is an innovative and fun way for students to research an eco-friendly future. Solar cars harness energy from the sun by converting it into electricity to fuel the car. A car running on gasoline burns fossil fuels and emits greenhouse gasses, but solar-powered cars burn no fuel and do not produce emissions. Solar energy is free and widely available. In supporting our project, you are supporting green energy and encouraging other students like us to do the same.

TEAMWORK

Students working on this project use their individual strengths to work for a common goal. With over 60 members in 21 different majors, our team brings a lot to the table. Our team follows a flow chart structure, which keeps it organized and communicative. Like NJIT, the Solar Car Team is incredibly diverse, and this makes us strong. This project gives us an opportunity to really collaborate and learn from each other-- and of course engage in some friendly competition.



INNOVATION



Through this project, our students are learning vehicle engineering design, problem solving, and system engineering. They are the innovators of tomorrow. Engineers like those on our team are the ones who will one day find a solution for sustainable energy and our team of engineers is eager to build a better future. We would love to have your support or mentorship in this pursuit. Join us in working for the future today.

PARTNERSHIP OPTIONS

We would love to partner with you as we complete NJIT's first solar car. Every donation is tax-deductible, and when you partner with us, your company will receive exposure as we travel across the nation with our solar car. Every donation helps us move closer to the finish line, but our various sponsorship levels are detailed below. *We would love to discuss alternate partnership options with you.*

Platinum - \$10,000 and more

Your company's name and logo will appear on our website, team T-Shirts, and solar car (all large). Your company logo/name will appear on the "Sponsor Board" displayed at testing and competition events. You will get access to our team resume book. Your company will be invited to speak at NJIT Solar Car meetings. Website blog and social media posts will be made about our partnership. You will also receive a special invitation to view and ride in our solar car!

Gold Level - \$6,000 to \$9,999

Your company's name and logo will appear on our website, team T-Shirts, and solar car (all medium). Your company logo/name will appear on "Sponsor Board" displayed at testing and competition events. You will get access to our team resume book. Website blog and social media posts will be made about our partnership.

Silver Level - \$1,000 to \$5,999

Your company's name and logo will appear on our website, team T-Shirts, and solar car (all small). Your company logo/name will appear on "Sponsor Board" displayed at testing and competition events. Website blog and social media posts will be made about our partnership.

Bronze Level - \$250 to \$999

Your company's name and logo will appear on our website, Team T-Shirts, and on our solar car (all small). Website blog and social media posts will be made about our partnership, and you will receive a thank you letter from our team.

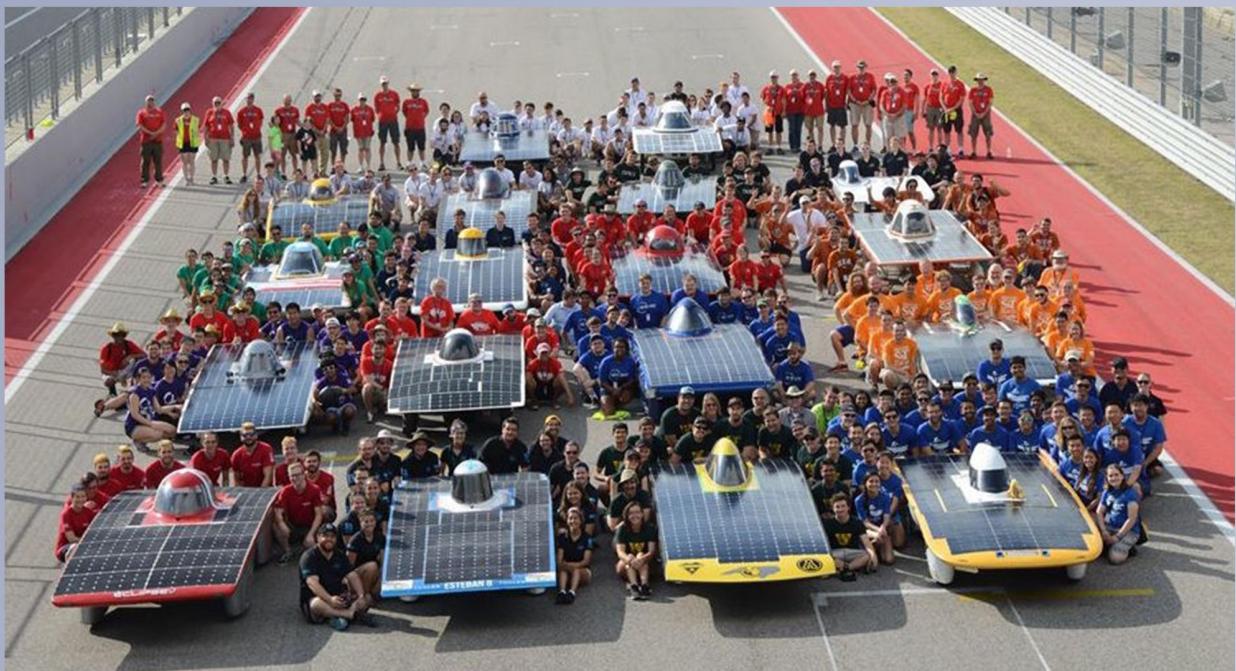
Friends - Up to \$250

Website blog and social media posts will be made about our partnership.

THE COMPETITION

We will race our Solar Car in the 2018 Formula Sun Grand Prix and the 2018 American Solar Car Challenge...

Within the first year of founding our team.



CONTACT US

We would love to partner with your company in order to complete NJIT's first ever solar car! Please feel free to contact us with any questions, or to request more information.

See you at the finish line!



Donate to our official fund and become our sponsor:

[https://njit-connect.njit.edu/
solar-car-donation-form](https://njit-connect.njit.edu/solar-car-donation-form)

Contact us through email:
solarcar@njit.edu

Visit our website:
solarcar.njit.edu

Connect with us on social media! @njitsolarcar

