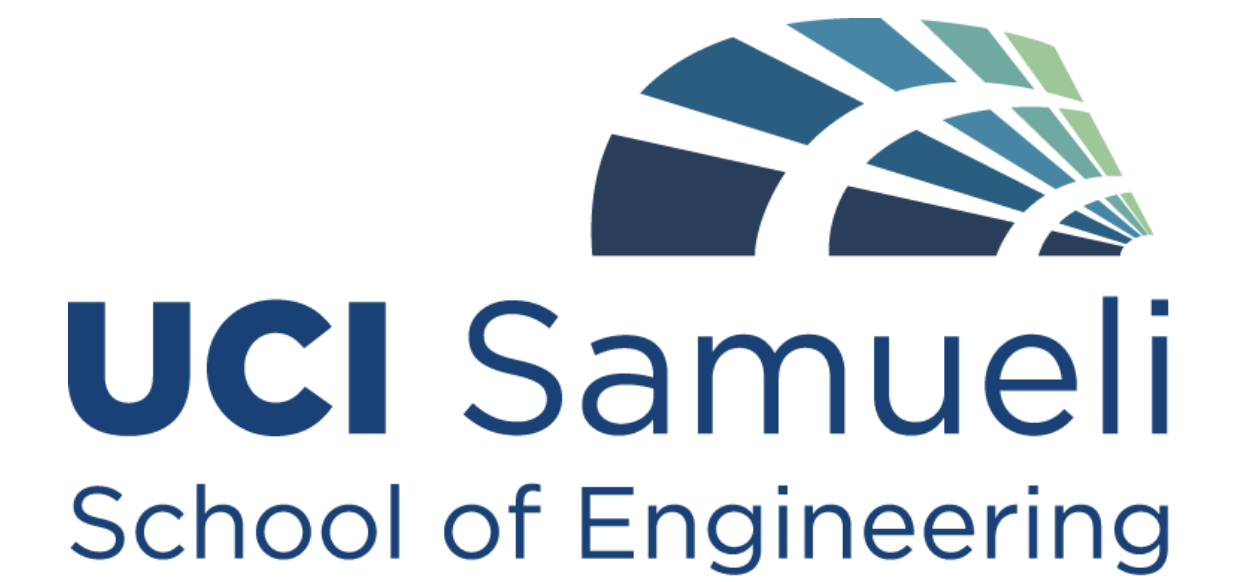


# SolEaters

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## DESIGN & INNOVATION

### BACKGROUND

For the past two decades, the American Solar Challenge (ASC) has held a 1500 -2000 mile endurance race that spans over numerous states in four days. The SolEaters, formed in November of 2016, is the first team at UC Irvine to design, build, and compete with a car completely powered by the sun in this trek across America.

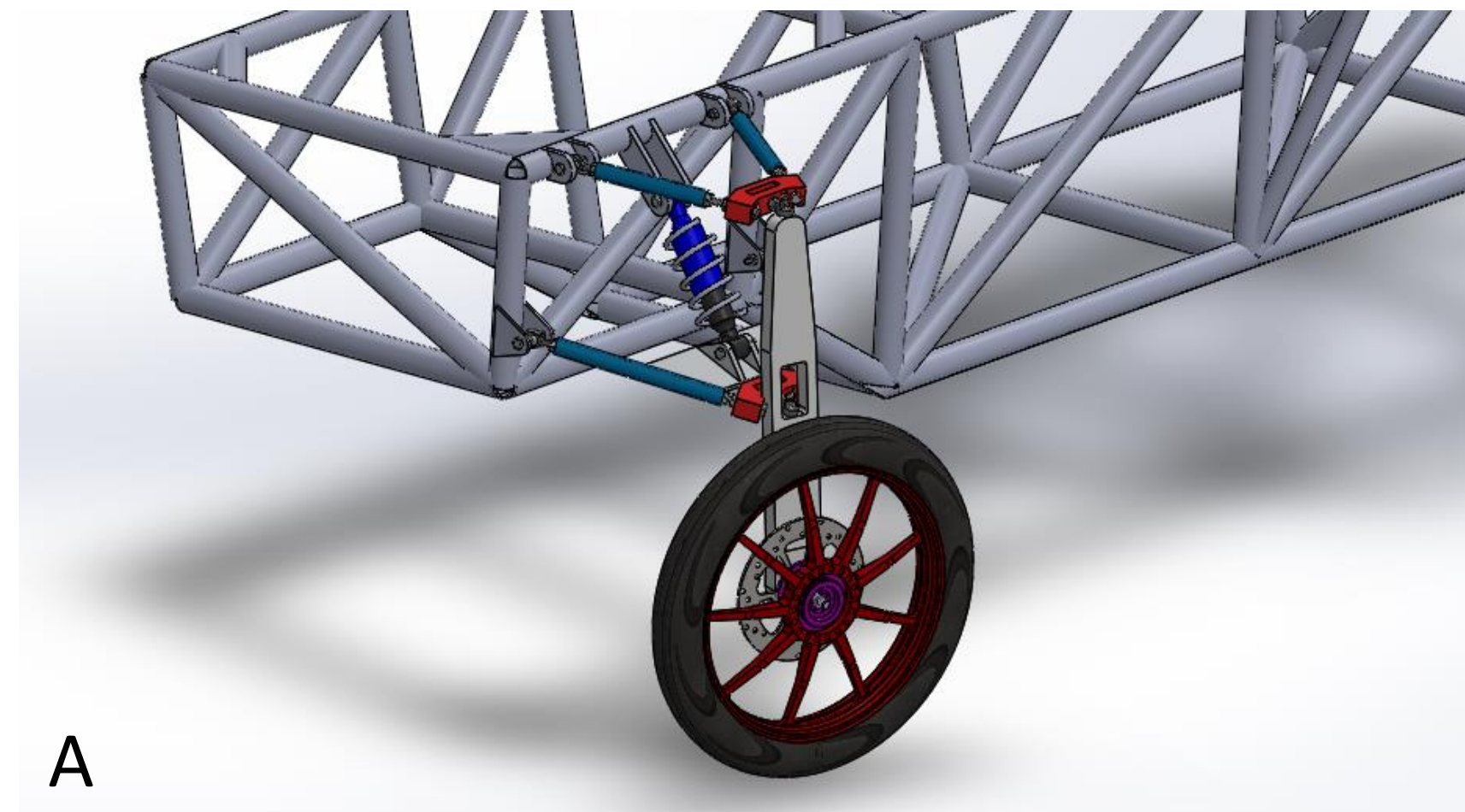


### GOALS & OBJECTIVES

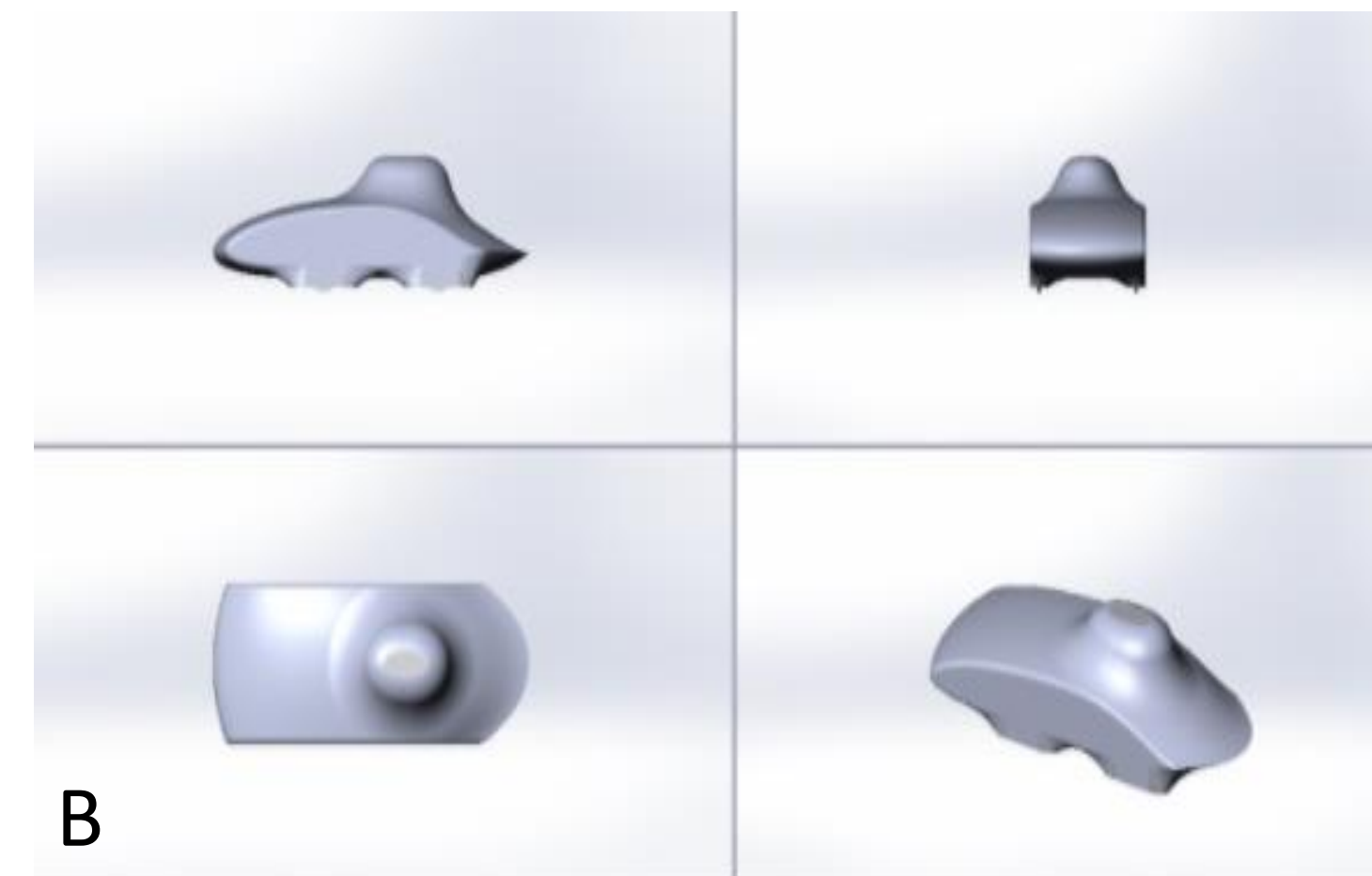
Overall: Compete in the 2018 ASC over summer.

Mechanical: Design and build a lightweight, yet durable design of a chassis, suspension, and aerodynamic body.

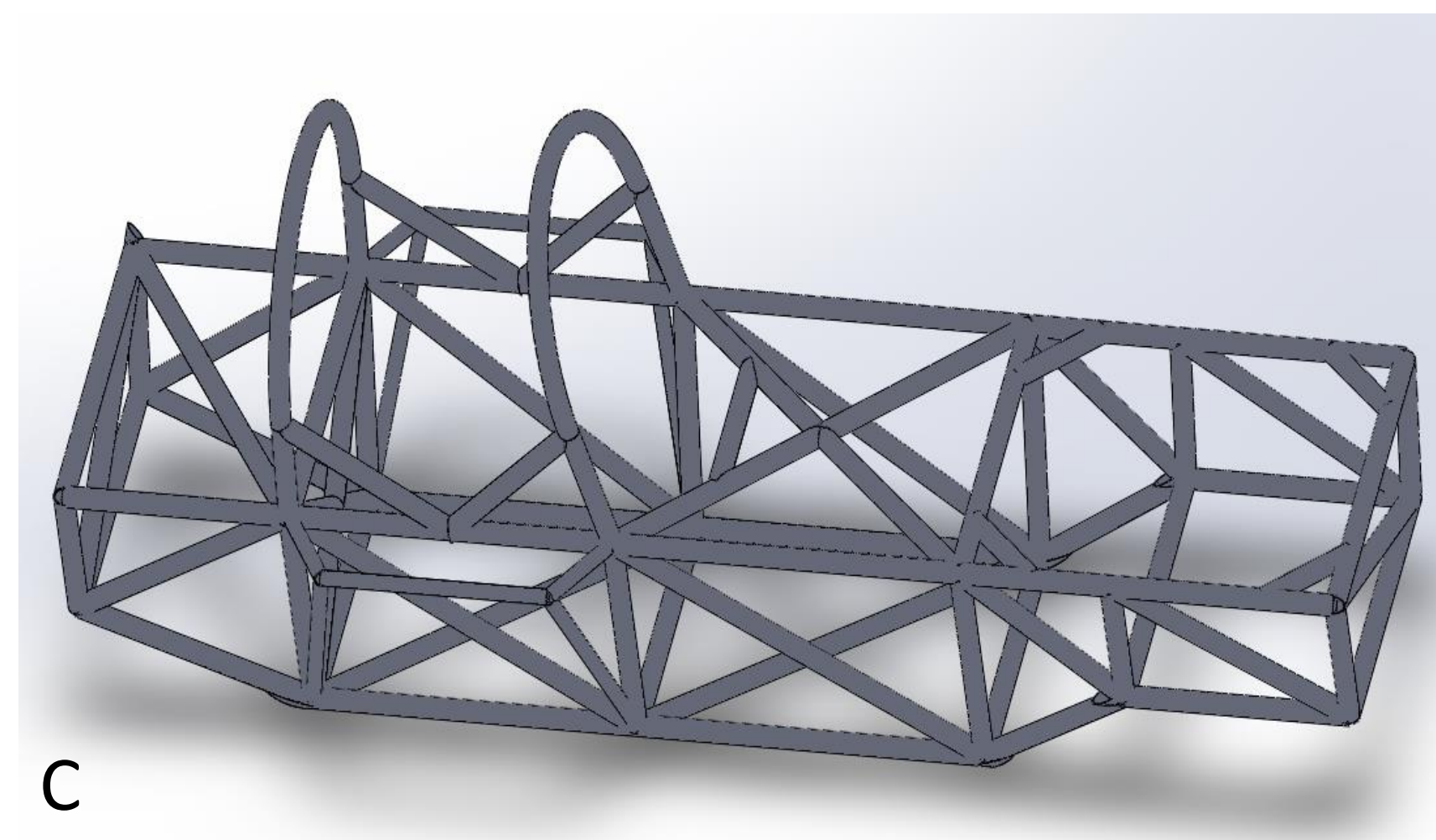
Electrical: Build a safe and highly efficient electrical system that will power our car to speeds of up to 65 mph



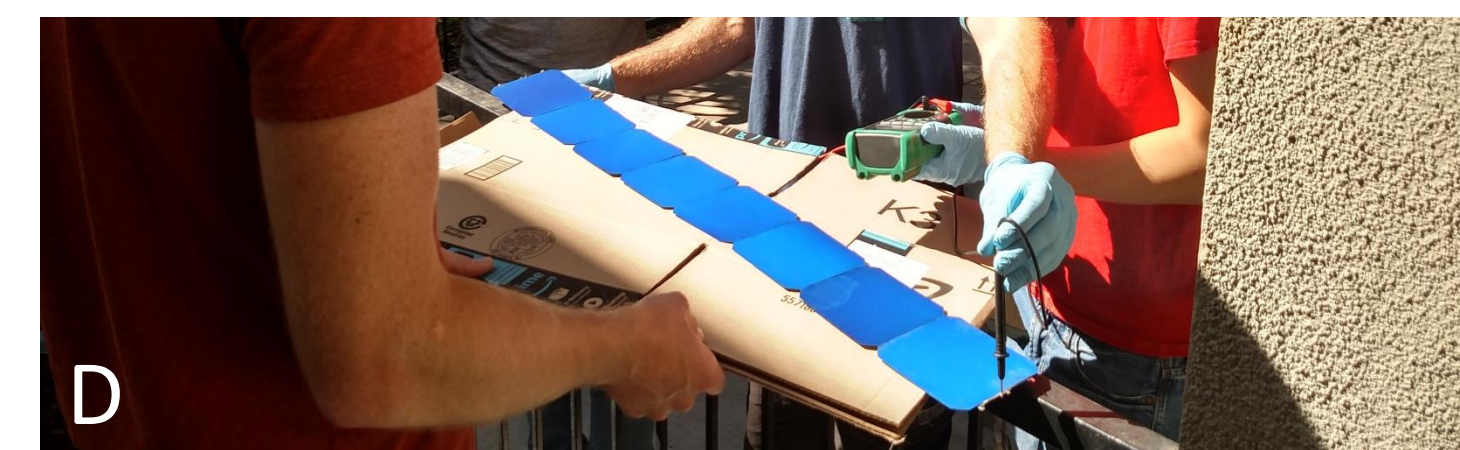
A



B



C



D

- A. Front suspension features a double A-arm suspension with lightweight aluminum wheels
- B. Aerodynamic body with a frontal area of about 1m<sup>2</sup>
- C. Spaceframe chassis for structural rigidity to withstand 5G loads
- D. Construction of scale system using a spot welder

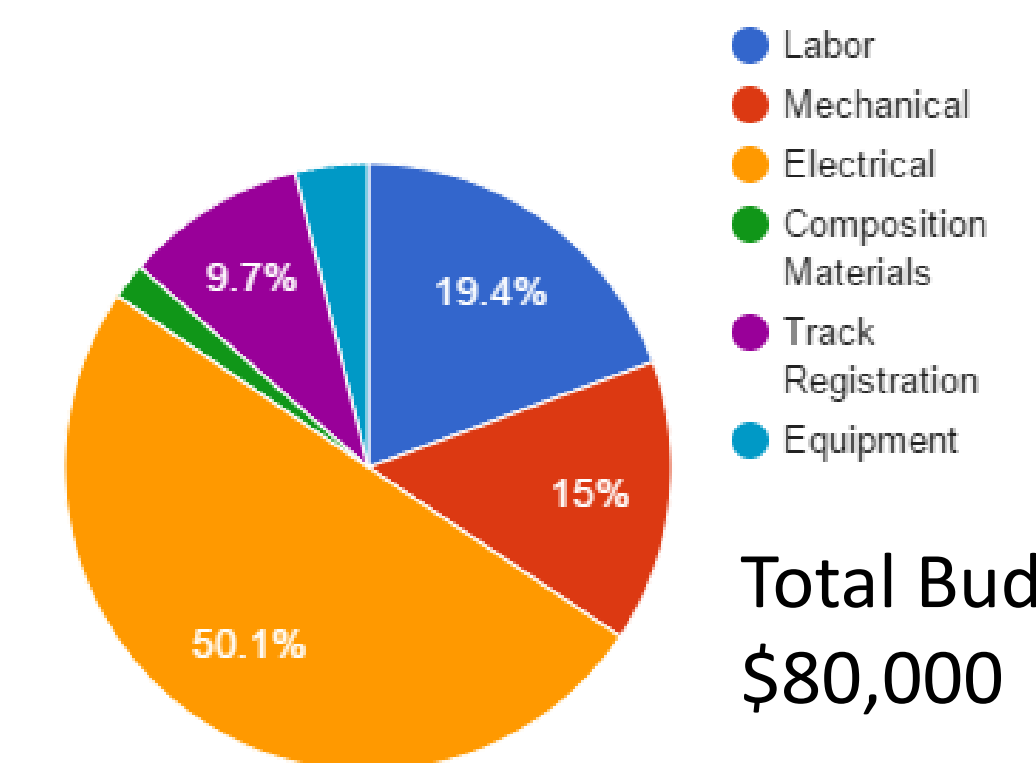
### REQUIREMENTS

The Solar Car must meet all 2018 ASC Regulations.

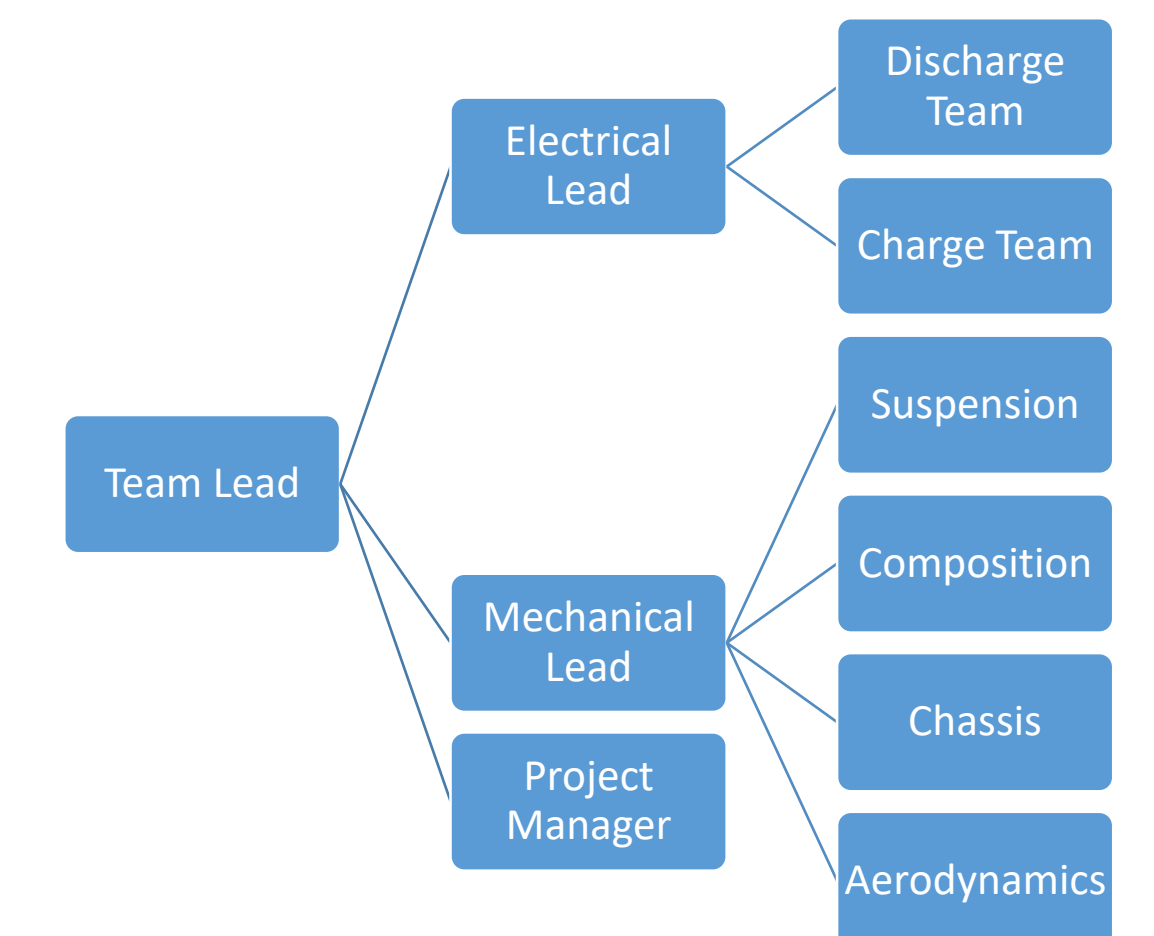
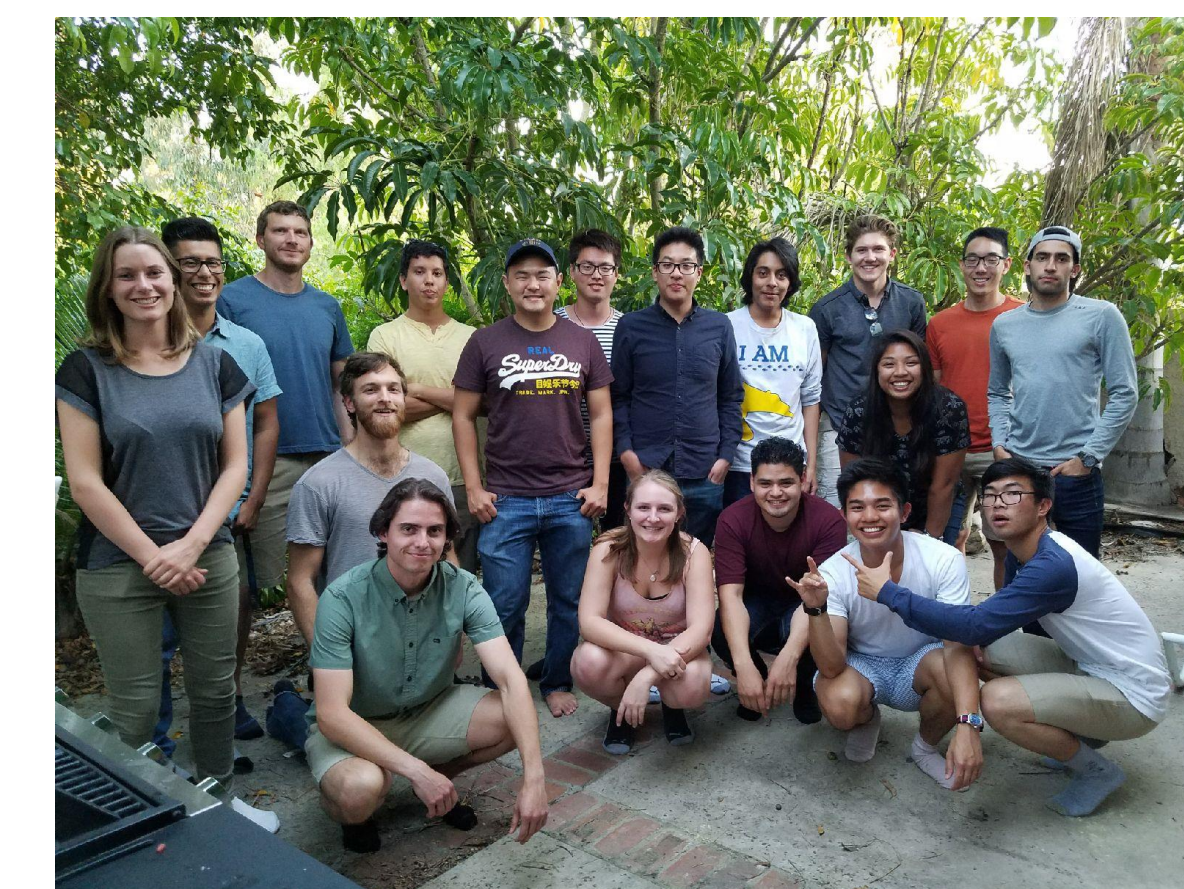
Mechanical: Solar car must be able to withstand 5G loads from all directions and be able to survive a 1G turn, 1G braking, and 2G bump applied at the contact patch

Electrical: The system must be powered by 4 m<sup>2</sup> of solar cells and 20 kg of batteries, while being completely safe from all electrical and battery failures

### BUDGET

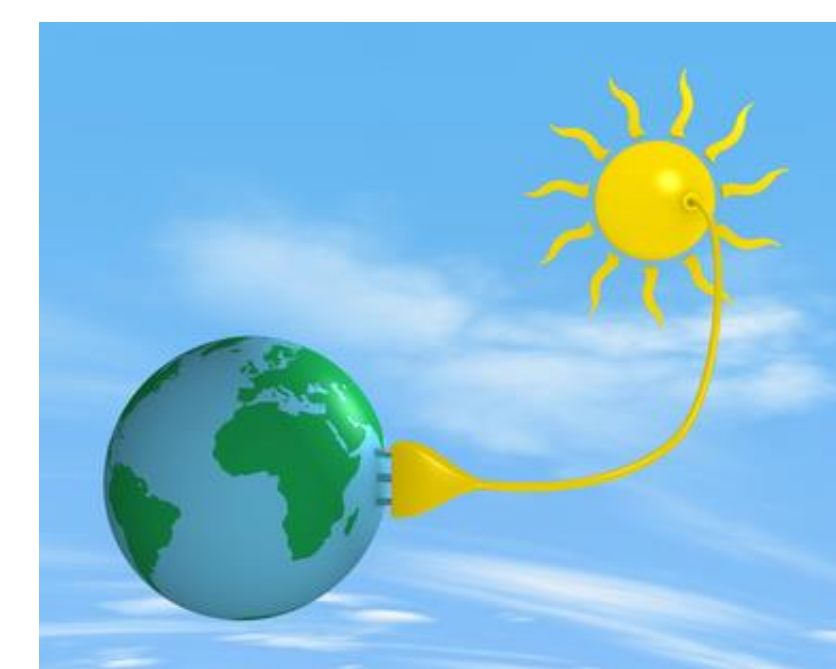


### MEET THE TEAM



Team Lead: David Kincade  
 Project Manager: Christian Phan  
 Mechanical Lead: Stacey Agustin  
 Mechanical Team Members: Caressa Brewer, Oscar Rodriguez, Kevin Cristobal, Fredrick Rogers, Scott Yamamoto, Justin Tsao, Anass Malabeh, Calvin Belcher, Jonathan Aquino, Michaela Strasser, Telson Coque  
 Electrical Lead: Brandon Larson  
 Electrical Team Members: Gilberto Garcia, Pengjie Tian, Alex Ly, Alec Vis

## THE BIGGER PICTURE



The most abundant renewable energy source is the sun. The SolEaters have a passion for renewable energy and the impact that using renewable energy in place of fossil fuels would have on the Earth. This project isn't just about competing in the challenge, but also taking the leap to a cleaner future by engaging in the design and innovation of solar power and becoming leaders in the renewable energy industry.

