

BUDGET

Aero (\$2,930)

Brakes (\$1,860)

Electronics (\$2,719)

Powertrain (\$6,452)

Suspension (\$16,265)

Miscellaneous (\$2,000)

Chassis (\$1,200)

Total Budget:

\$36,626

• Human Interface (\$3,200)

FormulaSAE

UCI Samueli School of Engineering University of California, Irvine

Wraith



GOALS

- Top 10 Finish at Lincoln FSAE-IC 2019
- Top 20 Design Presentation

OBJECTIVES

- Weight reduction (480 → 420 lbs)
- Increase Acceleration (4.27 → 3.99s)
- Increase downforce (150 → 300 lbs)

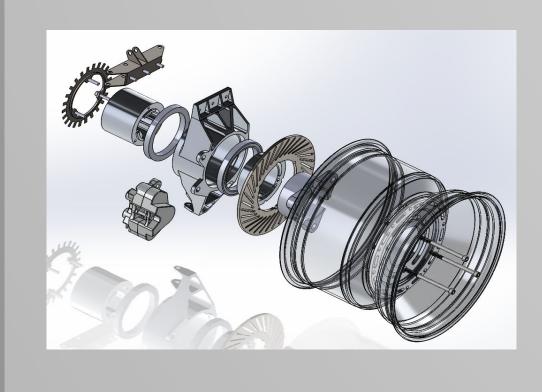
TEAM ORGANIZATION

			Alex Luna			
Chassis Lead Adam Moro	Suspension Lead Collin Cain	Engine Dev Lead Chris Lansford	Drivetrain Lead Chad Carvalho	Electronics Lead Ashley Gin	Human Interface Lead Alec Vartanians	Brakes Lead Matt McMurry
Noah Stein Pumudu Gunasekera	Ethan Kulla Jeff Lin Joe Xu Josh Marquez	Derek Diviak Jin Jiang Max Putintsev Tristan Cortez Brain Guardado	Christian Placencia Devon Parker Francisco Gomez	Stephanie Herrera Kyle Adamos	Madison McGrann Mitchell Kamau	Parisa Bendevoud

SUSPENSION

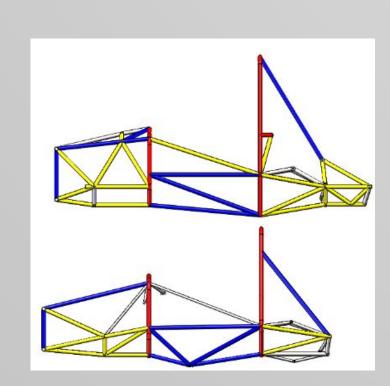
44.4%

- 15% weight reduction
- Removed rear suspension box



CHASSIS

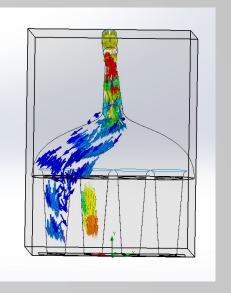
- 20 lb weight reduction
- 1800 ft*lb/deg torsional rigidity





POWERTRAIN

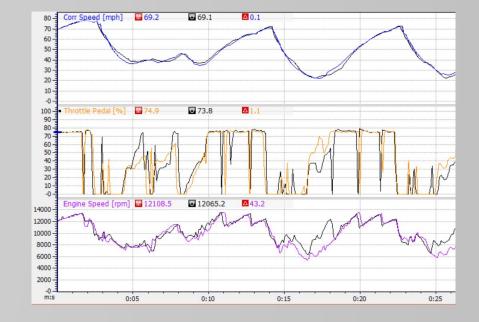
- Improved cooling
- Intake maximizes air flow to each cylinder
- Custom wet sump oiling to lower center of gravity





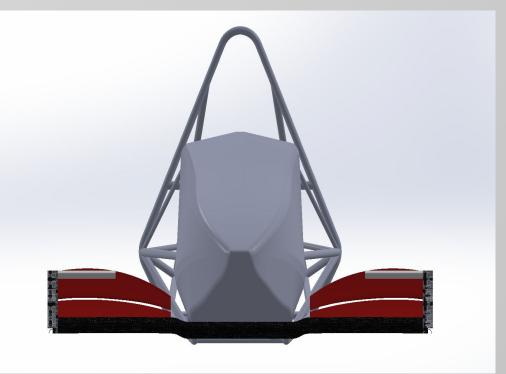
ELECTRONICS

- Modular wiring harness
- Sensors for diagnostics, driver training, research and development



AERO

- $C_1 = 2.5$,
- $C_d = 1.2$
- Body design complete



ERGONOMICS

- Paddle shifters
- Improve driver comfort

