

P09221: Innovative Composite Parts for a Formula SAE Racecar



Project Manager: David Holland

Website:

<https://edge.rit.edu/content/P09221/public/Home>

History of R · I · T Formula SAE

F1 – 8th Place
Rookie of the Year



F2 – 2nd Place

F3 – 2nd Place

F4 – 2nd Place

F5 – 3rd Place

F6 – 5th Place

F7 – 2nd Place Detroit, 1st Place England

F8 – 14th Place Detroit,
6th Place England, 2nd Place Australia

F9 – 21st Place Detroit,
4th Place England, 1st Place Australia

F10 – 20th Place Detroit,
3rd Place England, 3rd Place Australia



History of R · I · T Formula SAE

F11 – 12th Place Detroit, 5th Place in Australia



F12 – 22nd Place Detroit, 2nd Place in Composites Award, 3rd Place in Brake System Award, 1st place in PBR brake award, 5th place in Australia, 2nd in acceleration



F13 – 16th Place in Detroit, 3rd place in Composites Award, 6th place in design, 2nd place in sales and presentation



F14 – 12th Place in Detroit, 4th place in endurance 5th place in California, 4th place in endurance



F15 – 7th Place in Detroit, 6th place in endurance 5th place in Germany, 4th place in endurance



History of R · I · T Formula SAE

F16

Detroit (27/120)

- Skidpad: 3rd Place
- Autocross: 3rd Place
- Acceleration: 2nd Place
- Cost: 2nd Place
- Endurance: DNF

Germany (28/60)

- Skidpad: 3rd Place
- Autocross: 9th Place
- Acceleration: 3rd Place
- Cost: 2nd Place
- Endurance: DNF



Project Description

■ Goals:

- Design and fabricate innovative, high performance composite parts with intent of placing RIT back on top of competition.
 - Composite parts include monocoque chassis and aerodynamics package.

■ Positions Desired on SD Team:

- 5 Mechanical Engineers (all slots filled).
- 1 Electrical Engineer (open).

Position Roles/Responsibilities

- 5 Mechanical Engineers:
 - Manufacturing and testing of composite coupons
 - Design, analyze, manufacture, and test carbon monocoque
 - Design and manufacture jigs and molds for carbon monocoque
 - Source carbon prepreg, autoclave, tooling board, aluminum, etc..
 - Full aerodynamic evaluation and validation of aerodynamic package (including racecar geometry, ducts, etc...)

- 1 Electrical Engineer
 - Design amplifier and wiring harness for strain gage data acquisition
 - Ensure EMI isolation with new CDI (capacitive discharge ignition) box location

- Faculty Advisor: Dr. Alan Nye

Contact Information

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