

24

UNIVERSITY  
OF TORONTO  
FORMULA  
RACING

# UTFR

*University of Toronto Formula Racing*

Read time: 8 min

**THIS PAST MONTH**

**UTFR Wins!**





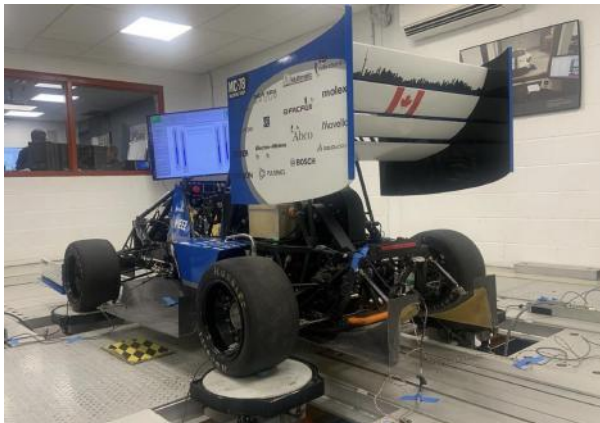
Vrooming through New Hampshire Formula Hybrid + Electric this past week, we're stoked to share our big win—we've once again secured first place overall! From adrenaline-pumping races like acceleration and autocross, to endurance challenges and design presentations, this win is a testament to our team's dedication. Massive shoutout to every member and sponsor who made this victory possible! [Learn more about our performance.](#)

### A New Addition

Given the innumerable hours of labour going into our car, the newsletter team shall be bringing you a close look into the people behind UT24 – Deep Dives. Each month, we will interview our directors to learn more about the journey behind their section. Scroll to the bottom of the newsletter to find the first interview with our Team Principal and Mechanical Technical Director, Daniel LaRosa.

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## DEVELOPMENTS



### Mechanical

We had an awesome visit to Multimatic to fine-tune our car. We ran through different spring and damper setups on Multimatic's Four-Post testing rig. With their data combined with our on-track experience, we've nailed down the perfect set-up for each competition.



### Electrical

Our powertrain just got even more efficient—by 1.5% to be exact!

We are now rocking over 95% efficiency, which is seriously impressive!



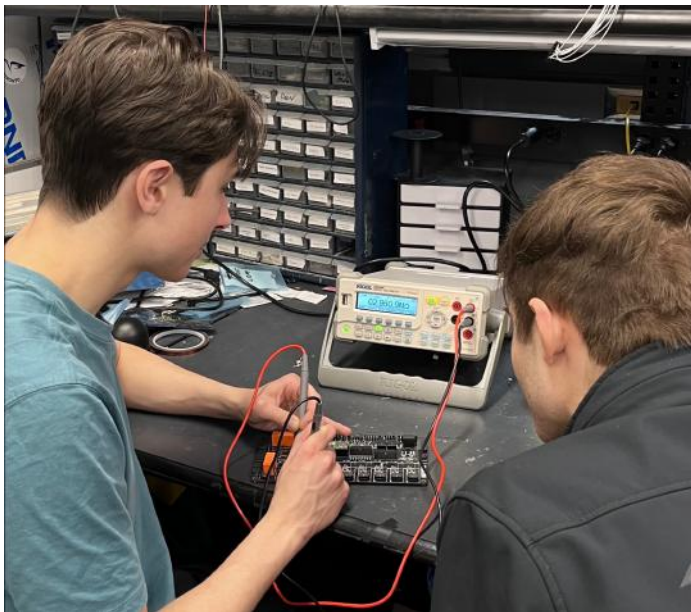
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MartinRea stands as a global pioneer in propulsion solutions, blazing trails in innovation through advanced engineering and R&D. They specialize in lightweight structures, propulsion systems and fluid management solutions, all aimed at achieving automotive excellence.



### **Electro-Meters**

For over 60 years, Electro-Meters has been a leading supplier of test instruments, handheld and portable instruments, as well as meters, indicators, transformers, and controllers.

For excellent service that we can anecdotally support, check them out!

## Deep Dives

### Team Principal and Mechanical TD, Daniel LaRosa



*This month, we caught up with UTFR's Team Principal and Mechanical Technical Director, Daniel LaRosa, amid preparation for the competition season to get the inside scoop on how UT24 was brought to life. Here are the highlights:*

#### A Juggling Act

"It's a lot of work" is an understatement when you're juggling two massive roles like LaRosa did for UT24 - Mechanical Director and overall Team Principal. While the technical realm of optimizing designs and testing pitfalls was well within his capabilities from four years of engineering coursework, LaRosa admittedly found the people management side trickier to handle.

"Dealing with people's emotions and preferences was the bigger challenge than the technical stuff," he admits candidly. He had to become a veritable people person too—overseeing everything from team dynamics to keeping ambitious visions in check.

#### The Design Philosophy

When it came to UT24's development, LaRosa and the team lived and breathed a simple mantra: "Keep things simple and make them work." This mindset touched everything from

addressing UT23's pitfalls like excessive pitching and rolling ("We tried to package everything tighter and optimize weight") to bridging the gap with the newest subsection, driverless systems, now reaching maturity.

"A lot of times it was just understanding what they actually needed the car to do," LaRosa explained about collaborating across teams. Instead of getting bogged down by lofty ideas, they cut through the fluff to prioritize functionality over flair. This focus gave rise to smart solutions like our custom pistons for driverless emergency braking, designed by our braking lead Mo Taban—"a pretty cool innovation" in LaRosa's eyes.

### **Pit Stops and Roadblocks**

But even a finely-tuned philosophy couldn't prevent every speed bump along UT24's ruthless race to the finish line. Battery cooling remained an area of concern requiring more R&D. With a delayed January start, LaRosa frequently had to pump the brakes, re-evaluate priorities, and ask "Do we really need this? What was our original goal?"

Some ambitious concepts like Red Bull-inspired curved side pods for cooling were left firmly on the ideation boards. "We had no analysis to base our decision on...so we scrapped it and did something simple we could validate."

### **The Team's Secret Weapon**

Despite the intensity, UT24's new recruits didn't disappoint—providing UTFR with crucial reinforcements. "I've been really impressed with the talent...very positive outlook for future years," he beams.

This human element was critical, as LaRosa knew maintaining strong communication and team bonding would be key for the incoming Team Principal. His advice? "Bond with the team, even outside [the shop]. You end up working better together."

### **The Checkered Flag and Beyond**

With UT24's unbridled success, expectations are now high for the team to build on another New Hampshire win. LaRosa is optimistic about their chances for the rest of the season "as long as we execute properly [in competition]."

As for UT25's design philosophy, the veteran advises staying flexible, having learned that meeting lofty goals starts with assembling a cohesive, communicative crew. "If you set out expectations and everyone is on board, that's a successful season already."