

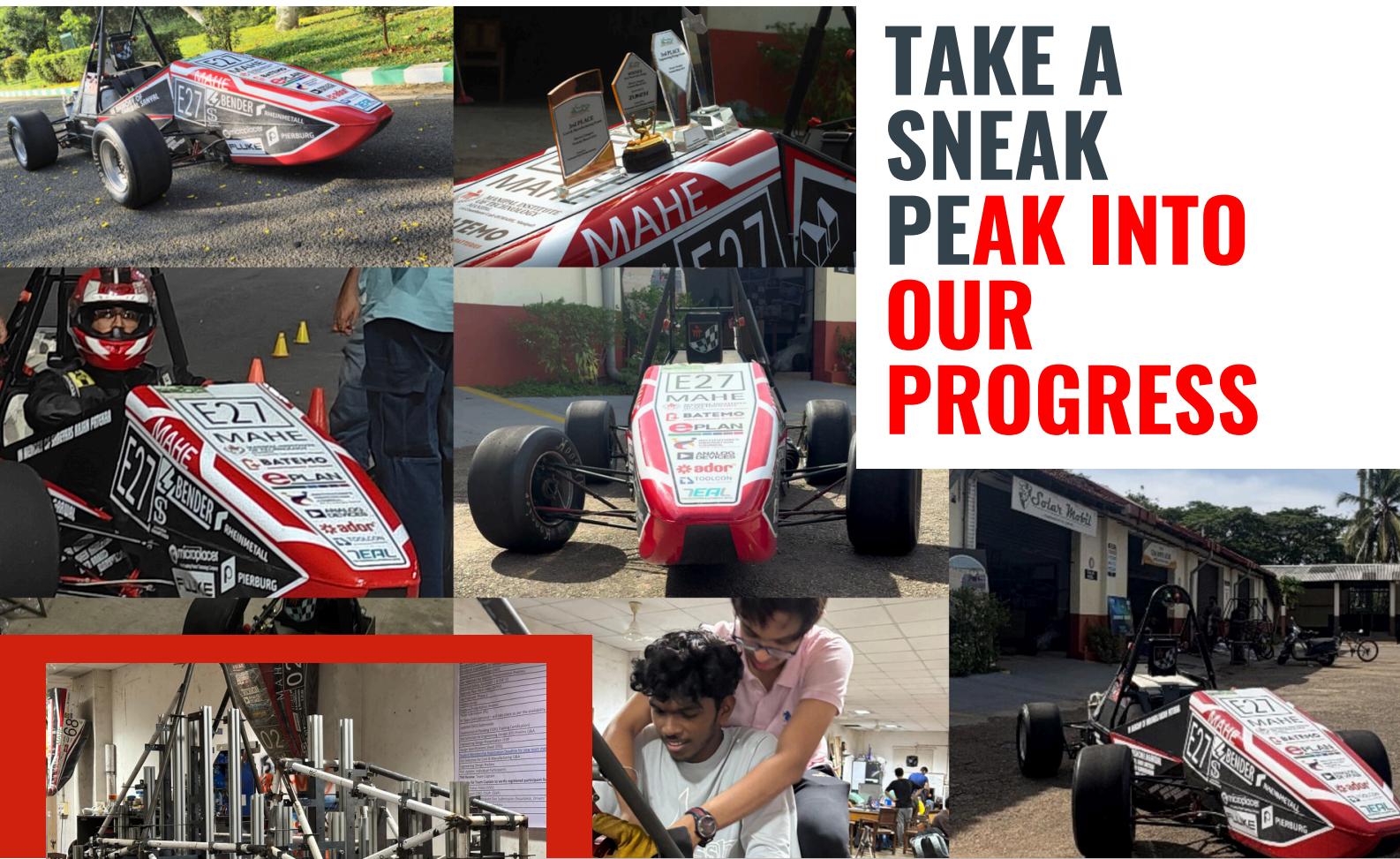
# FORMULA MANIPAL

AUGUST 2025



# KEEPING UP WITH FM

## TAKE A SNEAK PEAK INTO OUR PROGRESS



### Structures

Contributed to carbon fibre layup processes and gained practical fabrication experience. Performed three-point bend testing on mild steel tubes to study strength and deformation. Conducted perimeter shear testing on carbon fibre sandwich panels with an aluminium core for structural validation. Also designed and fabricated a handcart supporting TSAC operations.



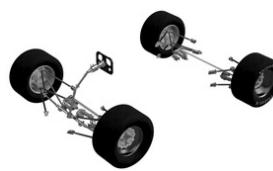
### Aerodynamics and composites

This month, the Aerodynamics and Composites team completed the manufacturing of all front and rear wing flaps and most of the body panels. Cooling system optimization is in progress through iterative CAD design and STAR-CCM+ simulations. The flaps were validated using wind tunnel testing.



### Vehicle dynamics

The steering geometry was finalized after thorough analysis, ensuring proper alignment and motion transfer. Bellcrank designs were also completed, optimizing efficiency and durability. Additionally, all wheel assembly components sourced from Toolcon were received on time, carefully inspected, and successfully assembled, marking a key milestone in preparing the system for upcoming performance tests and evaluations.

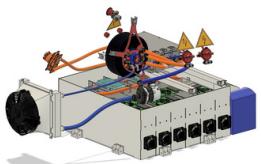


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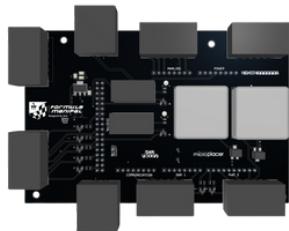
## Transmission

The transmission has been completely assembled and is now prepared for static testing to detect potential issues. Based on the test results, necessary modifications will be implemented to optimize performance, ensuring reliability and efficiency before the system is cleared for dynamic operations.



## E-Powertrain

This month, the E-Powertrain Subsystem conducted composite panel tests for the TSAC and completed necessary competition documentation. The front e-box and HV enclosure for the HVD were designed and manufactured. The Charger Handcart design was finalized, while the master switches panel and dashboard designs are ready for upcoming assembly.



## Electronics and controls

The wiring harnesses are being built, and our dual-channel cooling system is getting a major upgrade with new inline sensors for better data. To make sense of it all, our firmware team is designing a new telemetry GUI that will give us a crystal-clear view of the car's performance when it hits the track..



## Driverless

After extensive debugging, we successfully interfaced Taarzan's motor controller with the laptop and software. We've also received the NXP buggy and are gearing up for the finals. On the path planning side, we resolved minimum curvature clearance issues by restricting waypoint shifts perpendicular to the line formed by consecutive waypoints to half the car's width.



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## BUSSINESS PLAN PRELIMS

BUSINESS PLAN PRELIMS



# STRIDE

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INTRODUCING  
OUR TEAM



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CFO  
KRISHNA  
GERA



CTO  
SARANGAN  
SRINIVASAN



CMO  
SAANVI  
BANSAL



COO  
ANSHU  
LONI



## BPP PRELIMS

BPP prelims were conducted successfully, serving as an important milestone in the evaluation process. Our team demonstrated preparation, technical knowledge, and problem-solving abilities. Judges offered praises for the efforts and also provided constructive criticism to guide improvements. Overall, they expressed satisfaction with the performance, setting a positive tone for the main event.

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## FOR FURTHER ENQUIRIES CONTACT :

**TEAM MANAGER - AMOGHA RAO**

**CONTACT NO : +91 9986507801**

**EMAIL ID- FORMULAMANIPAL@MANIPAL.EDU**

**WEBSITE - WWW.FORMULAMANIPAL.IN**

