

## **OPTIMISATION OF THE CONTROL SYSTEM OF A SHELL-ECO MARATHON RACE VEHICLE: WORK IN PROGRESS**

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### **ABSTRACT**

*A Shell Eco-Marathon is used as a platform for aspiring young engineers to expose and nurture their talent in designing and building energy efficient automobiles. This platform hosts a global competition for science, engineering, technology and maths students around the world. The competition inspires students to work together to test their theories and innovative ideas of energy efficient cars. In this study, we are optimising the control system of an existing prototype car, so as to improve the driving range. Tests on the car's performance were conducted using the default controller settings. New settings on the controller were effected and the performance improvements were noted. The new settings regenerative braking functionality for improved energy conservation, automating cruise control for improved drivability at constant speed. The setting for the best driving speed has been noted as well.*

**KEYWORDS:** *Marathon, Automobiles, Competition, Performance, Optimisation*

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