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hat the car has a very tight turning radius. This paper is a concise description of the research, testing and design of the Viking XX solar race vehicle. Publications in design evolution in solar cars. Most solar cars that exist today are designed for cross-country races, but our goal is just to set the land speed record for a solar car. the FME Transactions. We will be working alongside aerospace, structures, steering, and business teams to design the solar car. It will be essential that we ompetibility, research part of the design. 2. Background. The suspension system for any car is designed to maximize the contact between the surface of the road and y wi Luc Dugard, in Semi-Active Suspension Control Design for Vehicles, 2010. 3.6 Conclusions. In this chapter, the most common models used to analyze the controllers are presented. This presentation is done by increasing the model complexity, starting from the simple quarter-car model involving vertical dynamics only, l and pitch dynamics also. The chapter provides a detailed analysis of the quarter-car model, with both analytic and numerical developments. Then, more complex bleteness, but with a shortened analysis.



Analiza evolucije sistema vešanja kod solarnih automobila

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ključne reči: Solar vehicles; Suspension; Sliding hub; Carbon fiber; FEM Static Analysis; Modal Analysis

Sadržetak

Kontrast između modernih alternativa mobilnosti i potražnje održivosti bio je bitan faktor za industriju u poslednjih nekoliko decenija, podstaknut tehnologijama koje su postepeno sušavale tu prazninu. Među njima, solarni automobili predstavljaju savremeni trend za obezbeđivanje ove potrebe. S obzirom na kompleksnost ove tehnologije, postizanje efikasnog dizajna zahteva poboljšanje svakog aspekta vozila, uključujući njegovu mehaniku. Kritičnom ulogom u stabilnosti vozila, sistem vešanja solarnih automobila je detaljno ispitan u ovom radu, naročito evolucija strukturnog dela koja je direktno odgovorna za podnošenje sila kojima je podvrgnuta karoserije vozila. Tri različita oblika realizavana od plastike ojačane ugljenim vlaknima su analizirana i upoređena statičkom i modalnom analizom konačnih elemenata: dve prednje viljuške spojene u jedinstveni zglob, a točak povezan sa novim kliznim sistemom.

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