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CRONE CONTROL METHODOLOGY FOR A MECHANICAL ACTIVE SUSPENSION SYSTEM

Reviewer 1: --

- 1. In several sections sentences have spelling and grammar mistakes, which need to be corrected.
- 2. In several sections sentences have a space problem, which needs to be corrected.
- 3. Proper sentence construction in several sections to be modified.

| Page No. | Actual | Suggested |
|-------------|--|---|
| 1 | unique controller named as CRONE, which is a non integer | unique controller named CRONE, which is a noninteger |
| 1 | In order to avoid the vibration and | To avoid vibration and |
| 1 | The work reveals to the design and implementation | The work reveals the design and implementation |
| 1 | The simulation results of servo response for the | The simulation results of the servo response for the |
| 2 | in different ways in order to exhibit the | in different ways to exhibit the |
| 2 | passive suspension system using a LQR | passive suspension system using an LQR |
| 2 | comparative performance found between | comparative performance was found between |
| 2 | time delay in order to achieve ride comfort [IV]. | time delay to achieve ride comfort [IV]. |
| 2 | designed for suspension system and implemented | designed for the suspension system and implemented |
| 2 | input signal in Matlab environment [VI]. | input signals in the Matlab environment [VI]. |
| 2 | in electric vehicle have been proposed to improve | in the electric vehicle have been proposed to improve |
| 2 | of pneumatic level system for a two degree of freedom | of the pneumatic level system for a two degree of freedom |
| 2 | determined with need of active suspension system | determined with the need for an active suspension system |
| 2 | suspension system to achievement of motion | suspension system to the achievement of motion |
| 2 | compared with state observer based | compared with the state observer-based |
| 2 | passive and LQR based seat suspension system | passive, and LQR based seat suspension system |
| 2 | implemented using Sliding mode Controller | implemented using the Sliding mode Controller |
| 2 | analyzed and evaluated in sense of time | analyzed and evaluated in a sense of time |
| 2 | PID controller in view of improving the ride | PID controller given improving the ride |
| 3 | backstepping technique and Lyapunov stability theory | backstepping technique and Lyapunov stability theory |
| 3 | the non linearity of active suspension system | the nonlinearity of the active suspension system |
| 3 | fuzzy approach utilized to construct the | the fuzzy approach utilized to construct the |

| 3 | introduced to quarter car active suspension system | introduced to the quarter car active suspension system |
|---|---|--|
| 3 | have examined by Popov stability | has examined by the Popov stability |
| 3 | a comparison with existing controller | a comparison with the existing controller |
| 3 | the development of active suspension system | the development of an active suspension system |
| 3 | system were carried out to compare with performance | system were carried out to compare with the performance |
| 3 | The mathematical model of passive suspension | The mathematical model of the passive suspension |
| 3 | accuracy of modelling has been checked with the state space | the accuracy of modeling has been checked with the state-space |
| 3 | prototype of VSVD semi-active suspension | The prototype of the VSVD semi-active suspension |
| 3 | vehicles consists four MRE isolators and MR | vehicles consists of four MRE isolators and an MR |
| 3 | performances compared with other four | performances were compared with the other four |
| 3 | modelling by Worst case modelling | modeling by the Worst case modeling |
| 3 | three generation of CRONE controller has been | three generations of CRONE controllers has been |
| 3 | The displacement of active suspension system | The displacement of the active suspension system |
| 3 | on neural network method for active | on the neural network method for the active |
| 3 | Dynamic surface control technique | the Dynamic surface control technique |
| 3 | Matlab by using CRONE CSD box. The evaluated | Matlab by using the CRONE CSD box. The evaluated |
| 4 | modelling of selected system for a MASS | modeling of a selected system for a MASS |
| 4 | reveals design of a controller strategy for the | reveals the design of a control strategy for the |
| 4 | The section IV reviews the implementation | Section IV reviews the implementation |
| 4 | CRONE CSD tool box. Section V shows analysis | CRONE CSD toolbox. Section V shows the analysis |
| 4 | The displacement of vehicle $(X_1(s))$ and | The displacement of the vehicle $(X_1(s))$ and |
| 4 | measured by using displacement sensor | measured by using a displacement sensor |
| 4 | compared with predefined control signal to find error | compared with a predefined control signal to find an error |
| 4 | determined control signal for the MASS by | determined the control signal for the MASS by |
| 4 | system to acquire desired system operation | to the system to acquire the desired system operation |
| 6 | The closed loop diagram of TGC controller | The closed-loop diagram of the TGC controller |
| 6 | Fig 2. In generalized template the Nichols | Fig 2. In a generalized template, the |
| 8 | of ωr and C and moreover, these | concerning or and C and these |

Comments to Editor:

1. After modifying the content, paper can be accepted for possible publication

Reviewer 2: --

- 1. Paper should be written in JMCMS Journal format.
- 2. References and in-text citations are not in JMCMS format. More references should be included and sequentially/adequately arranged, as cited in the text.
- 3. In many places, sentences are started with abbreviations. When it is introduced, the full form should be given.
- 4. Authors need to Modify the Abstract and conclusion more appropriately.
- 5. Conflict of interest regarding the article should be mention in the text.

Comments to Editor:

1. After modifying the content, the paper can be accepted for possible publication.

Reviewer 3: --1. Paper should be written in JMCMS Journal format. 2. References and in-text citations are not in JMCMS format. More references should be included and sequentially/adequately arranged, as cited in the text. 3. Authors need to describe the literature survey in the introduction section more elaborately 4. Conflict of interest regarding the article should be mention in the text. **Comments to Editor:** 1. After modifying the content, the paper can be accepted for possible publication. [Note: This is a computer-generated Report hence, no need for any Signature.]