(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/01/2024

(21) Application No.202441002309 A
(43) Publication Date : 23/02/2024

(54) Title of the invention : ADVANCED REGENERATIVE VEHICLE SUSPENSION SYSTEM WITH ARTIFICIAL INTELLIGENCE FOR ENERGY RECOVERY

(51) International classification :B60G0017015000, B60W0050000000, G06Q0030000000, B60G0017052000, B60G0017016500
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
1)RVR & JC COLLEGE OF ENGINEERING
Address of Applicant :RVR & JC COLLEGE OF ENGINEERING CHANDRAMOULIPURAM, CHOWDAVARAM, GUNTUR PIN - 522 019 Guntur ---------- ----------
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr. D. V. V. K. Prasad
Address of Applicant :Professor Mechanical Engineering RVR & JC COLLEGE OF ENGINEERING CHANDRAMOULIPURAM, CHOWDAVARAM, GUNTUR PIN - 522 019 Guntur ---------- ----------
2)Dr. K. Praveen Kumar
Address of Applicant :Associate Professor Mechanical Engineering RVR & JC COLLEGE OF ENGINEERING CHANDRAMOULIPURAM, CHOWDAVARAM, GUNTUR PIN - 522 019 Guntur ---------- ----------
3)Dr. V. Ramakoteswara Rao
Address of Applicant :Associate Professor Mechanical Engineering RVR & JC COLLEGE OF ENGINEERING CHANDRAMOULIPURAM, CHOWDAVARAM, GUNTUR PIN - 522 019 Guntur ---------- ----------
4)Sri Ch. Deva Raj
Address of Applicant :Assistant Professor Mechanical Engineering RVR & JC COLLEGE OF ENGINEERING CHANDRAMOULIPURAM, CHOWDAVARAM, GUNTUR PIN - 522 019 Guntur ---------- ----------

(57) Abstract :
ADVANCED REGENERATIVE VEHICLE SUSPENSION SYSTEM WITH ARTIFICIAL INTELLIGENCE FOR ENERGY RECOVERY ABSTRACT The invention presents an innovative approach to enhance energy efficiency in vehicular operations. This system integrates a sophisticated artificial intelligence controller with a plurality of suspension components and an energy storage unit. The suspension components, equipped with energy harvesting devices, capture mechanical energy during vehicle motion. The artificial intelligence controller processes real-time data from a sensor array, dynamically adjusting suspension parameters such as damping coefficient, spring stiffness, and ride height to optimize energy recovery. Additionally, machine learning algorithms enable continuous adaptation to varying driving conditions. The captured mechanical energy is converted into electrical energy through an energy conversion module and stored for subsequent use. This intelligent and adaptive regenerative suspension system contributes to improved fuel efficiency, reduced environmental impact, and heightened overall vehicle performance.

No. of Pages : 19 No. of Claims : 7