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Lecture in CSM:

DYNAMIC ABSORBERS FOR TRANSPORTATION AND AERONAUTICS APPLICATIONS: RECENT DEVELOPMENTS

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ABSTRACT

Vibrations mitigation is a primordial subject in different engineering fields. The mechanical handling of structures often depends on their vibration control. Several types of vibration absorbers have been conceived to answer this problematic, such as Tuned Mass Dampers, Nonlinear Energy Sinks, Hybrid Mass Dampers, even particle dampers.
The LaMCoS laboratory has been working on vibrational control for transportation and aerospace for over 30 years. Numerous innovative vibration absorbers have been developed and studied in recent years, combining active and passive, linear and nonlinear systems.
This presentation will focus on presenting and analyzing the main advancements of the laboratory in this field. Comparing these different systems can be challenging at times, as their performance depends on the specific problem and environment. We will strive to objectively note the advantages and disadvantages of each.

Keywords: Vibration absorber, Nonlinear system, active control.