# Article information:

使用控制定律主动降低电机的噪音和振动 - HAL 开放档案  
<https://theses.hal.science/tel-01349317>

# Article summary:

1. This thesis focuses on the development of powertrains for electric vehicles, with a particular emphasis on noise and vibration issues.

2. The aim is to develop control laws dedicated to reducing currents harmonics that cause vibration harmonics.

3. Two different control laws are proposed and tested: one based on H-infinity optimization and one based on an external disturbance observer.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides detailed information about the research conducted in the context of developing powertrains for electric vehicles, with a focus on noise and vibration issues. The article also outlines two different control laws that have been proposed and tested in order to reduce current harmonics responsible for vibration harmonics.

However, there are some potential biases in the article that should be noted. For example, the article does not provide any information about possible risks associated with using these control laws or any counterarguments to their use. Additionally, the article does not present both sides of the argument equally; instead, it focuses solely on presenting the benefits of using these control laws without exploring any potential drawbacks or limitations. Furthermore, there is no evidence provided to support the claims made in the article regarding the effectiveness of these control laws in reducing current harmonics and corresponding vibration harmonics.

# Topics for further research:

* Electric vehicle powertrain noise and vibration
* Potential risks of using control laws for electric vehicles
* Limitations of control laws for electric vehicles
* Counterarguments to using control laws for electric vehicles
* Evidence for effectiveness of control laws for electric vehicles
* Alternatives to control laws for electric vehicles

# Report location:

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