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# Comparison between LQR and ANN Active Anti-Roll Control of a Single Unit Heavy Vehicle

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**Abstract :** In this paper, a learning algorithm using neuronal networks to improve the roll stability and prevent the rollover in a single unit heavy vehicle is proposed. First, LQR control to keep balanced normalized rollovers, between front and rear axles, below the unity, then a data collected from this controller is used as a training basis of a neuronal regulator. The ANN controller is thereafter applied for the nonlinear side force model, and gives satisfactory results than the LQR one.

**Keywords :** rollover, single unit heavy vehicle, neural networks, nonlinear side force
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