

Haptic Simulation of a Gear Selector Lever Using Artificial Potential Fields ^{*}

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Abstract: In this paper, we propose virtual artificial potential functions to generate the desired force profiles that mimic the behavior of either automatic or manual gearshift transmission systems. The functions contain parameters that have intuitive physical meaning and that can be easily adjusted to change the force sensations fed to the user. Experiments have been carried out in a two degrees-of-freedom haptic mechatronic lever.

Keywords: haptic device, gearshift lever, artificial potential functions.
