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# **<sup>1</sup> INVESTIGATION OF VIBRATORY LOADINGS OF MOTOR VEHICLE'S USER IN OPERATION CONDITIONS**

*Miroslav Demić, Jovanka Lukić, Živorad Milić*

**UDK: 629.18; 534.1; 614.872**

## **Summary**

Investigations of a human body behavior exposed to whole body vibration of vehicles are important in design phase of vehicles. Results make possible to model human vehicle oscillatory system and vehicle parameter optimization from ride comfort aspects. Experimental results of investigations of motor vehicles users vibratory loads (passengers and duty) depending on operational conditions (road surface, vehicle speed). Obtained results were base for further investigation of human body behavior exposed to whole body vibrations in laboratory conditions.

**Key words:** human, whole body vibration, vibratory loads, random vibration

# **ISTRAŽIVANJE OSCILATORNIH OPTEREĆENJA KORISNIKA MOTORNIH VOZILA U EKSPLOATACIONIM USLOVIMA**

**UDK: 629,18; 534,1;614,872**

## **Rezime**

Istraživanje ponašanja čovečijeg tela pod dejstvom vibracija u vozilu su od izuzetnog značaja za projektovanje motornih vozila. Ona omogućuju modeliranje oscilatornog sistema čovek-vozilo i optimizaciju parametara vozila sa aspekta oscilatorne udobnosti. U radu su prikazani rezultati eksperimentalnih istraživanja oscilatornih opterećenja korisnika pri korišćenju vozila (putnička, teretna) u zavisnosti od eksploatacionih uslova (vrsta puta, opterećenje vozila, brzina kretanja vozila). Dobijeni rezultati su bili osnova za istraživanje ponašanja čoveka pod dejstvom vibracija u laboratorijskim uslovima – na pulzatoru

**Ključne reči:** human, whole body vibration, vibratory loads, random vibration

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