



## An Experimental Study of Human Motion Affected by Visual Information under Acceleration

Taro Miyao<sup>1</sup>, Shoichiro Takehara<sup>2</sup>

<sup>1</sup> Department of Science and Technology, Sophia University of Graduate, Tokyo, 7-1 Kioi-cho, Chiyoda-ku, 102-8554, Japan

<sup>2</sup> Department of Science and Technology, Sophia University, Tokyo, 7-1 Kioi-cho, Chiyoda-ku, 102-8554, Japan

\* Corresponding Author: E-mail [stakeha@sophia.ac.jp](mailto:stakeha@sophia.ac.jp)

**Abstract.** Recently, environmental consideration, energy-saving performance and low fuel consumption has become important, therefore personal mobility vehicles are actively being developed. Since these vehicles are smaller than previous vehicles, it is considered that human body motion has a big influence on running performance. Numerical simulation is used as a method to investigate the interaction between the vehicle and the body motion of occupant. It is necessary to investigate the accuracy of the model. This research is aimed to obtain knowledge about the body motion of the vehicle occupant. Subjects are seated on a simple experimental device simulated a vehicle. The experimental device is applied the acceleration, and the body motion of subjects was measured with motion capture system. From the measured data, human characteristics are examined by comparing the body motion of subjects for each condition.

**Keywords:** Biomechanics, Motion capture, Movement of human body