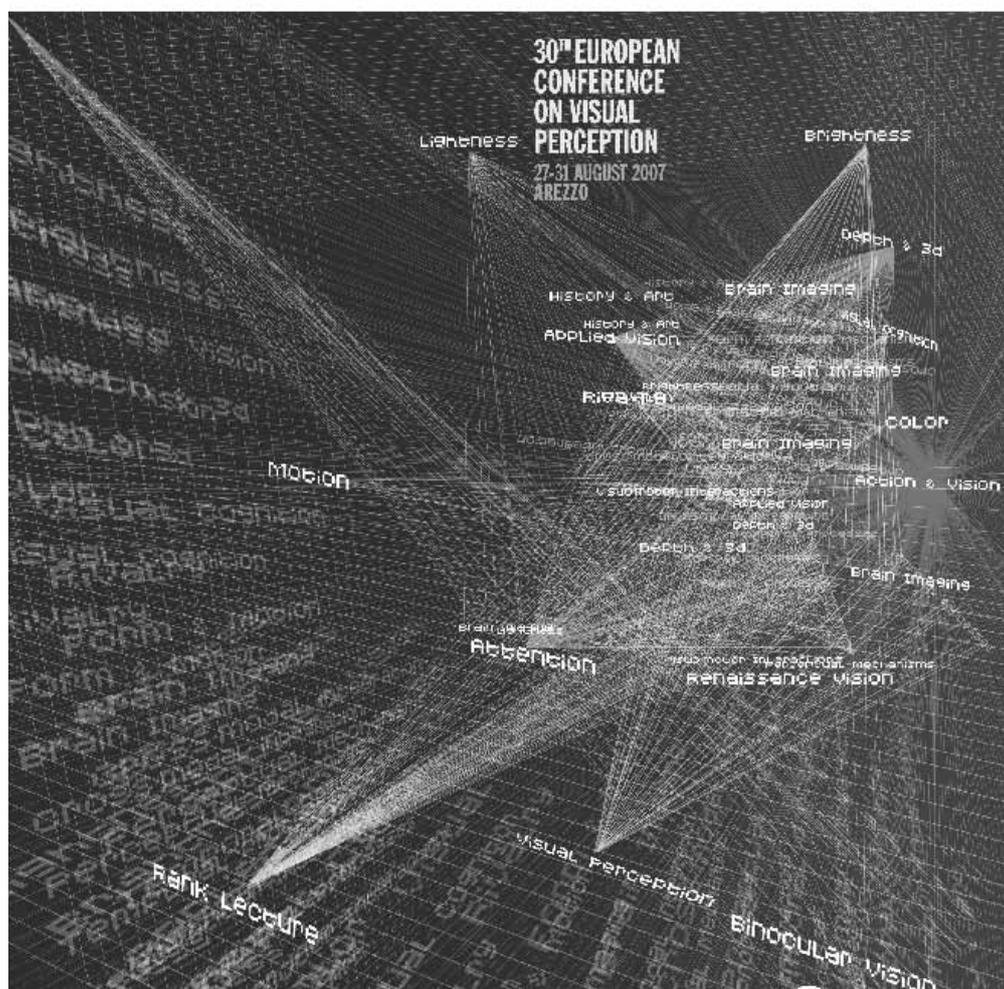


PERCEPTION

VOLUME 36 SUPPLEMENT



30TH ECVP
AREZZO 27-31 AUGUST 07

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Thirtieth European Conference on Visual Perception

Arezzo, Italy

27–31 August 2007

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◆ **Perception of biological motion during locomotion in a virtual environment**

S Mouta, J A Santos (Institute of Education and Psychology, University of Minho, Braga, Portugal; e-mail: smouta@iep.uminho.pt)

The classical studies on the perception of biological motion (BM) use impoverished stimuli without translation for the identification of moving patterns. A previous psychophysical study demonstrated that a velocity match between translational point-light walker (PLW) was poorest and greatly biased by background contrast when compared with rigid translational motion. The current work combines two methodologies to develop the study of BM perception. A computational method considers the quality and quantity of information presented by BM stimuli. The impoverishment of PLW leads to a decrease of the body rigidity increasing the patterns complexity. The relative motion between opposing vectors in complex patterns may contribute to an impaired speed perception. We manipulated the structure of BM stimuli differentiating complexity levels through an optic flow analysis. Moreover, the visual analysis of human motion in a classical setup differs substantially from analysis under more realistic conditions. An action-perception paradigm in a virtual environment allows us to compare perceptive judgments raised by different stimuli representations during locomotion and to gather visually guided motor responses. [Supported by Foundation for Science & Technology, Portugal, Grant SFRH/BD/18265/2004.]