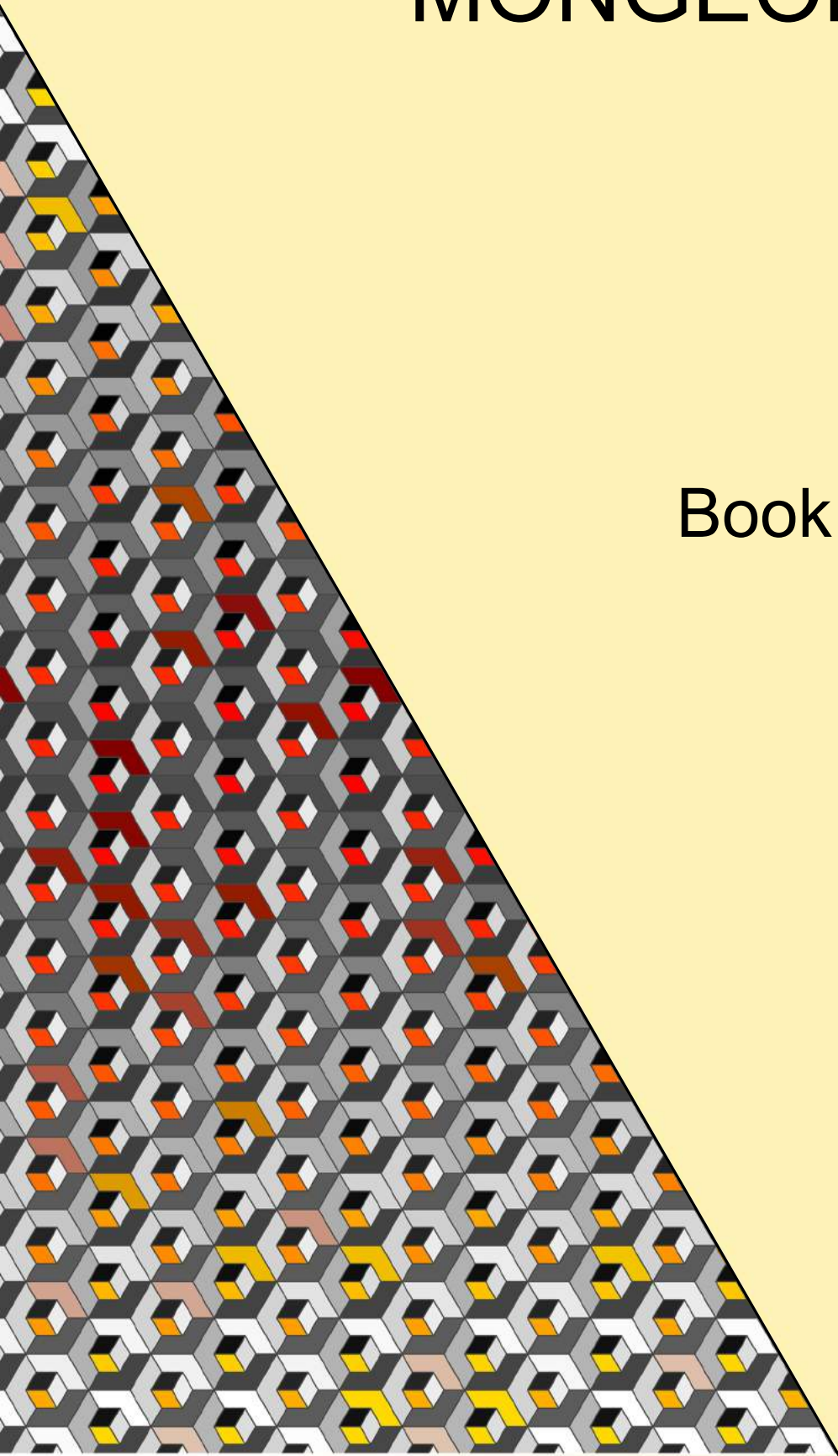


6th International Conference
on Geometry and Graphics

MONGEOMETRIJA 2018

Book of Abstracts



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BOOK OF ABSTRACTS

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PARAMETRIC OBJECT GENERATION DETERMINED BY ANAMORPHIC LIGHT SHADOW CONTOURS

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Abstract

Anamorphosis presents a distorted projection or perspective requiring the viewer to use special devices or occupy a specific vantage point to reconstitute the image. On the other hand, requiring a special device to reconstitute the image has been reinterpreted in shadow and light art. It refers to the process of creating incredible shadow silhouettes and artwork on flat surfaces, by using a single light source along with an assortment of perfectly placed objects. Specifically, light source requires a specific position in order to create a certain shadow. The goal of this research study, based on shadow and art technique, is to generate those objects creating a certain shadow shape. This paper explains the method for the object generation. In other words, the research presents parametric object generation determined by a certain contour.

Keywords: light, shadow, art technique, object generation, contour.

PERCEPTION OF THREE-DIMENSIONAL GEOMETRIC SHAPES AS VIRTUAL 3D ROAD MARKINGS

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Abstract

Excessive speed and poor driver perception are the causes of a large number of traffic accident. Analysis of the influence of geometry in driver behaviour has been widely performed by different researchers. One way to improve road safety is to provide adequate visibility in order to help drivers adopt adequate behaviours. When budget and financial situation do not allow the implementation of expensive traffic solutions, some of them can be replaced by innovative, but simple solutions. In this study, the experiment was performed to explore how driver perception and behaviour are influenced by two virtual 3D shapes projections - 3D alternative crosswalk pattern and speed bumps consisted from triangular prisms. The results show statistically significant differences between willingness to reduce vehicle speed as a response to the road marking using the square (rectangular prism) as the basis compared to one that has been used triangle (triangular prism).

Keywords: Three-dimensional geometric shapes, Perception, 3D Road bumpers, 3D zebra crossing, Design.