

Planar anamorphosis; case study: fresco of St. Francis of Paola

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Abstract

The poster is about planar anamorphic projection (central projection of a plane in \mathbb{R}^3 to another plane), which was used in the 15th century art. We present historical background of anamorphosis and modern scientific attitude to it. In particular, we describe the 17th century method of constructing anamorphic projections by means of materializing fibers and compare it to the modern approach based on the principles of descriptive geometry. We present the deformation grid of the projection, which provides a simple method of anamorphic image construction. Geometric and mathematical description of the anamorphic mapping is exemplified by photographic documentation of the fresco of St. Francis of Paola and by its specially prepared 3D animation.

AMS Classification: Primary 51; Secondary 01.