

# The born of Perspective: when painting meets reality

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## **Abstract**

*Perspective projection is at the core of 3D computer vision. It sets a mathematical transformation for the pinhole camera model, which allows us to establish the geometric relation between points in the world and their projections onto the image. In this talk, perspective is addressed not from a mathematical point of view, but from a rather different angle, surely not as practical and useful as we (engineers and computer scientists) are always pursuing, but tremendously fascinating and interesting.*

*This talk will review the born of perspective in painting, given answers to questions such as: When does it first appear? Why does it happen after so many centuries of pictorial art? Who are the key figures pioneering such a radical change in painting?*

*This “drawing” technique, which emerged at the early renaissance (quattrocento) in Florence (Italy) and exploded in a short period of time, revolutionized the concept of painting by providing specific rules to create the illusion of reality (3D world) on a canvas (2D). Beside of such remarkable change, perspective in painting has led to other extraordinary achievements, like the introduction and use of the notion of infinite, or the design and construction of machines to draw, which eventually has ended up with machines to see, that is, cameras: the essential device for artificial vision.*