

## ***Moiré Fringes and the Conic Sections***

***M. R. Cullen***

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### ***Excerpt***

When two geometric patterns are superimposed, additional geometric patterns (known as *moiré patterns*) may become visible. In the “Op Art” posters of the 1960s two superimposed screens create additional images that appear to change rapidly with the slightest movement of the viewer. To create a moiré or “watered” silk, two layers of ribbed silk are steam pressed together and a third pattern emerges which resembles reflections on the surface of a pool of water. The scientific applications of the mathematical theory of overlapping geometric patterns range from wave interference phenomena in physics to the detection of stress patterns in metals and of aberrations in lenses. Two objects can be positioned precisely by arranging for moiré patterns to appear with any small displacement in alignment. Particular examples will be given later in the paper.