

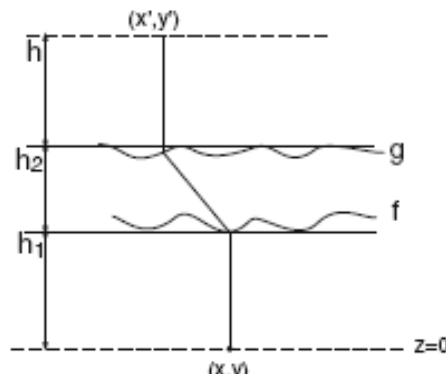


SEMINARIO DE IMÁGENES Y VISIÓN
INSTITUTO DE OPTICA (CSIC)



The Weighted Fermat Principle

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ABSTRACT

The Fermat least time principle states that light travels between two points in an optical medium along a path that minimizes (or, more precisely, extremizes) the travel time. This principle is one of the pillars of optics, and was the foundation on which Hamilton developed the modern theory of geometrical optics. In this talk I shall point out a serious drawback of the Fermat principle. To cure this difficulty I shall present a new principle that extends the Fermat principle in a natural way. I shall then use the new principle to solve practical problems ranging from lensmeters and aberrometers all the way to illumination design and beam shaping lenses.

Lunes, 31 Agosto 2009
12:30 horas
Sala de Juntas (CSIC)
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