



KOÇ UNIVERSITY

Science – Math Seminar

Speaker: M. Naci İnci
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Date: Thursday, Feb. 24, 2005

Time: 16:45 (Tea and cookies will be served at 16:30)

Place: Science Building, Room Z42

Title: Fourier Transform Profilometry with multi-core optical fibre

Abstract:

The use of a four-core optical fibre for measurements of three dimensional rigid-body shapes is described. A fringe pattern, which is generated by interference of four wavefronts emitted from the four-core optical fibre, is projected on an object's surface. The deformed fringe pattern containing information of the object's surface topography is captured by a digital CCD camera and is analysed using a two-dimensional Fourier transform profilometry. It is demonstrated for the first time that the use of such a four-core optical fibre increases the compactness and the stability of the fringe projection system.

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