

Structural diagnosis of El Greco paintings by means of modern laser technology.

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The structural condition of two El Greco paintings was assessed by optical holographic interferometry and digital speckle pattern interferometry based on modern laser technology. These techniques are non destructive and non contact capable of providing whole field maps of defects and structural discontinuities, which causes differential displacement which alters the optical phase of the reflecting laser light that illuminates the surface of the painting. The diagnostic methodology developed may be repeated later times allowing comparative studies to be take place. Results will be presented from structured diagnostic studies of two paintings of El Greco, “The Adoration of Magi” and “The Baptism”.

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Detachments

Cracks

Inhomogeneities

Stress concentration

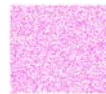
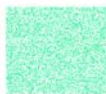


Fig 1 Defect Map as resulted from the assessment of fringe patterns due to the influence of subsurface defects.

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