



## COMBINING 2D AND 3D FACE IMAGES FOR RELIABLE IDENTITY VERIFICATION (ThuAmOR11)

★ Author(s) :

Sotiris Malassiotis

(Informatics and Telematics Institute, Greece)

Michael G. Strintzis

(Aristotle University of Thessaloniki, Greece)

★ Abstract :

The paper describes a complete face authentication system using a combination of color and depth images. Depth information acquired by a novel 3D and color sensor is used for robust face detection, localization and 3D pose estimation. To cope with illumination and pose variations 3D information is used for the normalization of the input images. Illumination compensation exploits depth data to recover the illumination of the scene and relight the image under frontal lighting. When normalized images, depicting upright orientation and frontal lighting, are used for authentication significantly low error rates are achieved, as demonstrated on a face database with more than 3000 images.

[Menu](#)