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ROBUST AND REAL−TIME 3D−FACE MODEL EXTRACTION (WedAmPO5)

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Abstract :

This article deals with 3D−face model and 3D−pose extraction from a small set of couples of 2D−3D corresponding−points. Major drawbacks of current 3D model extraction solutions are either the computationally complexity or the over−simplified modeling. As it happens, applications like face tracking or augmented reality need a rapid, robust and descriptive−enough solution. The solution we propose is based on a two step approach in which an approximation of a 3D−face model and a 3D pose is computed and then refined in order to extract more precise parameters. The contribution of this paper is to describe how to efficiently (rapidly and robustly) solve the problem of 3D−face model and 3D pose extraction. The results obtained show rapid and robust performances which could be exploited in a more global real−time face tracking application.

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