



FACIAL ANIMATION ANALYSIS

A Thesis Submitted to Computer Science Department, Faculty of
Computer and Information Sciences, Ain Shams University, Cairo,
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CERTIFICATION

This is to certify that the thesis titled by “**Facial Animation Analysis**” and submitted by the student Rahma Mohsen Ragab, as a partial fulfillment of the Master Degree requirements in Computer Science, Faculty of Computer and Information Sciences, Ain Shams University, has not been previously submitted to other universities or research institutes for any other degree, and that any scientific material used from other resources has been cited, referenced and acknowledged in the thesis.

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LIST OF PUBLICATIONS

1. Rahma M. Tolba, Taha Al-Arif, El-Sayed M. El Horbaty, “Realistic Facial Animation Review: Based on Facial Action Coding System”, ECSJ (Egyptian Computer Science Journal), Vol. 42, No. 1, January 2018.
2. Rahma M. Tolba, Taha El-Arif, and El-Sayed M. El Horbaty, “Facial Action Coding System for the Tongue”, NAUN Journal: International Journal of Computers, ISSN: 1998-4308, Vol. 12, pp. 9-14, March 2018.

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LIST OF ABBREVIATIONS

AD: Action Descriptor

AU: Action Unit

AVO: Audiovisual Objects

CG: Computer Graphic

DV: Desktop Virtualization

EMA: ElectroMagnetic Articulometer

EMFACS: Emotion Facial Action Coding System

EPG: ElectroPalatoGraphy

FA: Facial Animation

FACS: Facial Action Coding System

FAP: Facial Animation Parameter

FAPU: Face Animation Parameter Units

FDP: Facial Definition Parameter

FE: Finite Element

FP: Feature Points

GSR: Galvanic Skin Response

MCM: Multimodal Caricatural Mirror

MIT: Massachusetts Institute of Technology

ML: Mimic Language

MoCap: Motion Capture

MPEG-4: Moving Pictures Experts Group-4

MRI: Magnetic Resonance Imaging

PCA: Principal Components Analysis

PDFA: Performance Driven Facial Animation

PSD: Pose Space Deformation

US: UltraSonography

VFG: VideoFluoroGraphy

VFX: Visual Effects

XRMB: X-RAY Microbeam