a new standard for
facial rigging ™

Expressing and Animating: Making Realistic Facial Animations Easy

IBM®

Premio
Científico
2010

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IPM· September 2011

instituto de
telecomunicações

U.PORTO

FC FACULDADE DE CIÊNCIAS
UNIVERSIDADE DO PORTO

my best science
and art project
– v.orvalho

FCUP

1994 – 2004: IT companies (IBM, Ericsson, Patagonik)

2007: PhD in Software Development (Computer Graphics)
        Universitat Politecnica de Catalunya (Barcelona, Spain)

2005: founder of Face in Motion [htpp://www.faceinmotion.com]

2008-...: Assistant Professor of the Computer Science dept.
        Faculty of Science of the University of Porto (Portugal)

computer graphics & HCI

Entertainment & rehabilitation

Recommended 12 Camera Setup

OptiTrack

OptiTrack
by NaturalPoint®
Motion Capture Software
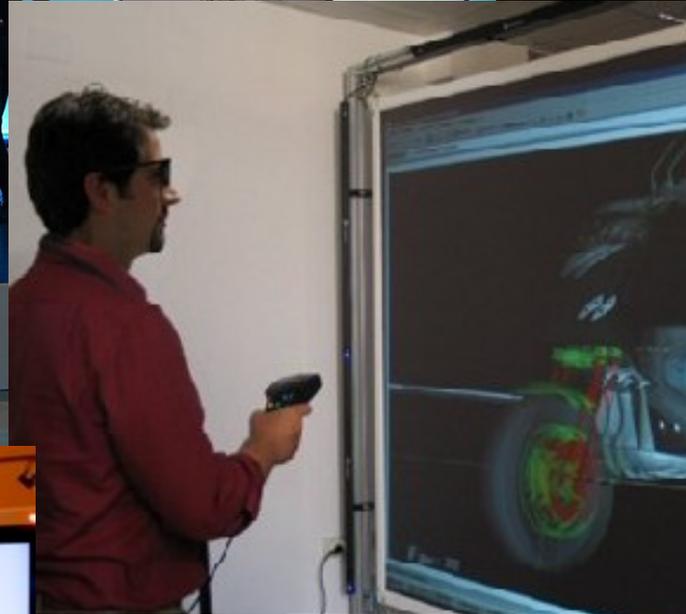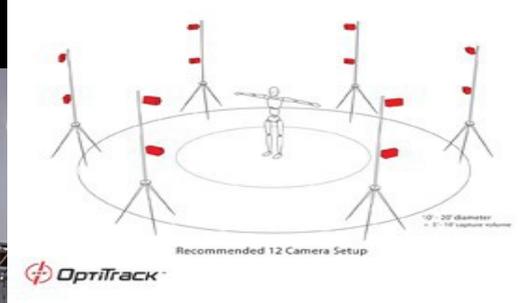
projects & resources

VERE: Virtual Embodiment & Robotic Re-embodiment (CO-PI)
Total Funding: 11.000.000 EUR, PIC Funding: <u>580.000 EUR</u>

GOLEM: Realistic Virtual Humans (CO-PI)
Total Funding: 650.752 EUR, PIC Funding: <u>213.484 EUR</u>

LIFEisGAME: LearnIng of Facial Emotions usIng Serious GAMEs (PI)
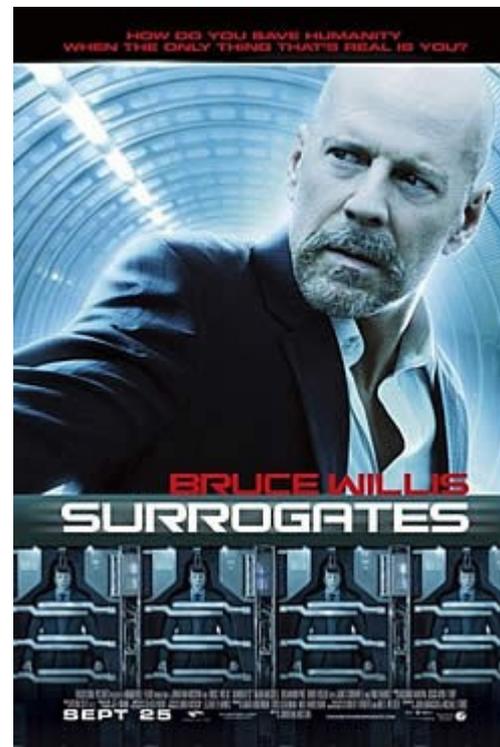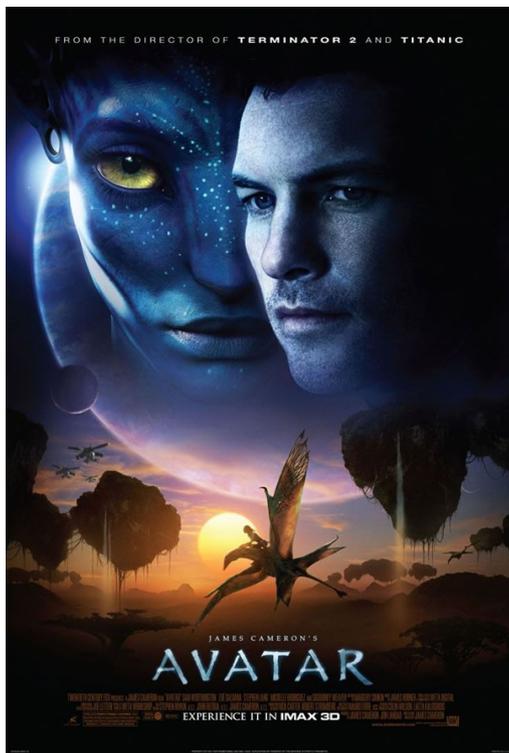Total Funding: 230.000 EUR, PIC Funding: <u>200.000 EUR</u>

Equipment: <u>250.000 EUR</u>
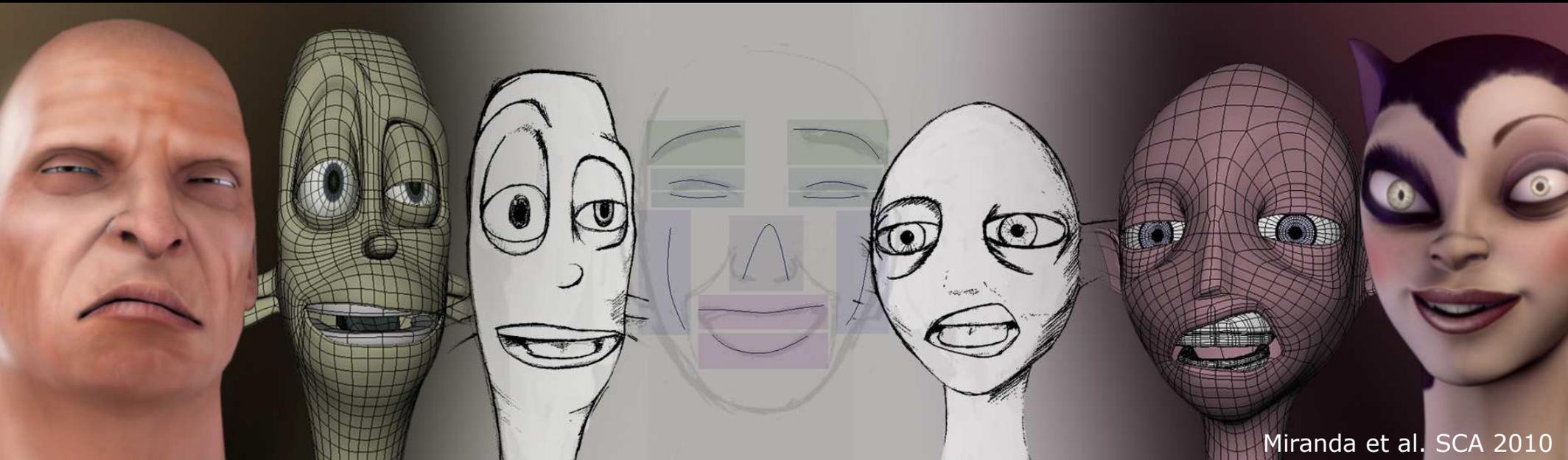
Total Funding (aprox): **<u>1.100.000 EUR</u>**

VERE
Virtual Embodiment and Robotic Re-Embodiment

dissolve the **boundary** between the **human body** and surrogate representations in immersive **virtual reality** and **physical reality**.

LIFEisGAME
LearnIng of Facial Emotions usIng Serious GAMEs

Miranda et al. SCA 2010

shows how it is possible to apply a pioneer **serious game** approach to teach people with **Autism Spectrum Disorders** (ASD) to **recognize facial emotions**, using **real time synthesis** and automatic **facial expression analysis**

GOLEM
Realistic Virtual Humans

Jimenez et al. SIGGRAPH 2010

radically improves the **visual appearance** and behaviour of virtual characters, while **streamlining** the **production pipeline** and keeping them customizable and affordable

technology:

VERE	GOLEM	LIFEisGAME

Markerless Motion Capture (HMD, Low Cost)

Dynamic Skin Shading

Auto-rigging

Sketching

Interactive Device

Muscle System

Real-time Animation Framework