

a new standard for  
facial rigging™

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# Expressing and Animating: Making Realistic Facial Animations Easy

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Premio  
Científico  
2010

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my best science  
and art project  
- v.orvalho

FCUP

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

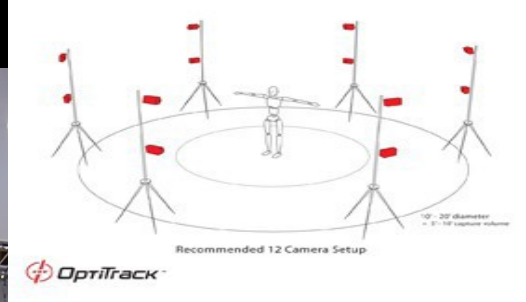
2007: PhD in Software Development (Computer Graphics)  
Universitat Politecnica de Catalunya (Barcelona, Spain)

2005: founder of Face in Motion [<http://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**



# projects & resources

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

**GOLEM:** Realistic Virtual Humans (CO-PI)  
Total Funding: 650.752 EUR, PIC Funding: 213.484 EUR

**LIFEisGAME:** LearnIng of Facial Emotions usIng Serious GAMEs (PI)  
Total Funding: 230.000 EUR, PIC Funding: 200.000 EUR

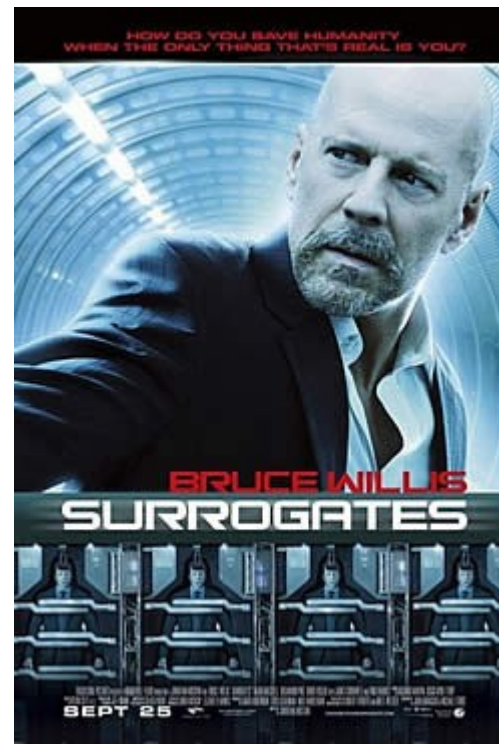
**Equipment:** 250.000 EUR

**Total Funding (aprox):** 1.100.000 EUR



# VERE

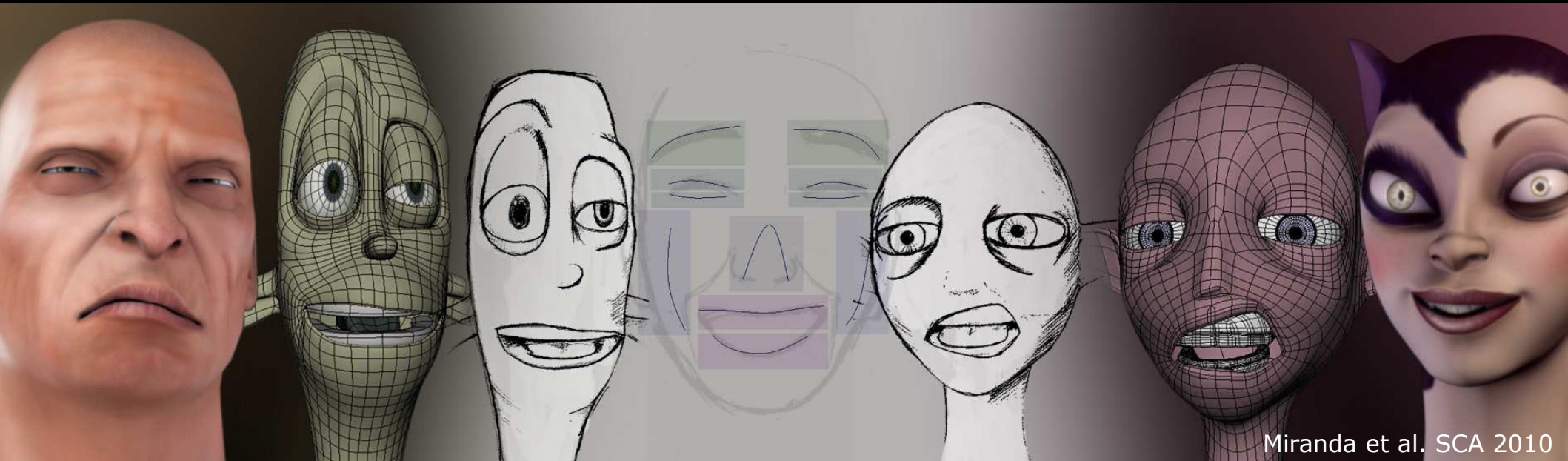
## Virtual Embodiment and Robotic Re-Embodiment



**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