



# Graphics and Imaging Lab

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Universidad de Zaragoza, Spain

**Eurographics 2013**

May 6-10, Girona (Spain)



# Introduction



- Established in 2008
- Research fields
  - Computer graphics
  - Computational photography
  - Computational imaging
  - Applied perception

# Staff

- 2 Faculty members
- 1 Post-doctoral researcher
- 5 PhD Students
- 6 Master and undergraduate students

# Funding projects



Golem  
Realistic Virtual Humans

- **GOLEM:** Realistic Virtual Humans
  - Marie Curie Programme



VERVE

- **VERVE:** Vanquishing fear and apathy through E-inclusion: Personalized and populated Realistic Virtual Environments for clinical, home and mobile platforms
  - 7th Framework Programme



- **MIMESIS:** Low-Cost Techniques for Appearance Model Acquisition of Materials
  - Spanish Ministry of Science and Technology

# Collaborations



**Adobe**

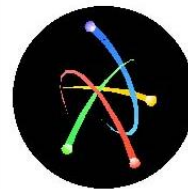


**nVIDIA®**



**Disney** Research, Zurich

**NOKIA**



Microsoft®  
**Research Asia**

# Collaborations



TRINITY COLLEGE DUBLIN  
COLÁISTE NA TRÍONÓIDE

THE UNIVERSITY OF DUBLIN



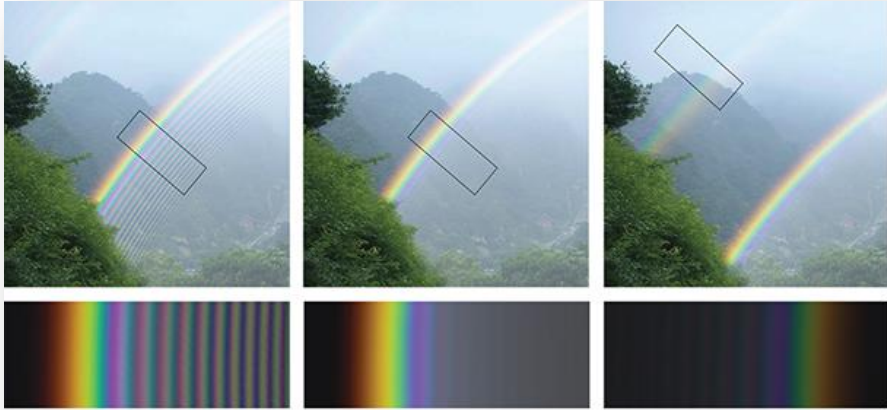
Cornell University



SAPIENZA  
UNIVERSITÀ DI ROMA

Yale

# Research: Computer graphics



## Rainbows simulation

Sadeghi et al., TOG 2012



## Antialiasing

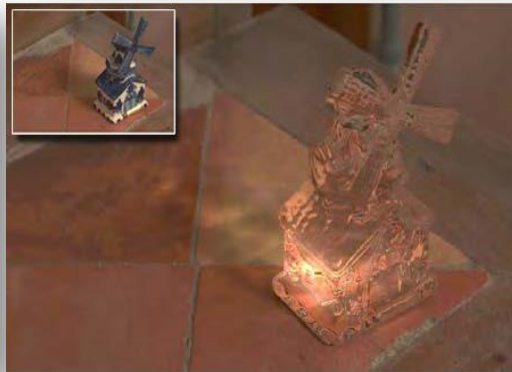
Jimenez et al., CGF (EG 2012)

Jimenez et al., SIGGRAPH 2011 Course

# Research: Computer graphics



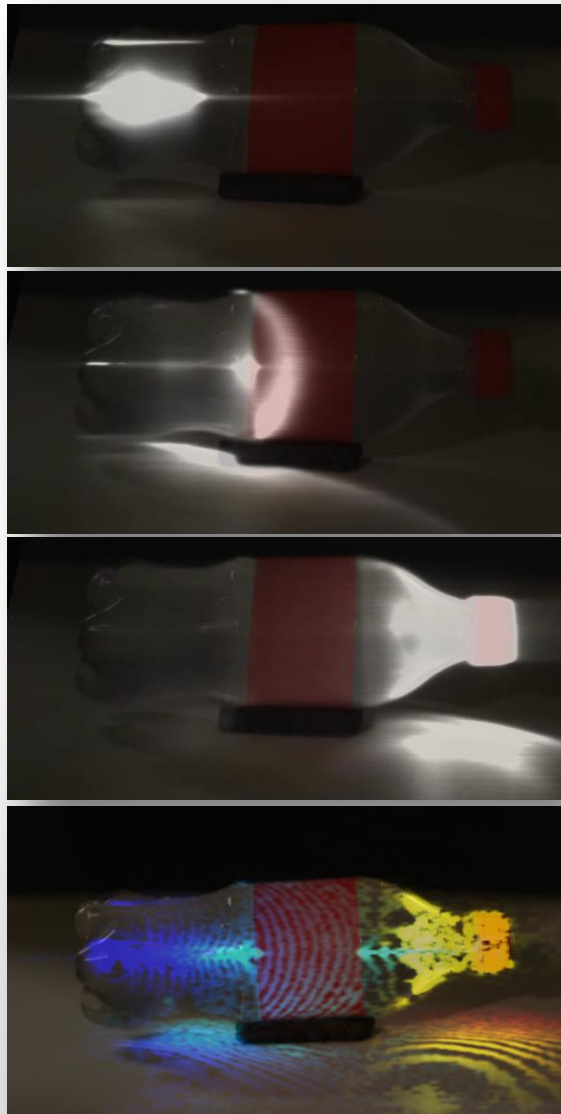
Real-time dynamic skin  
Jimenez et al., SIGGRAPH Asia 2010



Procedural caustics  
Gutierrez et al., SIGGRAPH Asia 2008



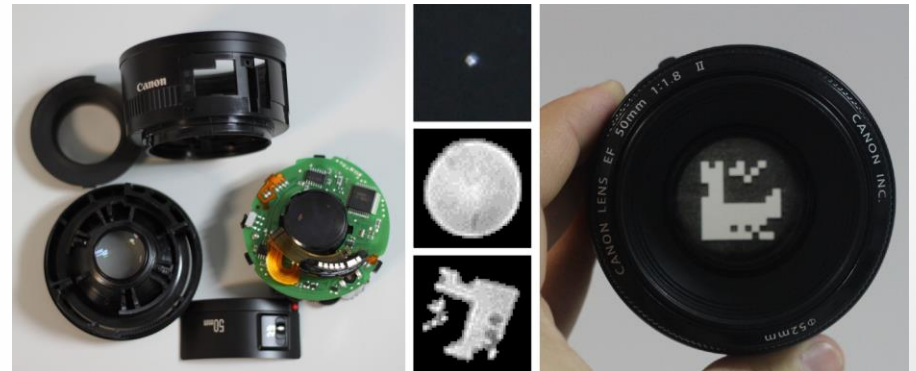
# Research: Computational photography



## Femto photography

Velten et al., SIGGRAPH 2013

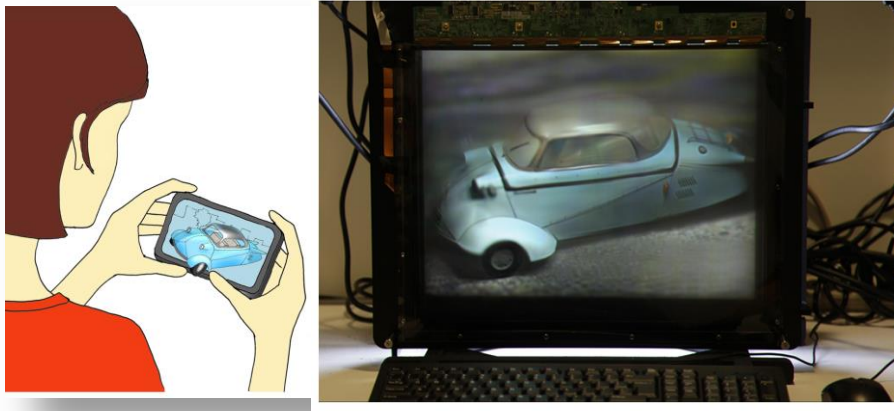
Velten et al., SIGGRAPH 2012 talk



## Coded apertures

Masia et al., CGF 2012

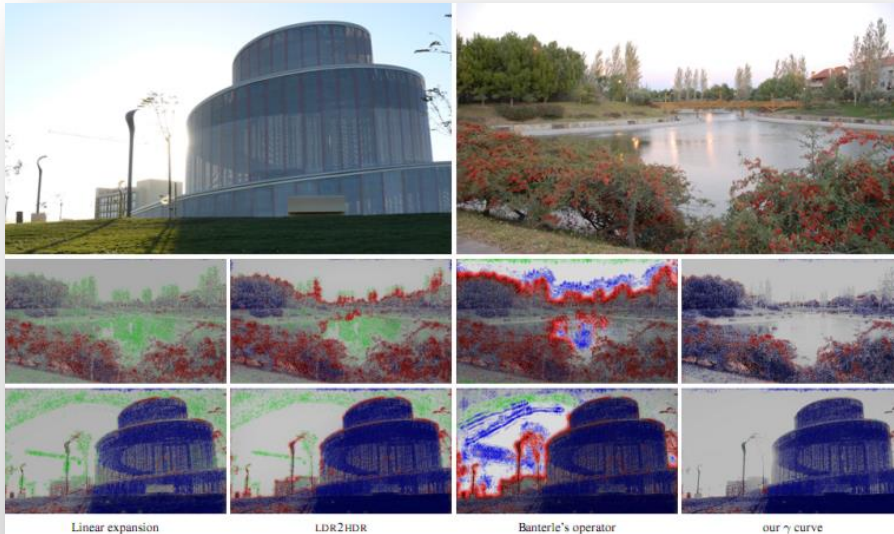
# Research: Computational imaging



## Computational displays

Wetzstein et al., SIGGRAPH 2012 Course

Masia et al., SIGGRAPH 2012 Poster



## Reverse tone mapping

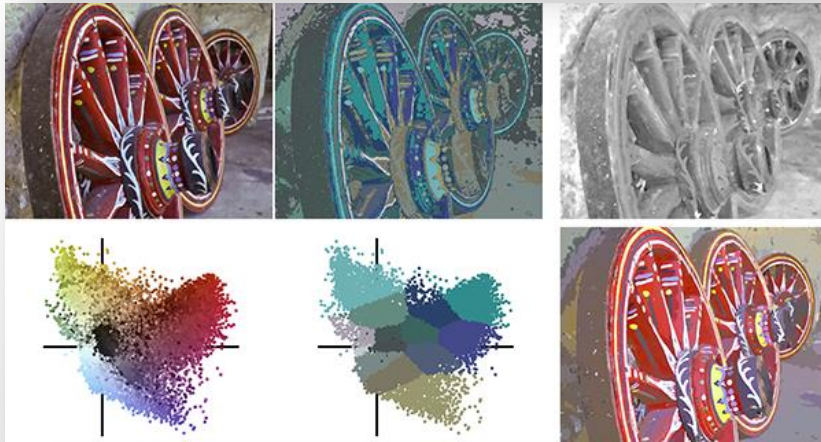
Masia et al., SIGGRAPH Asia 2009

# Research: Computational imaging



## Light detection and relighting

Lopez-Moreno et al., C&G 2011



## Intrinsic images

Garces et al., CGF (EGSR 2012)



## Material acquisition

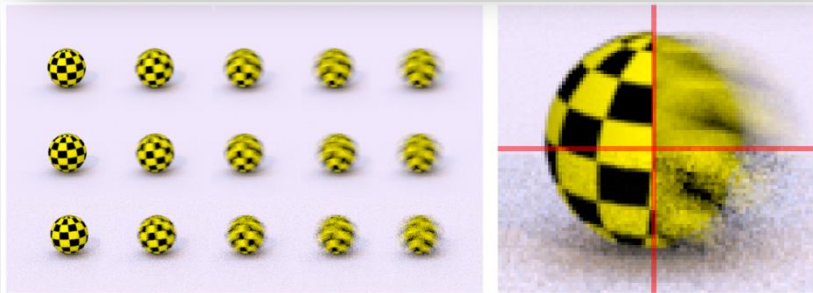
Munoz et al., CGF (EG 2011)

# Research: Applied perception



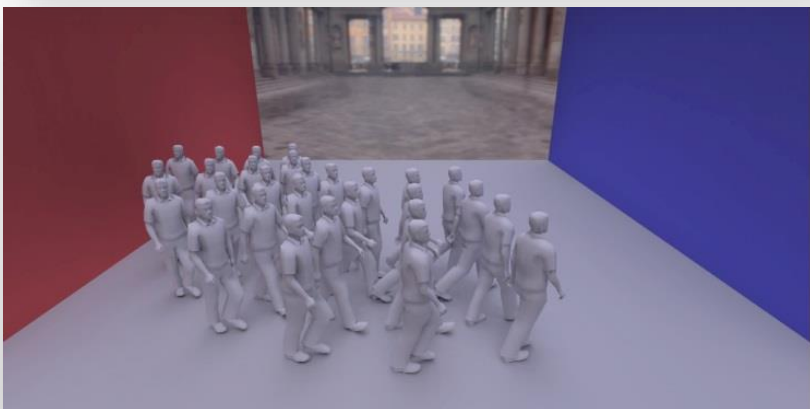
## Image retargeting

Rubinstein et al., SIGGRAPH Asia 2010



## Motion blur

Navarro et al., TAP 2011



## Lighting of crowds

Jarabo et al., CGF (EG 2012)

## Perception in graphics

McNamara et al., SIGGRAPH Asia 2011 Course