



HOOLAB

FABRICA
CIENTIA VIVA
AV. 19 DE MARÇO, 1000-0019 LISBOA

fis
UNIVERSIDADE DA BEIRA
IRIS



Holography for all

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Emanuel Santos¹
Carolina Magalhães¹



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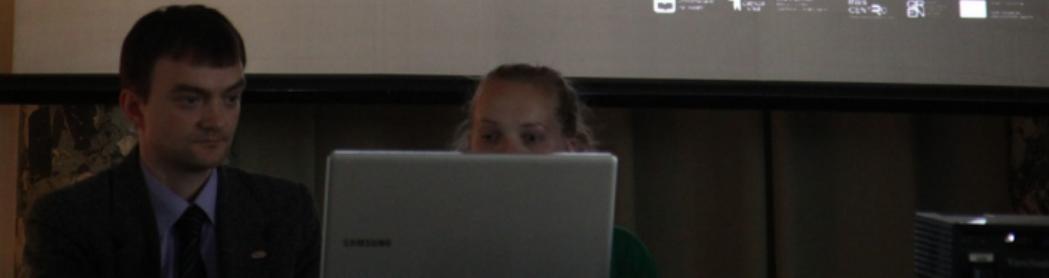
¹Physics Department, University of Aveiro, PORTUGAL

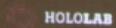
²Fábrica Ciência Viva Science Center of Aveiro, PORTUGAL
ppombo@ua.pt

"Building Bridges with Light"
In memoriam of Yu. N. Denisyuk

10th International Symposium on Display Holography
26 June - 3 July, 2015, St. Petersburg

INTERNATIONAL YEAR OF LIGHT 2015





FÁBRICA
CENTRO CIENTÍFICO
AVANÇO



UNIVERSIDADE DA SERRA
DE SANTOS



HoloNetwork

holography

starts 1997

programs

schools

science center

traveling exhibitions - 2

network

30

7

- 2

physics

art

biology

math

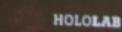
chemistry

students & teachers



shopping centers





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AVILO

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UNIVERSIDADE DE SANTA MARIA



HoloNetwork of Schools and Science Centres



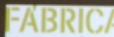
universidade de aveiro
theoria poiesis praxis

1997

- University of Aveiro



AGÊNCIA NACIONAL
PARA A CULTURA
CIENTÍFICA E TECNOLÓGICA



CENTRO CIÉNCIA VIVA
AVILO

2009

- Fábrica Ciência Viva Science Center

- 30 Schools in Portugal
- 7 Science Centers in Portugal
- 1 Science Center in Cape Verde



development of holographic systems

- holographic systems

advanced system

portable system

low cost system

holokit

chemicals

holographic film & plates



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AVANTAGE



INSTITUTO DE SALUD



holographic techniques

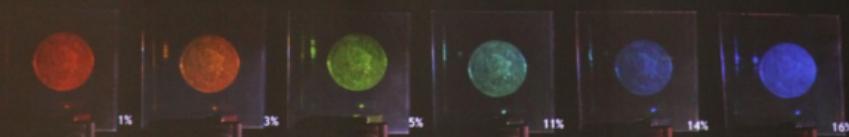
reflexion



transmission

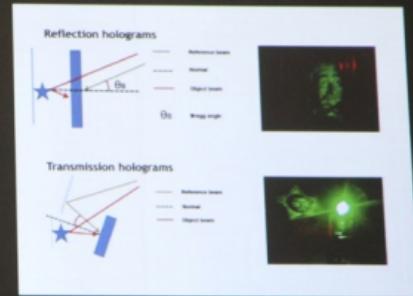
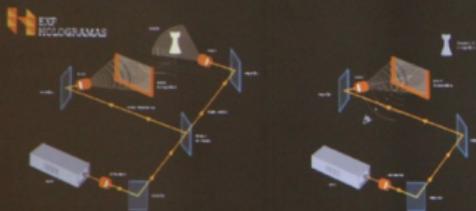


pseudocolor



CONCEPCIÓN
CENTRO CÍVICO
AVANTAGE
FIS CENTRO
GVT
CONCEPCIÓN

experimental holography (example)



Denisyuk holograms (90%)

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AVENIDA

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educational materials

- holography4all

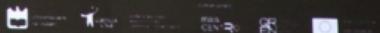


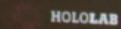
Kit holoschool

Holo CD

Holo videos

Holo handbook





Results

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UNIVERSITARIO



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- some numbers

3500 students involved

1500 students make holograms

4500 holograms

17 prizes



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Results

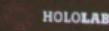
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ALMEIDA



traveling exhibition - Cape Verde Science Center

- holograms exhibition
- scratch holograms





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INTERNATIONAL
YEAR OF LIGHT
2015

Future work traveling exhibition

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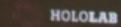
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- holograms vizualisation
12 reflexion holograms
- holograms prodution
I hololab



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MUSEU
CENTRO
BR



Future work traveling exhibition

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ESTADUAL



- interactive holographic exhibit

holography setup

holographic gratings

holographic applications

3 laser transmission holograms

holographic materials

