

VISGRAF Lab: *past - present - future*

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IMPA

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Overview

- Academic Program
 - Topics Courses
 - Visiting Researchers
- Research
 - Broad & Related Areas
- Collaborations & Partnerships
 - Reaching Out

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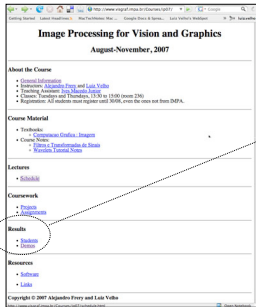
Academic Program

- August-December 2007
 - Image Processing
 - 3D Reconstruction
- Summer 2008
 - Illustrative Visualization
- March-June 2008
 - Machine Learning

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Image Processing - 2007

- Alejandro Frery (UFAL) / Luiz Velho
- *Emphasis on Stochastic Image Models*



Student Projects
• Seam Carving
• Fractal Mosaics

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3D Reconstruction - 2008

- Thomas Lewiner (PUC-Rio) / Luiz Velho
- *Research on 3D Photography*

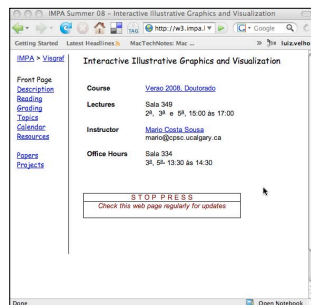


Projects
- techniques
- applications

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Illustrative Graphics - 2008

- Mario Costa Sousa (U. Calgary)
- *Research Collaboration - MOU*



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Machine Learning - 2008

- Paulo Cezar Carvalho
- *Continuing Topics Course*

► *Stay Tuned*

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Research

- NPR
- Geometry
- 3D Photography
- Faces
- Fluids
- Animation
- Computer Music

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Non-Photorealistic Rendering

Thesis Topics

- Emilio Vital Brazil (PhD)
 - Pencil Rendering
- Anna Regina Corbo (Ms)
 - Stippling
- Eric Jardim (Ms)
 - Line Drawings

More on that soon

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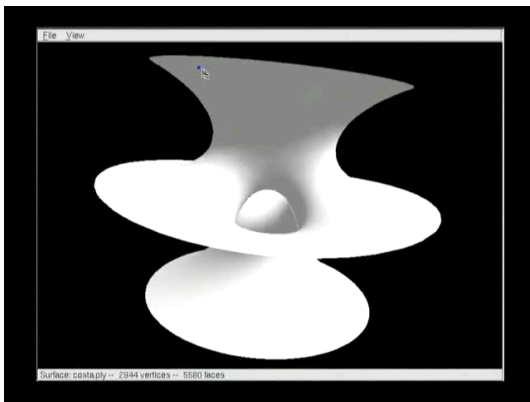
Geometry Processing

- Dimas Martinez (PhD thesis / Postdoc)
 - Geodesics on Discrete Surfaces
- Fernando de Goes (Ms research / Unicamp)
 - Dynamic Adapted Meshes
- Esdras Medeiros (PhD thesis)
 - Topological Multiresolution

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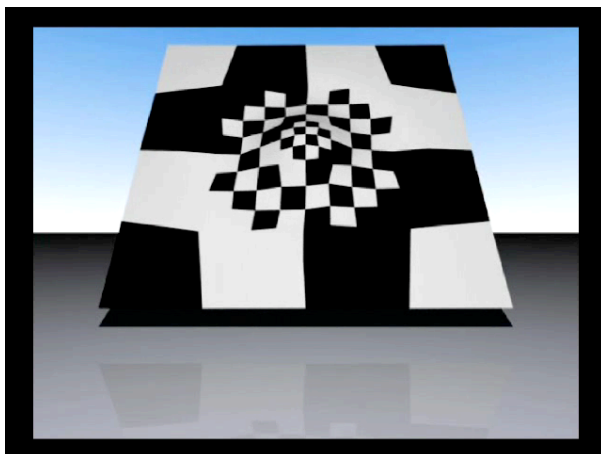
“Geodesic Bezier Curves”

- SIGGRAPH 2007 best paper award



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Dynamic Adapted Meshes



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3D Photography

Application Framework

- Thales Vieira (PUC-Rio)
 - Automatic Scan Registration
- Ilana Patterman / Ana Fucs
 - Claygirls
 - Gramophone Digital

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Automatic Registration



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Digital Gramophone



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Facial Animation

- Paula Lucena (PhD thesis / PUC-Rio)
 - Expressive Talking Heads
- Jesus Mena Chalco (PhD research / IME-USP)
 - Video Puppeteering

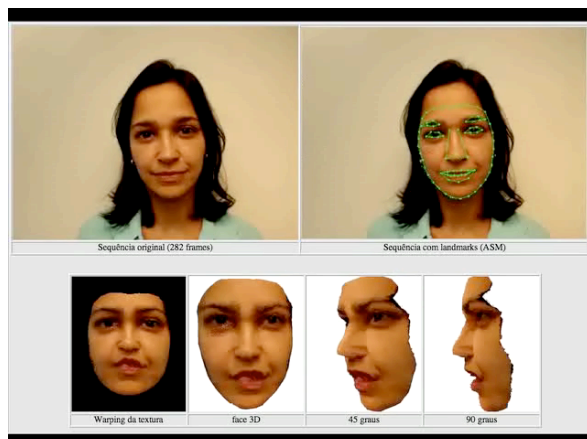
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Expressive Talking Heads



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Video Puppeteering



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Fluids

- Ives Macedo Jr. (Ms. thesis)
 - Lagrangean / Eulerian Methods
- Dalia Bonilla (PhD research)
 - Physics-Based Warping

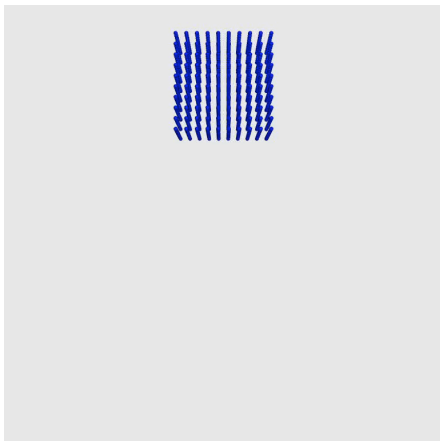
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Stable Fluids



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SPH Simulation



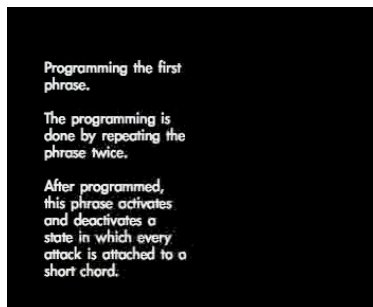
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Computer Music

- Sergio Krakowski (PhD research)
 - Real-Time Performance
- Marcelo Cicconet (PhD research)
 - TBA

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Pandeiro +



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Collaborations & Partnerships

- Visitors in 2008
 - Summer and beyond...
- Joint Projects
 - Video 4D / GIGA
 - Coreographisms
- Technology Transfer
 - Visorama / Digitok

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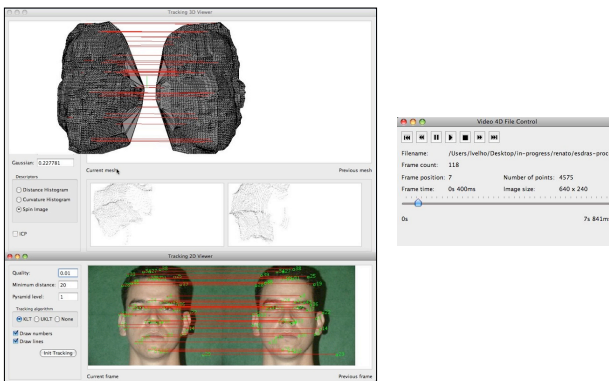
Visitors in 2008

- Summer Program
 - Mario Costa Sousa / Marcelo Siqueira / Gustavo Nonato / Jorge Stolfi
 - Perfilino Eugenio / Vinicius Mello
 - others...
- Short Visits during the Year
 - Jos Stam
 -

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Video 4D

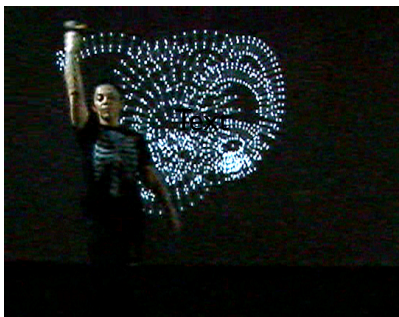
- Collaboration with UNICAMP and IME-USP



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Coreographisms

- “Unsquare Dance” with Analivia Cordeiro



Upcoming Seminar ...

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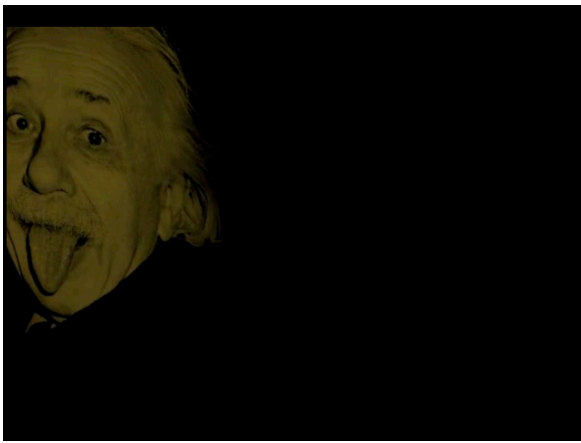
Visorama II

- Product: *new hardware / new software*



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Video Panoramas



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Questions?

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