DES 400 Creative Coding

- Daria Tsoupikova – School of Design
- Peter Hanula - Computer Science

Creative Coding

Electronic Visualization Laboratory (EVL)
Engineering Research Facility (ERF)
842 W Taylor St

3036 EVL 3rd floor lab
2036 CAVE2

Creative Coding

Course website, syllabus, schedule
http://www.evl.uic.edu/datsoupi/2018_des400/

2017 Fall website
https://www.evl.uic.edu/datsoupi/491_350/

2017 Spring website
http://www.evl.uic.edu/datsoupi/coding/

Creative Coding

Course Goals:

- To become familiar with contemporary tools in computational expression

- To survey topics in computer graphics, VR, visualization, new media design

- To work collaboratively to create meaningful creative coding projects at the intersections of culture and technology

Creative Coding

Class Structure

Wednesdays 1-6.40 pm (3036+CAVE2)

Mixed lecture and lab, with an in-class focus on introducing programming and software concepts:

- Informative and thorough, rather than comprehensive
- Programming tutorials, collaborative exercises; planning & developing projects

Creative Coding

Modules

1 – Virtual Reality and 3D environments with Unity – CAVE2
2 – Visualization with D3 - data visualization via web platform

Creative Coding

Class Structure

- Graduate students and undergraduate students
- Work on individual assignments and teams projects
- Collaboration between Computer Science and Design

Creative Coding

Project based

- projects will have both a *technical* component and a *conceptual* component.

- projects should be novel and clearly illustrate a technical and/or conceptual contribution.

- each final project needs to be documented with a website, video, and code.

Electronic Visualization Laboratory (EVL) – short history

- 1969 Dan Sandin is invited to UIC's Art Dept. to bring computers to the art curriculum
- 1973 Tom DeFanti comes to UIC with the GRASS system, EVL begins as a short order media house for education and research

Electronic Visualization Laboratory (EVL) – short history

40 years of Art/Science collaboration at UIC

Joint program: CS and Art & Design departments

First program in the US offering MFA that is a formal collaboration of art and computer science 1973-2014

EVL – The Collaboration

- Artists organize projects, help visualize data, create media
- Artists are supported and get the toys to do their own work: often inspired by science
- Scientists get to communicate effectively
- EVL makes them look good
- EVL delivers visualization technology and techniques to science

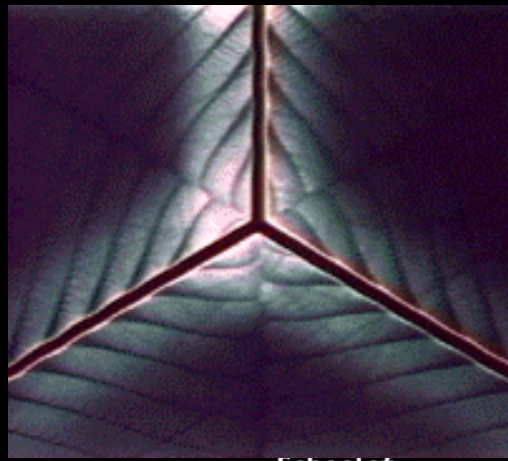
Electronic Visualization Laboratory (EVL)

- Advanced networking research
- Distributed computing/visualization
- Collaborative software
- Advancement of tools and techniques for collaborative work over high-speed, experimental networks
- Development of viable, scalable, deployable stereo displays
- Development of VR hardware, software, tools and techniques

Electronic Visualization Laboratory (EVL)

mid-70s - the Electronic Visualization Events
a series of live performances in which images were computer generated and color processed in real time with musical accompaniment

EVL helped to produce the CG special effects for the first Star Wars film

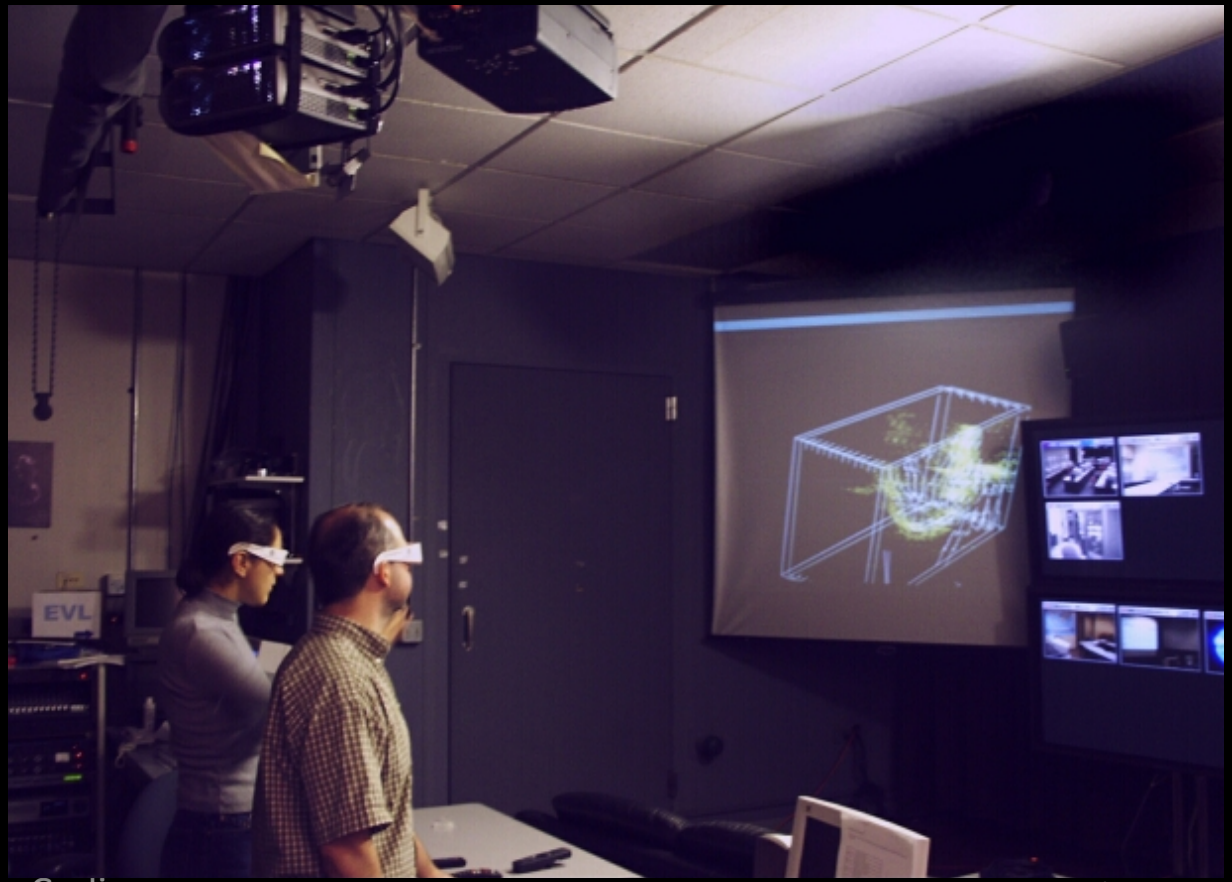


CAVE® 1992

ImmersaDesk® 1995

Paris 1998

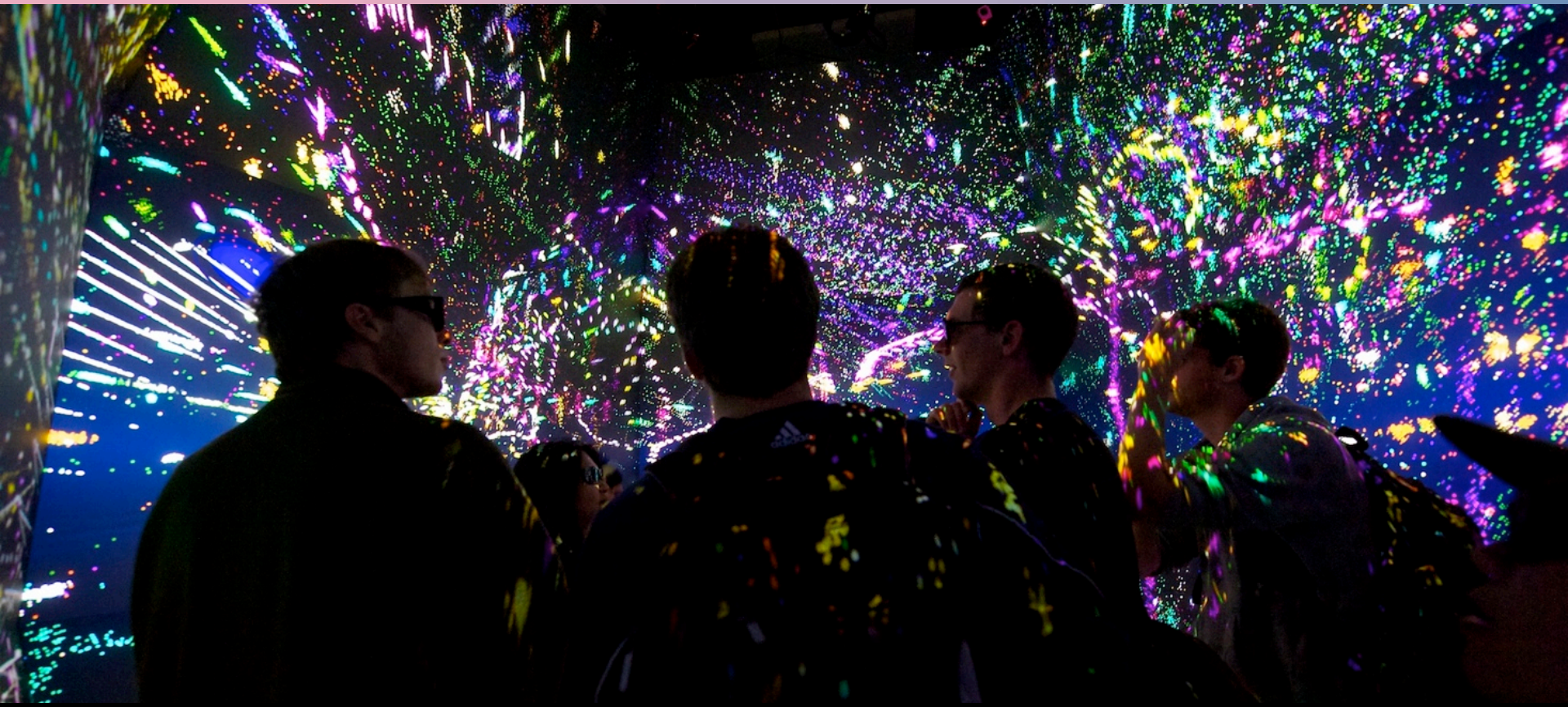
GeoWall -2000



Varrier

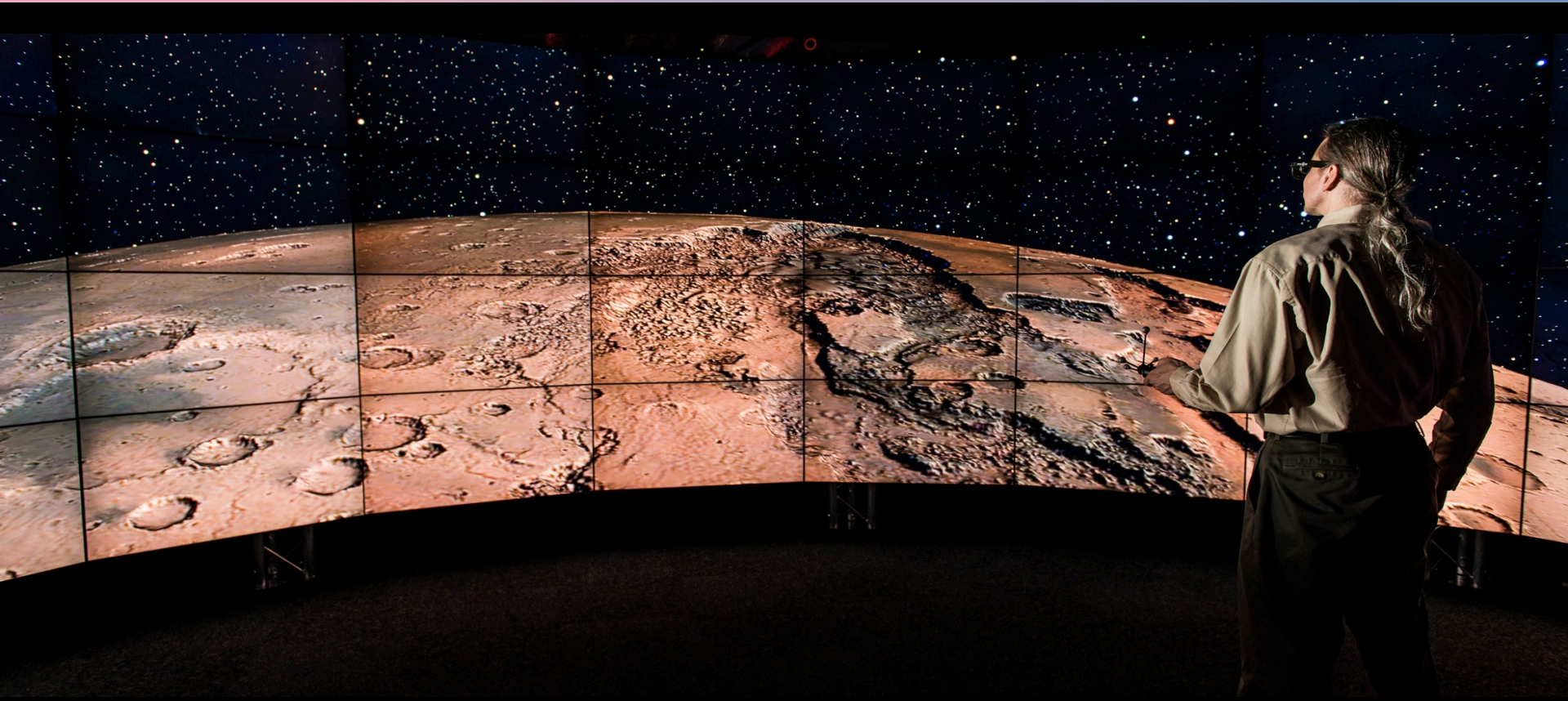
CAVE2 -2012

Particle Dreams in Spherical Harmonics



3D Brain MRI Data

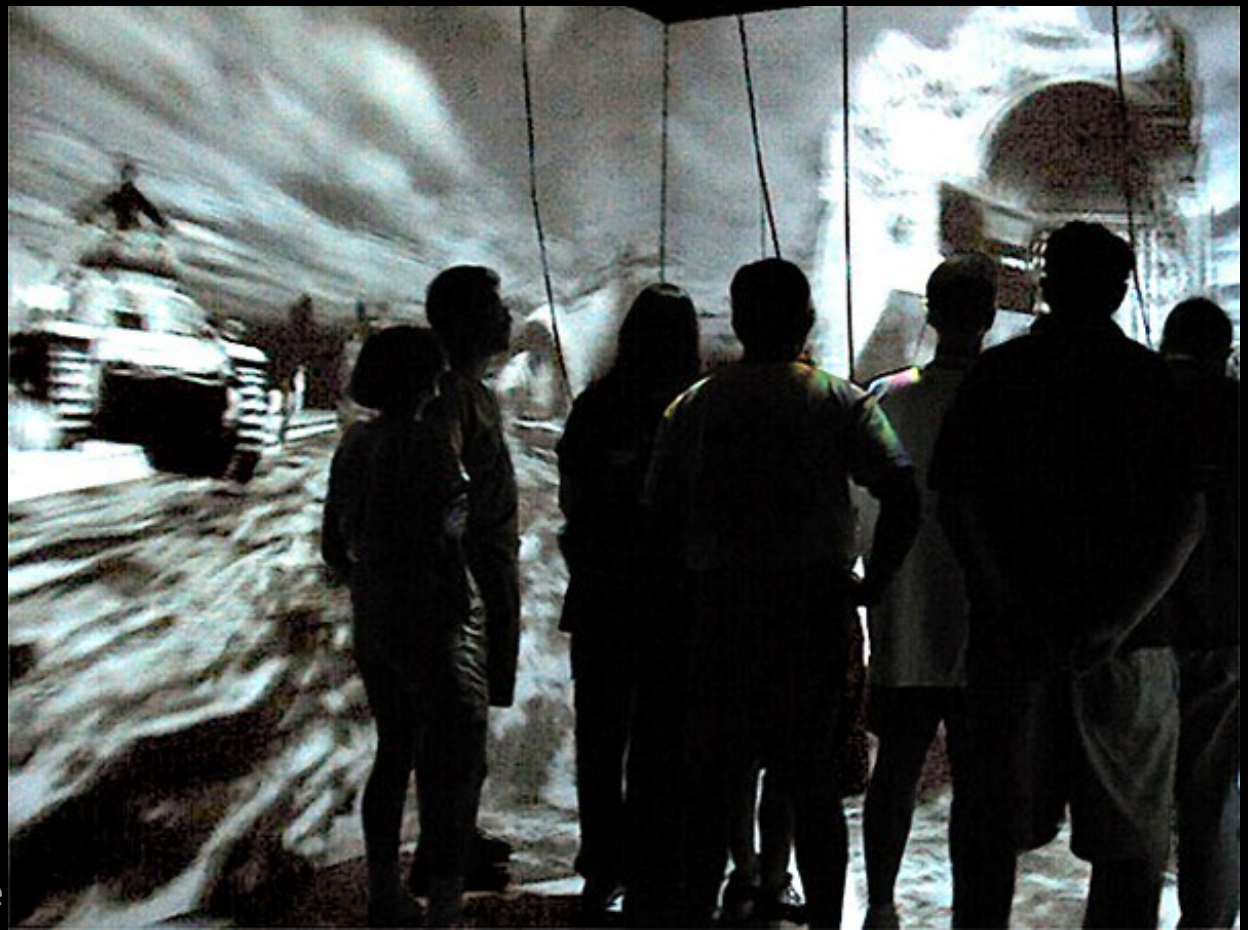
Mars Surface



Brief History of Virtual Reality – Art and Research

Virtual Reality Environments - Beyond Games

Maurice Benayoun
World Skin: A Photo Safari in the Land of War, 1997



Maurice Benayoun
World Skin: A Photo Safari in the Land of War, 1997

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World Skin: A Photo Safari in the Land of War, 1997

Jeffrey Shaw, The Legible City, 1988-91

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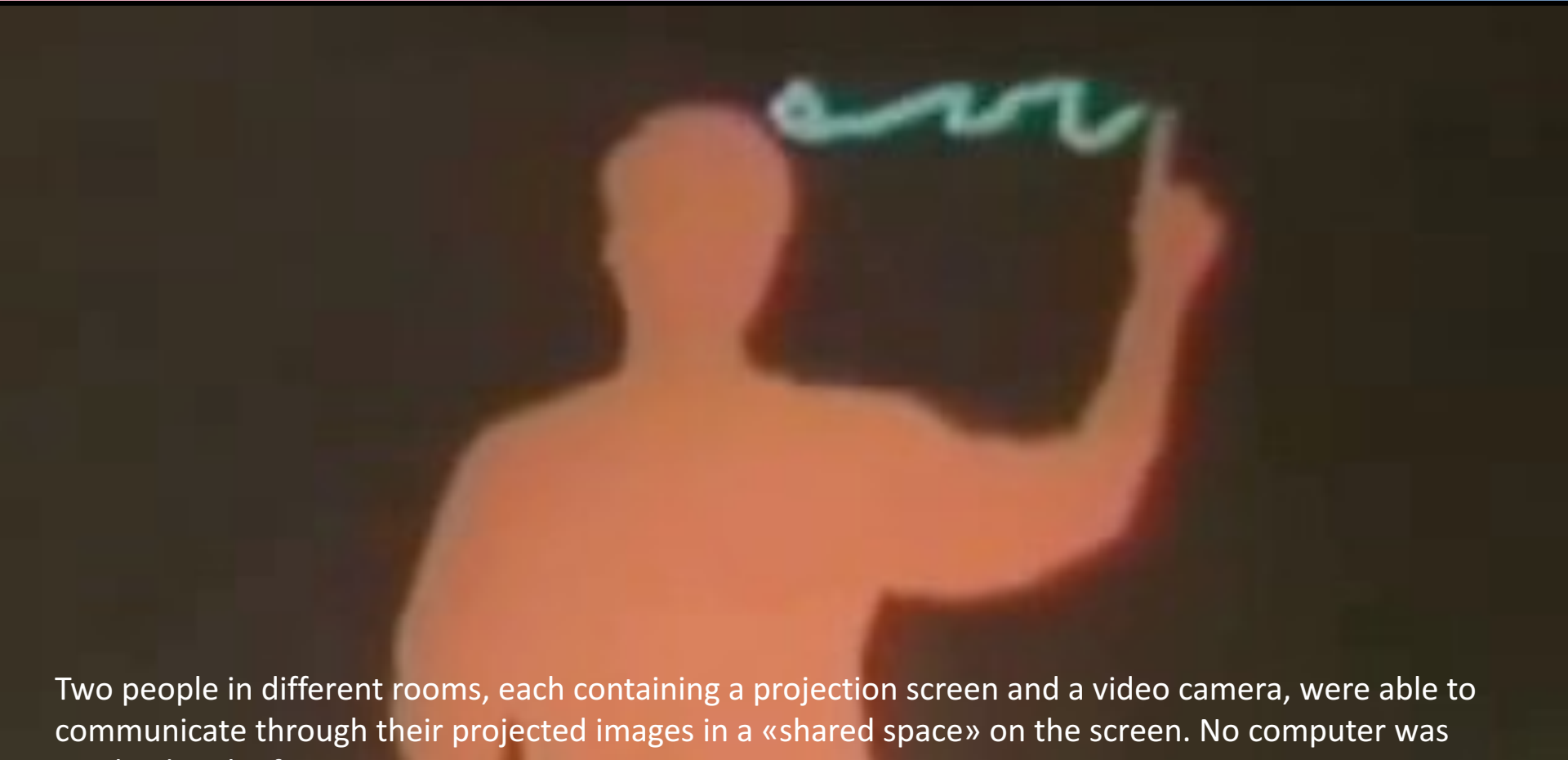
In the Amsterdam (1990) and Karlsruhe (1991) versions all the letters are scaled so that they have the same proportion and location as the actual buildings which they replace, resulting in a transformed but exact representation of the actual architectural appearance of these cities. The texts for these two cities are largely derived from archive documents that describe mundane historical events there.

Myron Krueger, Videoplace, 1972-85

Myron Krueger, Videoplace, 1972-85



Two people in different rooms, each containing a projection screen and a video camera, were able to communicate through their projected images in a «shared space» on the screen. No computer was

SnowWorld by Hunter Hoffman

Institute for Creative Technologies /Skip Rizzo- Medical VR

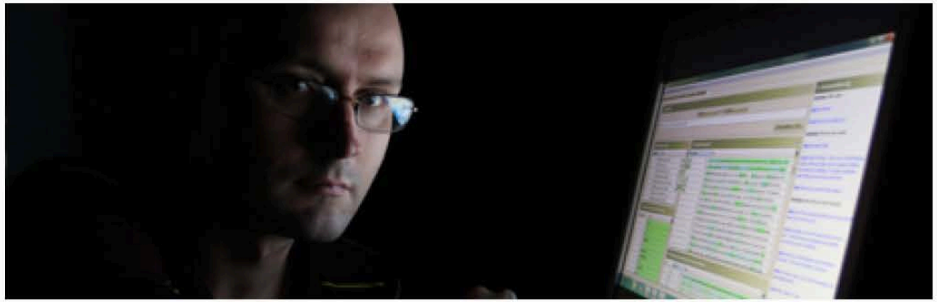
Creative Technologies

About | Research | Prototypes | Academics | People | Collaborators | News | Events | Search

Research

- Research Overview
- Labs + Groups
- Faculty + Research Interests
- Publications
- Editorships + Editorial Boards
- Board + Committee Memberships
- Project One-Sheets

Research Overview



ICT is a multidisciplinary research institute at the University of Southern California focused on exploring and expanding how people engage with computers, through virtual characters, video games, simulated scenarios and other forms of human-computer interaction.

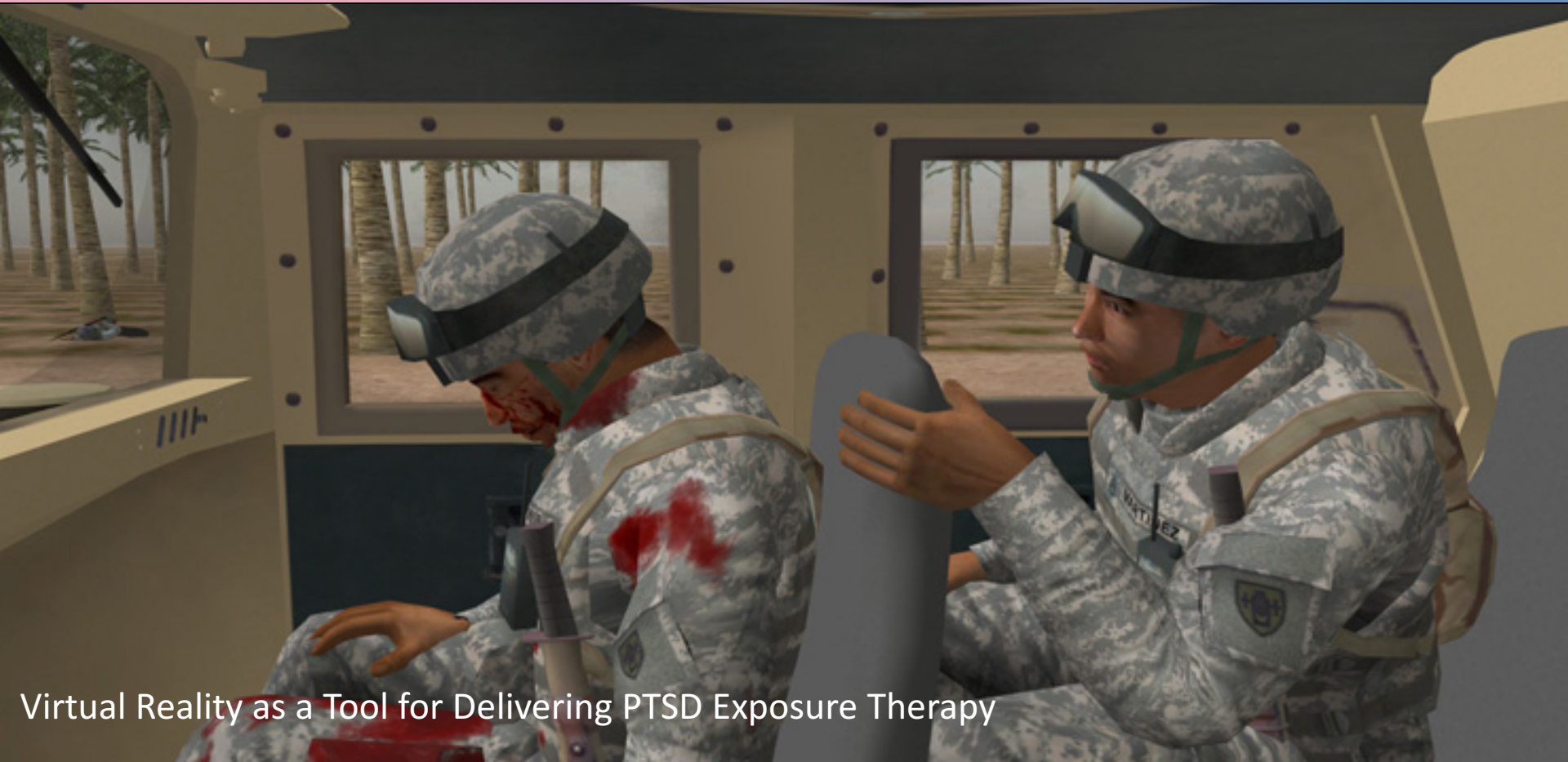
Leading researchers and faculty from computer science, psychology, interactive media

Featured Research

Graphics

The ICT Graphics Laboratory develops new techniques for creating and displaying photo-real computer graphics of people, objects and environments.

Institute for Creative Technologies /Skip Rizzo- Medical VR



SIGGRAPH2017 VR Theater

SIGGRAPH2017 VR Theater

AT THE of COMPUTER GRAPHICS & INTERACTIVE TECHNIQUES

VR THEATER SCHEDULE

Full Conference

SCREENING B
Sonaria
Dear Angelica
Arden's Wake
We Wait
Rainbow Crow

Sunday, 30 July
4 pm*

Monday, 31 July
2:30 pm
3:30 pm
4:30 pm

Tuesday, 1 August
2:30 pm
3:30 pm
4:30 pm

Wednesday, 2 August
2:30 pm
3:30 pm
4:30 pm

Thursday, 3 August
1:30 pm
2:30 pm

for Full Conference Platinum attendees only.

SIGGRAPH2017 VR Theater

SIGGRAPH2017 VR Theater

School of Design

SIGGRAPH2017 VR Village

https://www.youtube.com/watch?v=QKWgXHM6yMo

SIGGRAPH2017 VR Village

Flock
Become a bird and flock with your feathered friends in untethered VR while dining on colorful, procedurally generated insects.

David Lobser
New York University
Ken Perlin
New York University
Lily Fang
Object Normal
Christopher Romero
Manyplace

https://venturebeat.com/2017/07/22/siggraph-2017-will-showcase-the-latest-in-ar-and-vr/

SIGGRAPH2017 VR Village

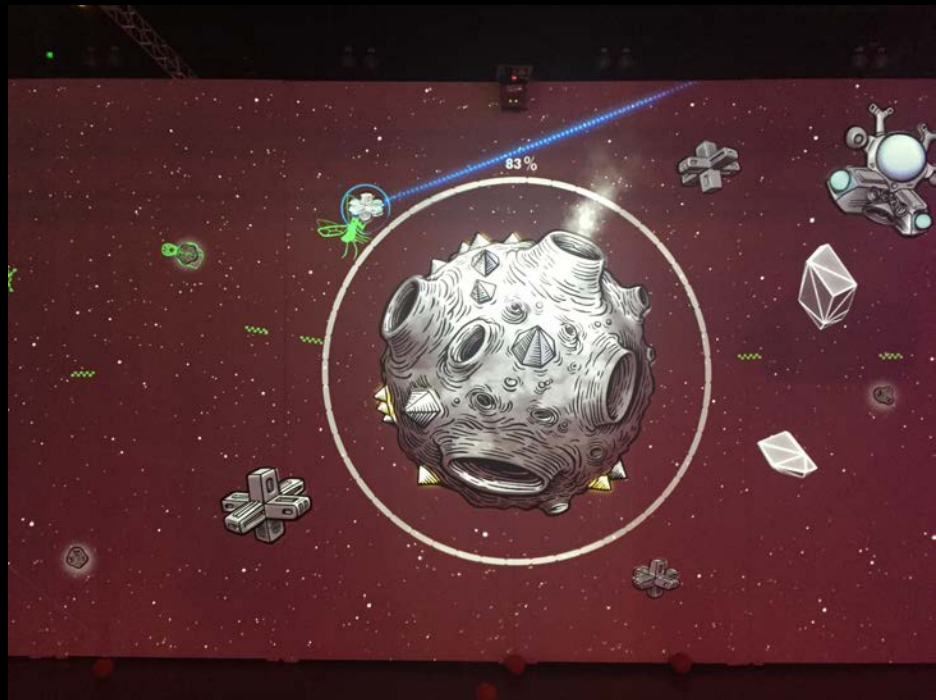
Blortasia
Blortasia combines art and flying in virtual reality to engage the imagination and inspire wonder through shape, color, motion, sound, and spatial presence.

Snow Mack
Shape Space VR
Kevin Mack
ShapeSpaceVR
Ray Mack
Shape Space VR
Jonathan Mack
Shape Space VR

https://www.youtube.com/watch?v=

SIGGRAPH2017 VR Village

Digital Playgroundz: Demonz I.
CURATED CONTENT
Digital playgroundz is an interactive and augmented-reality system that displays large-scale applications
Daniel Gregor
INITI.org
Ondřej Prucha
INITI.org
Jakub Roček
INITI.org
Josef Kortan
INITI.org



INITI

SIGGRAPH2017 VR Village

SIGGRAPH2017 VR Village

Kiss or Kill
Kiss or Kill is the very first room-scale VR game show. Players compete in a one-versus-one trivia showdown filled with big choices and crazy shenanigans. Answer fast-paced trivia but watch out for your opponent who can do whatever it takes to win.

Nicholas Robinson
RLTY CHK

Azin Mehrnoosh
RLTY CHK

Andy Thai
RLTY CHK