

CS491 / DES350 Creative Coding

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

CS491 / DES350 Creative Coding

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

2068 CyberCommons lab
2036 CAVE2

CS491 / DES350 Creative Coding

Course syllabus

http://www.evl.uic.edu/datsoupi/491_350/

website

http://www.evl.uic.edu/datsoupi/491_350/

2017 Spring website

<http://www.evl.uic.edu/datsoupi/coding/>

CS491 / DES350 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

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Class Structure

Mondays 9-11.40am - Lecture / Collaborative lab (CS+Design)

Wednesdays 9-11.40am - Design studio

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

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Modules

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

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Class Structure

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

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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



Computer Science

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)

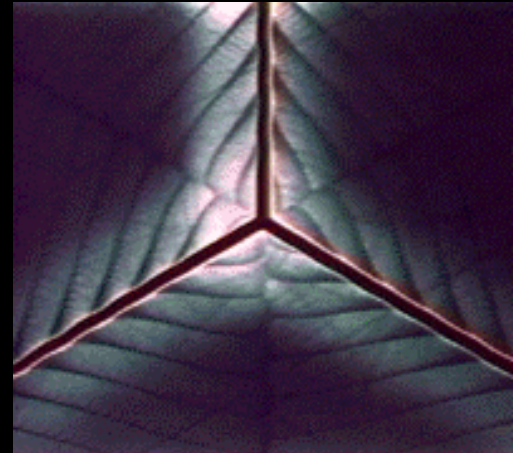
- Advanced networking research
- Distributed computing/visualization
- Collaborative software
- Advancement of tools and techniques for collaborative work over high-speed, experimental networks
- Development of viable, scalable, deployable stereo displays
- Development of VR hardware, software, tools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



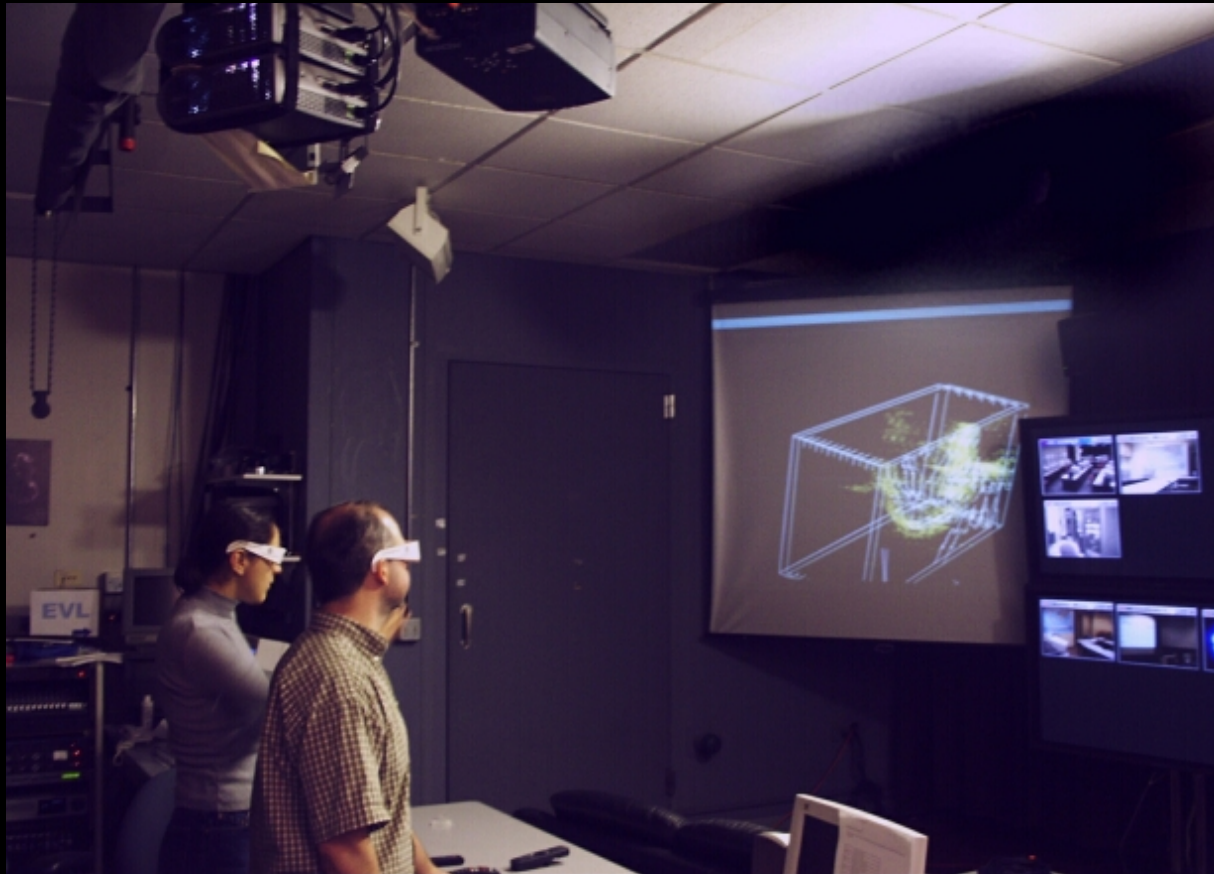
ImmersaDesk® 1995



Paris 1998



GeoWall -2000



Varrier



CAVE2 -2012



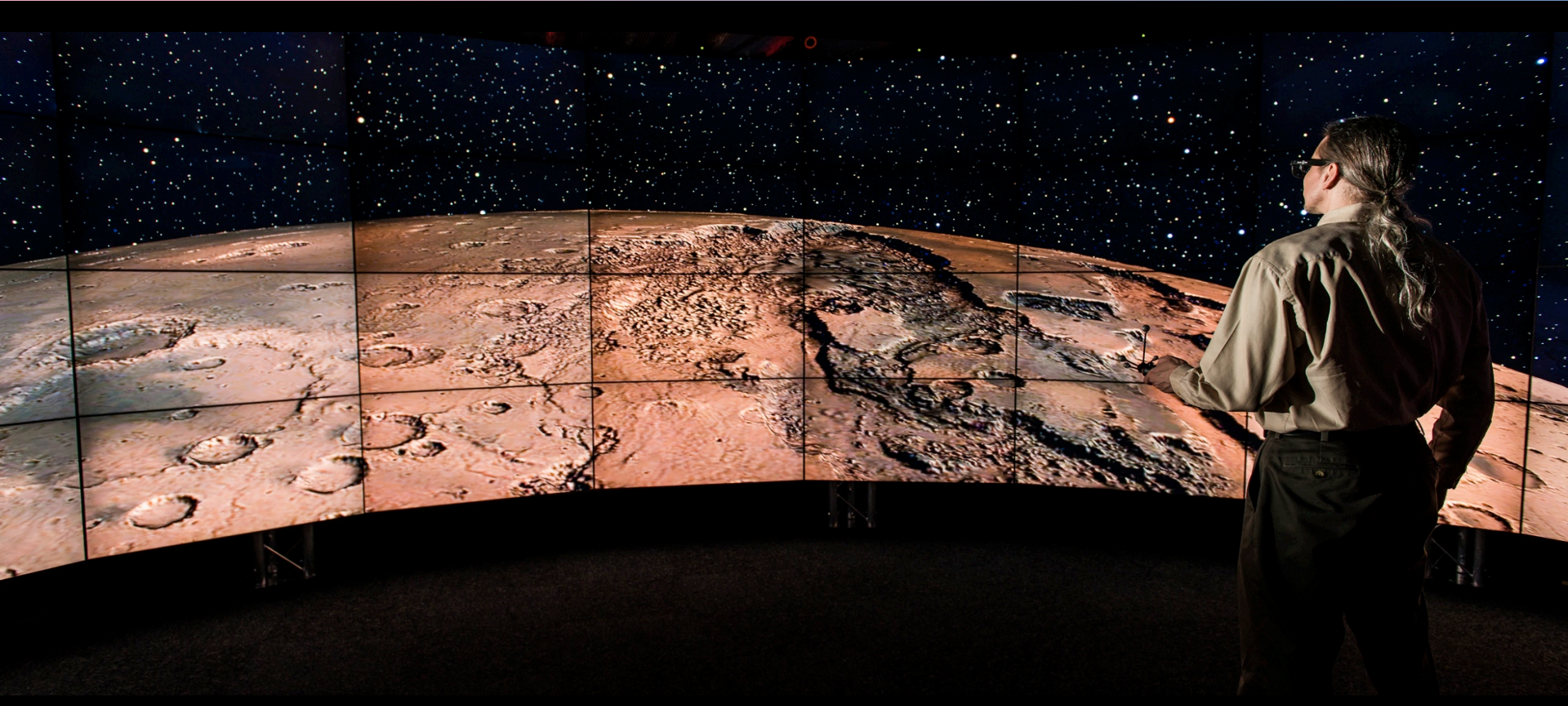
Particle Dreams in Spherical Harmonics



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



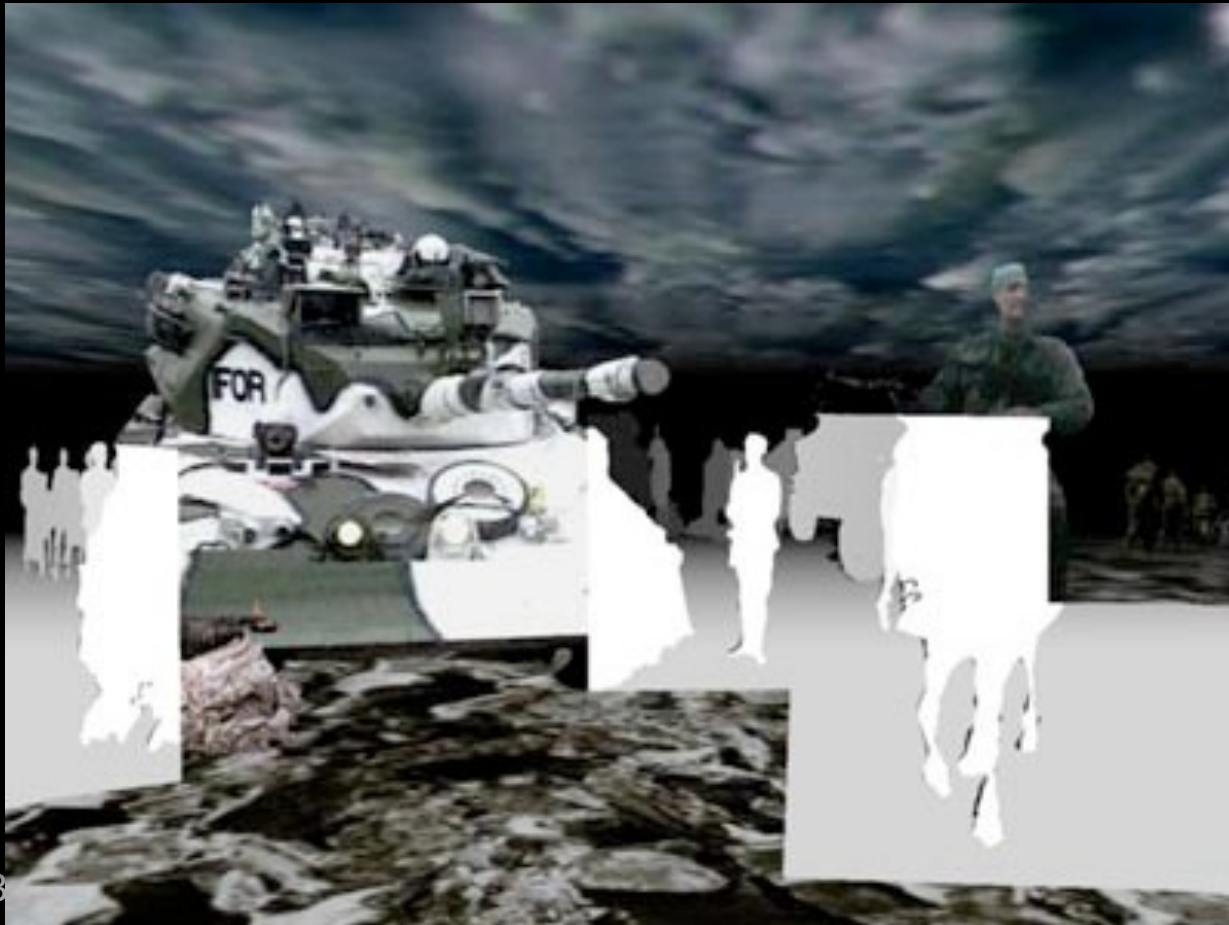
Maurice Benayoun

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



Maurice Benayoun

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



Jeffrey Shaw, The Legible City, 1988-91



Jeffrey Shaw, The Legible City, 1988-91

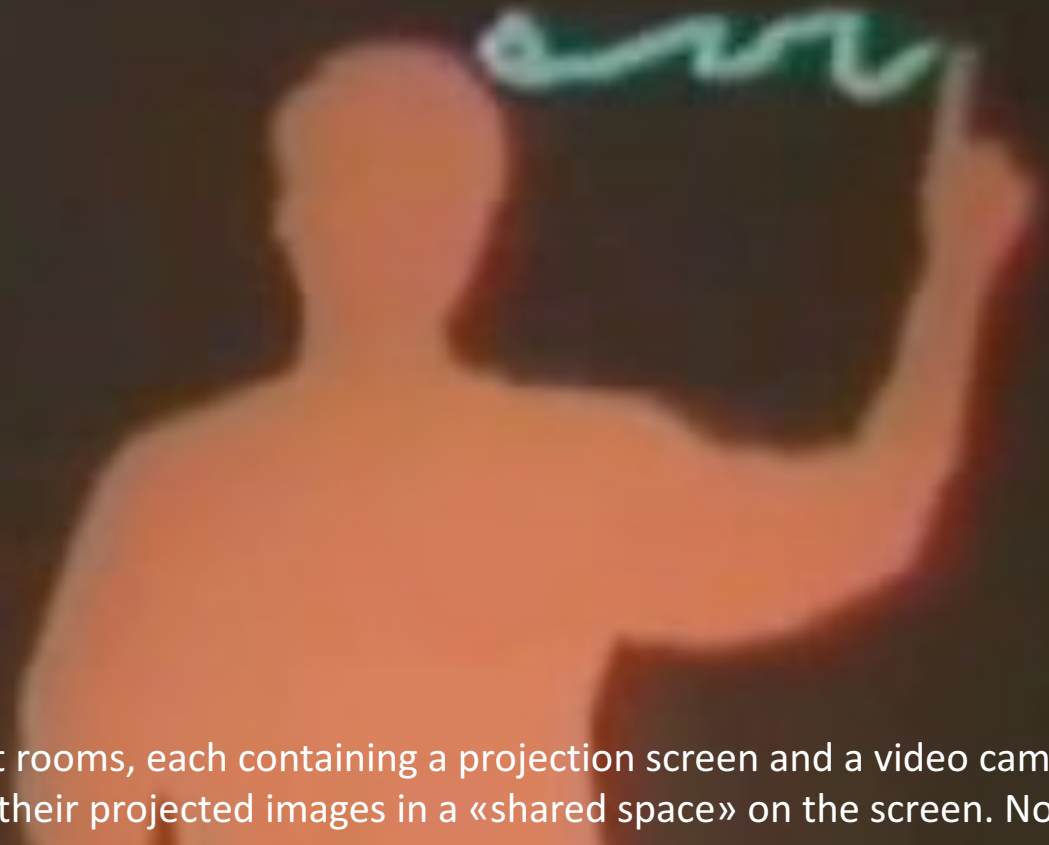


In the Amsterdam (1990) and Karlsruhe (1991) versions all the letters are scaled so that they have the same proportion and location as the actual buildings which they replace, resulting in a transformed but exact representation of the actual architectural appearance of these cities. The texts for these 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

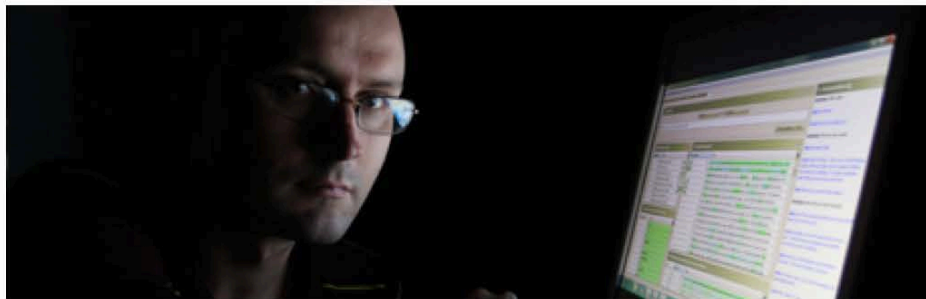


Virtual Reality Pain Reduction

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

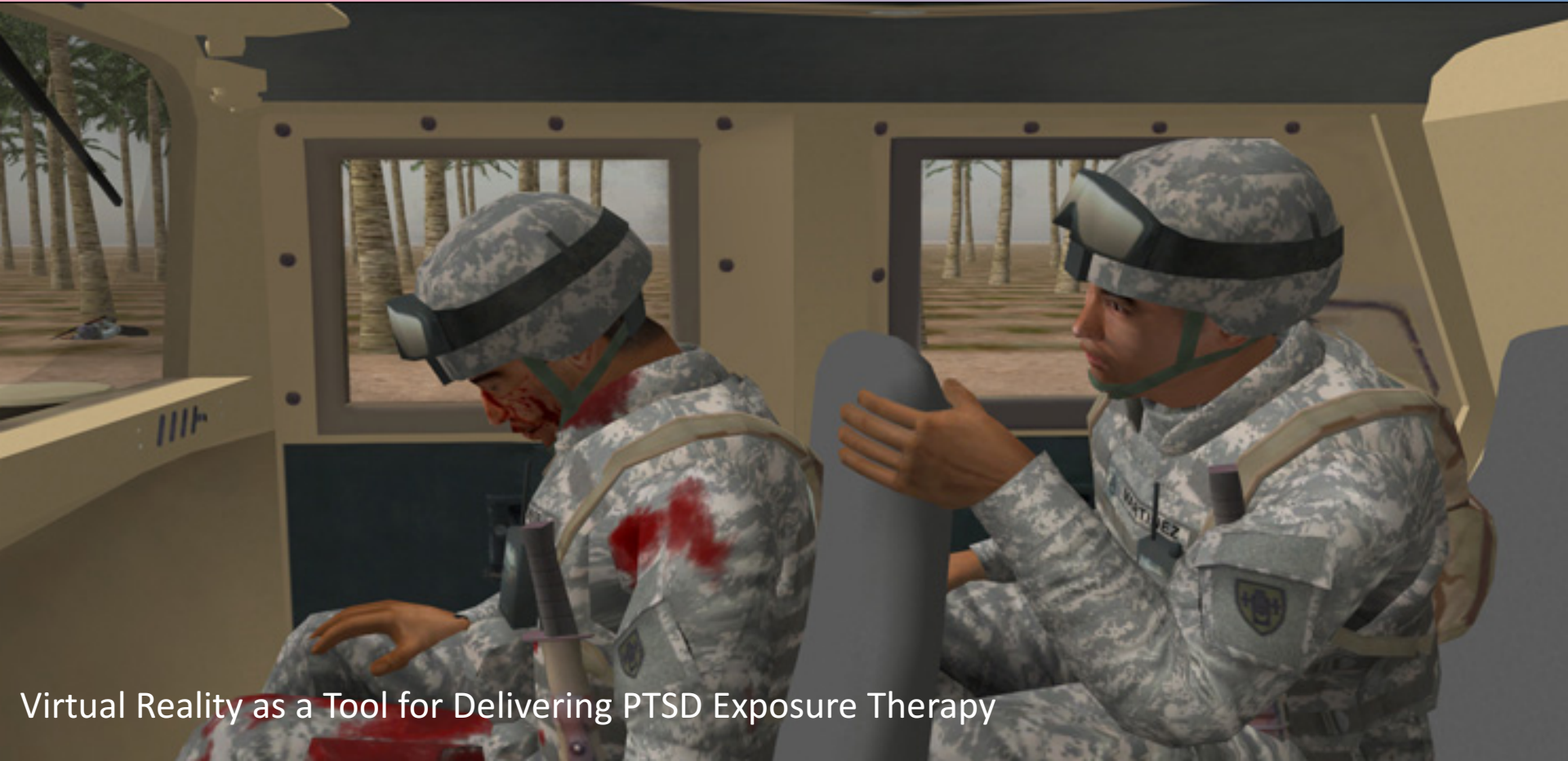
Featured Research



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



Virtual Reality as a Tool for Delivering PTSD Exposure Therapy


SIGGRAPH2017 VR Theater



SIGGRAPH2017 VR Theater

AT THE  of COMPUTER GRAPHICS & INTERACTIVE TECHNIQUES

VR THEATER SCHEDULE

im  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



nice

SIGGRAPH2017 VR Theater





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: Démonz I.

CURATED CONTENT

Digital playgroundz is an interactive and augmented-reality system that displays large-scale applications

Daniel Gregor

INITI.org

Ondřej Prucha

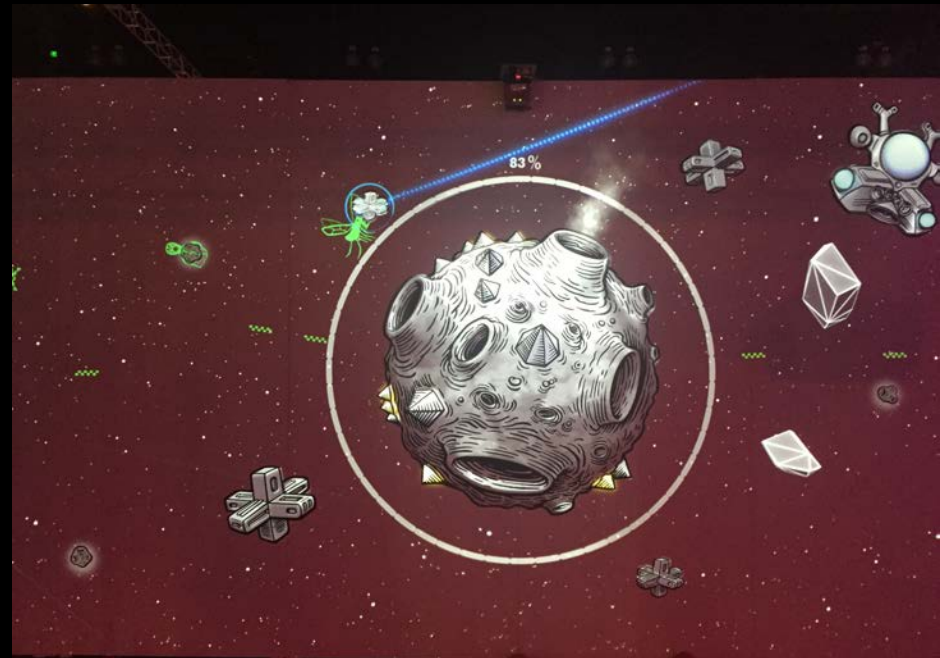
INITI.org

Jakub Roček

INITI.org

Josef Kortan

INITI.org





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

