

Conference at a Glance

FRIDAY, 9th January 2004 Pre-conference Workshops

Ambassador Room

Workshop Chair: Stephane Bouchard PhD

9:00am Workshop #1:

Introduction to VR

12:30pm Workshop #2:

Anxiety & Eating Disorders

3:00 pm Workshop #3:

> VR for Pain, Neuropsychology, Rehabilitation, & Addictions

6:00 pm Welcome Reception

Embassy Room

SATURDAY, 10th January 2004

Exhibits: Riviera Room 900am - 9pm

Versailles Ballroom

Registration 8:30 am

Breakfast

9:00am Welcome

> Brenda K Wiederhold PhD MBA BCIA

CyberAssessment

Session Chairs: Hunter Hoffman PhD &

Rosa Banos PhD

9:15am - 10:30am **Oral Presentations**

10:30am - 11:00am Break

Virtual Reality and Addictions

Session Chairs: Alex Bullinger MD, MBA &

Dave Thomas PhD

11:00am – 12:30pm Oral Presentations

12:30pm – 12:35pm CRC Award

Stephane Bouchard PhD

12:35pm – 2:00pm Lunch Break

Versailles Ballroom CvberEvaluation

Session Chairs: Erik Viirre MD PhD &

Albert "Skip" Rizzo PhD

2:00pm - 3:15pm **Oral Presentations**

3:15pm – 4:15pm Afternoon Tea

Presence in CyberTherapy

Session Chairs: Cristina Botella PhD &

David Walshe PhD

4:15pm – 5:00pm **Oral Presentations**

6:00pm - 9:00pm **CYBERARIUM**

Riviera, Ambassador, Embassy, & Coronet

Rooms

POSTER RECEPTION is at the Cyberarium

Ambassador, Embassy, & Coronet Rooms

SUNDAY, 11th January 2004

Exhibits: Riviera 9:00am - 9:00pm

Versailles Ballroom

9:00am Welcome

Giuseppe Riva PhD

CyberEducation and CyberTraining

Session Chairs: Kay Howell PhD &

Mark Wiederhold MD PhD FACP

9:15am - 10:30am Oral Presentations

10:30am - 11:00am Break

11:00am - 12:00am Discussion

12:00pm – 1:30pm Lunch Break

Versailles Ballroom

Funders' Panel

Session Chairs: Walter Greenleaf PhD

Brenda K. Wiederhold PhD

MBA BCIA

1:30pm – 2:30pm Oral Presentations 2:30pm – 3:00pm Q & A Session

3:00pm – 3:30pm Break

Anxiety Disorders

Session Chairs: Stephane Bouchard PhD &

Sun I. Kim PhD

3:30pm – 5:00pm Oral Presentations

6:00pm - 9:00pm CYBERARIUM

Riviera, Ambassador, Embassy, & Coronet

Rooms

POSTER RECEPTION is at the Cyberarium Ambassador, Embassy, & Coronet Rooms

MONDAY, January 12th 2004

Versailles Ballroom

Pain Distraction and Rehabilitation

Session Chairs: Giuseppe Riva PhD &

Isabelle Viaud-Delmon PhD

9:30am – 10:30am Oral Presentations

10:30am - 11:00am Break

E-health Applications

Session Chairs: Carlo Galimberti PhD &
Brenda K Wiederhold PhD MBA BCIA

Brenda K Wiederhold PhD MBA BCIA

11:00am - 12:00pm Oral Presentations

12:00pm – 2:00pm

Lunch with Richard M Satava MD FACS

Human-Robot Interactions

Session Chairs: Gary Gilbert PhD &

Elena Libin PhD

2:00pm – 3:30pm Oral Presentations

3:45pm – 4:15pm Break

Games for Health

Moderator: Mark Wiederhold MD PhD

FACP

4:15pm -- 5:30pm Panel Discussion

Conference Program Committee

Conference Co-Chairs:

Brenda K. Wiederhold, Ph.D., MBA, BCIA Interactive Media Institute The Virtual Reality Medical Center

Giuseppe Riva, Ph.D.
Applied Technology for Neuro-Psychology Lab
Istituto Auxologico Italiano

Program Committee:

Mariano Alcañiz Raya, Ph.D. Universidad Politécnica de Valencia

Cristina Botella, Ph.D. Universitat Jaume I

Stéphane Bouchard, Ph.D. University of Quebec at Hull

Alex H. Bullinger, M.D, MBA University of Basel (COAT-Basel)

Ken Graap, M.Ed. Virtually Better, Inc.

Walter Greenleaf, Ph.D. Greenleaf Medical

Hunter Hoffman, Ph.D. University of Washington

Sun I. Kim, Ph.D. College of Medicine, Hanyang University Gabriele Optale, M.D. Association of Medical Psychotherapists

Albert "Skip" Rizzo, Ph.D. University of Southern California

Professor Paul Sharkey University of Reading Department of Cybernetics

Mel Slater, DSc. University College London

Erik Viirre, M.D., Ph.D. University of California, San Diego

David Walshe, Ph.D. University College Cork

Mark D. Wiederhold M.D., Ph.D., FACP The Virtual Reality Medical Center

Pre-Conference Workshops

Workshop Chair: Stephane Bouchard PhD

FRIDAY, 9th January 2004

Ambassador Room

9:00 Introduction to Clinical Virtual Reality

Workshop leaders: Stephane Bouchard PhD & Mark D Wiederhold MD PhD FACP Moderator: Stephane Bouchard PhD

Aim: To provide complete information on basic topics such as Virtual Reality (VR) equipment, cybersickness, presence and other technical aspects of VR.

12:30 Advanced workshop on the applications of VR for Anxiety and Eating Disorders Workshop leaders: Cristina Botella PhD, Stephane Bouchard PhD, Giuseppe Riva PhD, and Brenda K Wiederhold PhD MBA BCIA

Moderator: Stephane Bouchard PhD

Aim: To present data-driven material that is representative of the current state of research and knowledge in the areas of VR applied to anxiety disorders and eating disorders, and to familiarize participants with the applications of VR in clinical practice.

3:00 Advanced workshop on the applications of VR for Neuropsychology,
Neurophysiology, Rehabilitation, Drug Abuse, and Pain
Workshop leaders: Alex Bullinger MD MBA, Azucena Garcia-Palacios PhD, Walter
Greenleaf PhD, Hunter Hoffman PhD, and Albert "Skip" Rizzo PhD
Moderator: Hunter Hoffman PhD

Aim: To present data-driven material that is representative of the current state of research and knowledge in these fields, and to familiarize the participants with the applications of VR in clinical practice.

Embassy Room

6:00 Welcome Reception

Special Sessions

Virtual Reality Treatments for Addiction

Moderators: Alex Bullinger, M.D., MBA; Dave Thomas, Ph.D.

CyberEducation and CyberTraining

Moderators: Kay Howell, Ph.D.; Mark D. Wiederhold, Ph.D.

Games for Health

Panel Discussion

Moderator: Mark D. Wiederhold, M.D., Ph.D., FACP

Participants: Stephane Bouchard, Ph.D.

Barbara Hayes-Roth, Ph.D. Giuseppe Riva, Ph.D. Albert "Skip" Rizzo, Ph.D. David Walshe, Ph.D.

Funders' Panel – Funding Opportunities for Advanced Technologies' Research

Moderators: Walter Greenleaf, Ph.D.; Brenda K. Wiederhold, Ph.D., MBA, BCIA

Human-Robot Interactions

Moderators: Gary Gilbert, Ph.D.; Elena Libin, Ph.D.

Other Topics:

CyberAssessment

Moderators: Hunter Hoffman, Ph.D.; Rosa Baños, Ph.D.

CyberEvaluation

Moderators: Albert "Skip" Rizzo, Ph.D.; Erik Viirre, M.D., Ph.D.

Presence in CyberTherapy

Moderators: Cristina Botella, Ph.D.; David Walshe, Ph.D.

Anxiety Disorders

Moderators: Stephane Bouchard, Ph.D.; Sun Kim, Ph.D.

Pain Distraction and Rehabilitation

Moderators: Giuseppe Riva, Ph.D.; Isabelle Viaud-Delmon, Ph.D.

E-health Applications

Moderators: Carlo Galimberti, Ph.D.; Brenda K. Wiederhold, Ph.D., MBA, BCIA

Cyberarium

Saturday and Sunday, 6-9pm:

The Cyberarium is a two-night event consisting of poster presentations detailing cutting edge research as well as hands-on demonstrations of virtual reality, simulation, physiology, and robotics technologies from around the world. You will have the opportunity to discover the latest research being performed in a variety of healthcare specialties, reviewing areas of interest at your own individual pace. The relaxed atmosphere of the Cyberarium serves to encourage discussion between researchers and those interested in their work, serving to help promote new collaborations. Appetizers will be served. Sunday evening the Cyberarium is open to the general public, to allow for education of end-users about healthcare options and advancements in treatment.

Cyberarium Participants:

CyberTherapy 2004/2005 Information

Interactive Media Institute

EON Reality

Mats W. Johansson

Fairleigh Dickinson University

Eamon Doherty, Ph.D.

Image Institute

Toni Nixon, Ed.D.

Interactive Media Institute

Brenda K. Wiederhold, Ph.D., MBA,

BCIA

IOS Press

Istituto Auxologico Italiano

Giuseppe Riva, Ph.D.

Mary Ann Liebert, Inc. publishers

Olin Neuropsychiatry Research Center - Virtual Reality Laboratory

Robert S. Astur, Ph.D.

PREVI

Cristina Weddle

Sandia National Laboratories

Peter Merkle

Universitat Jaume I

Cristina Botella, Ph.D.

University of Haifa

Uri Feintuch, Ph.D.

University of Ottawa

Veronique Vaillancourt, Ph.D.

University of Pittsburg

Steve Baumann, Ph.D.

University of Quebec at Hull

Stéphane Bouchard, Ph.D.

University of Southern California

Skip Rizzo, Ph.D.

Virtual Reality Medical Center

Brenda K. Wiederhold, PhD, MBA, BCIA

Virtually Better, Inc.

Ken Graap, M.Ed.

VRNEUROTECH

Morris Steffin, M.D.

Conference Schedule

SATURDAY, 10th January 2004

9:00 Welcome –
Brenda K. Wiederhold PhD MBA BCIA

CyberAssessment
Session Chairs: Hunter Hoffman PhD &
Rosa Banos PhD

9:15 Robert Astur, PhD

Olin Neuropsychiatry Research Center Institute of Living "Using Virtual Reality to Investigate Functioning of the Hippocampus in Schizophrenia"

9:30 Sarah St. Germain

Olin Neuropsychiatry Research Center Institute of Living "Investigation of Driving Behavior in Individuals with Schizophrenia Using a VR Driving Simulator"

9:45 Mattias Wallergård MScEE

Department of Design Sciences Lund Institute of Technology "Can People with Brain Injury Transfer Route Knowledge from a Virtual Environment to the Real World?"

10:00 Jang Han Lee PhD

Hanyang University
"Design and Implementation of Virtual
Reality System to Assess and Train the
Patients of Unilateral Visual Neglect"

10: 15 Evelyne Klinger Eng

Université de Caen "A Virtual Supermarket to Assess Cognitive Planning"

10:30 **BREAK**

Virtual Reality and Addictions
Session Chairs: Alex Bullinger MD MBA &
Dave Thomas PhD

11:00 Ho-Sung Kim, PhD

Hanyang University
"A functional Magnetic Resonance
Imaging (fMRI) Study of Nicotine Craving
and Cue Exposure Therapy (CET) by
using Visual Stimuli"

11:15 Steve Baumann PhD

Psychology Software Tools, Inc.

"Smoking Cues in a Virtual World Provoke Craving in Cigarette Smokers as Demonstrated by Neurobehavioral and fMRI Data"

11:30 Patrick Bordnick MSW MPH PhD

Virtual Reality Clinical Research Center University of Georgia "Development and Testing of a Virtual Reality Cue Reactivity Environment for Nicotine Dependent Cigarette Smokers"

11:45 Barbara Hayes-Roth PhD

Extempo Systems, Inc. "Online Workshops Training Brief Intervention in Alcohol Abuse"

12:00 Leo Whang PhD

Yonsei University
"The On-line Game Addiction as a
Luxury Syndrome: An immersion of
digital world as a consumption of digital
product"

12:15 **Brian Ng MS**

DePaul University
"Addiction to Massively Multiplayer
Online Role-Playing Games"

12:30 PRESENTATION OF THE CLINICAL CYBERPSYCHOLOGY NEW INVESTIGATOR AWARD Stephane Bouchard PhD

12:35 LUNCH BREAK

CyberEvaluation

Session Chairs: Albert "Skip" Rizzo PhD &
Erik Viirre MD PhD

2:00 Alex Bullinger MD MBA

COAT-Basel

"Development and Evaluation of a Modular Psychophysiological Test Battery for Use with Virtual Environments/Augmented Reality Applications"

2:15 Patrice Renaud PhD

Cyberpsychology Lab University of Quebec in Outaouais "The Recording of Oculomotor Responses in Virtual Immersion"

2:30 Gabor Csukly MD

SOTE

"Evaluating Psychiatric Patients Using High Fidelity Animated 3D Faces"

2:45 Sharon Tettegah PhD

University of Illinois "Assessing Perceptions and Empathy of Victims in Educators"

3:00 Isabelle Viaud-Delmon PhD

"3-D Sound and Virtual Reality:
Applications in Clinical Psychopathology"

3:15 AFTERNOON TEA

Presence in CyberTherapy
Session Chairs: Cristina Botella PhD &
David Walshe PhD

4:15 Genevieve Robillard MSc

Cyberpsychology Lab University of Quebec in Outaouais "The Relationship Between Anxiety and Presence"

4:30 Fabrizia Mantovani PhD

Istituto Auxologico Italiano "Narrative Dimension, Sense of Presence and Emotional Involvement"

4:45 Stephane Bouchard PhD

Cyberpsychology Lab University of Quebec in Outaouais "A Hint on the Relationship Between Fear and Presence"

CYBERARIUM: 6-9pm Brenda K. Wiederhold PhD MBA BCIA

Poster Presentations:

Rosa Banos PhD

Universitat Jaume I "Virtual Reality as a Psychological Laboratory: Its Utility for Assessing Attentional Biases in Anxiety Disorders."

Alex Bullinger MD MBA

COAT-Basel

"Traffic Safety Investigations by means of an Augmented Reality Driving Simulation: Neurophysiological Measurements in Sleep Deprived Subjects"

Sophie Cote PhD Candidate

Cyberpsychology Lab University of Quebec in Outaouais "The Use of a Pictorial Stroop Task and Psychophysiological Measures in Understanding Cognitive Mechanisms Underlying Virtual Reality Exposure Effectiveness"

Eamon Doherty, PhD

Fairleigh Dickinson University
"Low Cost Facial/Mental Controlled
Tele-robotic/Tele-Medicine System for
Quadriplegic Persons"

Stephanie Dumoulin

Cyberpsychology Lab University of Quebec in Outaouais "The sense of presence in videoconferencing and emotional engagement"

Uri Feintuch PhD

University of Haifa, Mount Carmel "Development of a 'low end' multimodal feedback program for motor, cognitive and sensory rehabilitation"

Carlo Galimberti PhD

Università Cattolica del Sacro Cuore "Artifact Based Trust in On-line Interactions 2: Relevance to telemedicine, on-line psychologic counseling and therapy"

Azucena García-Palacios PhD

Universitat Jaume I "Comparing The Acceptance of VR Exposure vs. In vivo Exposure in a Clinical Sample"

Michael Heim PhD

Beach Cities Health and Healing Center "Avatar Diplomacy"

Patricia Heyn PhD

University of Texas Medical Branch "Virtual Reality Therapy: A Systematic Review of the Effectiveness of Interventions"

Jeonghun Ku PhD

Hanyang University
"A study of Brain activations and
Presence in a Virtual Touching Task
using fMRI"

Melanie Michaud

Cyberpsychology Lab University of Quebec in Outaouais "Manipulating Presence and Its Impact on Anxiety"

Toni Nixon EdD

Image Institute

"Therapeutic application of mental imagery in virtual reality, a report on current findings and suggestions for future study"

Matthew Parrott

3D Interaction Group Virginia Tech "A Methodology for Designing Specific Animal Phobia Stimuli for Virtual Reality Exposure Therapy"

Matthew Parrott

3D Interaction Group Virginia Tech "An Immersive Virtual Environment for the Treatment of Ophidiophobia"

Giuseppe Riva PhD

Istituto Auxologico Italiano "VEPSY"

Catherine Sabourin

Cyberpsychology Lab University of Quebec in Outaouais "The Impact of Instructions on the Feeling of Presence During Virtual Immersions"

Julie St-Jacques

Cyberpsychology Lab University of Quebec in Outaouais "Long-Term Effectiveness of In VR Exposure for Phobic Children"

Morris Steffin MD

VRNEUROTECH
"On-Board In-Vehicle Real Time Video
Monitoring of Driver Alertness"

Dorothy Strickland PhD

Do2Learn

"Evaluating a Video Enhanced Virtual Reality Program for Teaching Restaurant Social Skills to Children with Autism"

Veronique Vaillancourt PhD

University of Ottawa

"Use of Audio VR to evaluate functional hearing abilities in the workplace"

Raquel Viciana-Abad MSc

University of Malaga "The Importance of Significant Information"

Beth Yost

Virginia Tech

"Learning to Interact with People with Disabilities Using Virtual Environments"

SUNDAY, 11th January 2004

9:00 Welcome - Giuseppe Riva PhD

CyberEducation and CyberTraining
Session Chairs: Kay Howell PhD &
Mark D Wiederhold MD PhD
FACP

9:15 **Jan Cannon-Bowers, PhD** University of Central Florida

9:30 Clint Bowers, PhD

Dr. Clint A. Bowers, PhD University of Central Florida Team Performance Laboratory FAA/UCF/NAWCTSD Partnership for Aviation Team Training

9:45 Kay Howell PhD
Learning Federation
"Advances in Mains Simulations to "

"Advances in Using Simulations to Train Complex Decision-Making in Teams"

10:00 Mark D Wiederhold MD PhD FACP Virtual Reality Medical Center "Combat Medic Training"

10:15 Harvey Magee

Telemedicine and Advanced

Technology

Research Center (TATRC)
"Medical Modeling & Simulation (MM&S)
Applied to Army Medical Training"

10:30 BREAK

11:00 DISCUSSION

12:00 LUNCH BREAK

Funders Panel

Session Chairs: Walter Greenleaf PhD & Brenda K Wiederhold PhD MBA BCIA

1:30 Ro Nemeth-Coslett PhD

National Institute on Drug Abuse (NIDA) "Virtual Reality at NIDA"

1:45 Harvey Magee

TATRC

"TATRC MM&S Summary & Funding Opportunities"

2:00 Walter Greenleaf PhD

"Funding Opportunities at NIDDR"

2:15 Walter Greenleaf PhD

"Strategies for Start-up Funding"

"A Controlled Study of the Effectiveness of Virtual Realty to Reduce Children's Pain During Venipuncture"

2:30 Question & Answer Session

3:00 **BREAK**

Anxiety Disorders

Session Chairs: Stephane Bouchard PhD & Sun I. Kim PhD

3:30 Cristian Sirbu PhD

Virginia Polytechnic Institute and State University "How Active are Fear Structures During Exposure in Virtual Environments? A Test of Emotional Processing Theory in Acrophobia"

3:45 Brenda K Wiederhold PhD MBA BCIA

Virtual Reality Medical Center "Clinical Analysis of 350 Patients Completing VR Therapy"

4:00 Ken Graap MEd

Virtually Better, Inc. "Treating Fear of Flying in Virtual Reality"

4:15 David Walshe PhD

University College Cork
"Can MVA victims with Driving Phobia
Immerse in Computer Simulated Driving
Environments?"

4:30 **Ioannis Tarnanas PhD**

Aristotle University of Thessalonica "A Clinical Protocol for the Development of VR Training in Disaster Exposure and Relief"

4:45 Albert "Skip" Rizzo PhD

University of Southern California "Data, Development Issues and Future Visions from the USC Integrated Media Systems Center Virtual Environments Laboratory"

CYBERARIUM: 6-9pm Brenda K. Wiederhold PhD MBA BCIA

MONDAY, 12th January 2004

Pain Distraction and Rehabilitation
Session Chairs: Giuseppe Riva PhD &
Isabelle Viaud-Delmon PhD

9:30 Jeff Gold PhD

Children's Hospital of Los Angeles

9:45 Hunter Hoffman PhD

University of Washington
"Virtual Reality Analgesia During
Thermal and Electrical Pain for Longer
Durations, and Multiple Treatments"

10:00 Robert Kline-Schoder PhD

Creare Incorporated "Virtual Reality-Enhanced Physical Therapy System"

10:15 Uri Feintuch PhD

University of Haifa, Mount Carmel "Effect of Performance Demands and Constraints Within Virtual Environments"

10:30 **BREAK**

E-health Applications

Session Chairs: Carlo Galimberti PhD&
Brenda K. Wiederhold PhD MBA
BCIA

11:00 Mignon Coetzee PhD

University of Cape Town
"A Low-cost VR Group Support System for People Living with HIV"

11:15 Cristina Botella PhD

Universitat Jaume I "Telepsychology and Self-Help: The Treatment of Phobias Using the Internet"

11:30 C. Barr Taylor MD

Stanford Medical Center "The Use of an Internet-based Program to Prevent Eating Disorders"

11:45 Giuseppe Riva PhD

Istituto Auxologico Italiano "The VRTherapy Project: Free Virtual Reality Tools for Mental Health Therapists"

12:00 LUNCH with Richard Satava MD FACS

University of Washington Medical Center Special Assistant in Advanced Technologies at the US Army Medical Research and Materiel Command, Ft. Detrick, MD.

Human-Robot Interactions

Session Chairs: Gary Gilbert PhD & Elena Libin PhD

2:00 Elena Libin PhD

Complex Interactive Systems Research,

"Interactive Robotic Creatures With Therapeutic Potential: Robotic Psychology and Robotherapy Project (RPR)"

2:15 Takanori Shibata PhD

AIST

"Robot Therapy at Elderly Institution by Therapeutic Robot"

2:30 Cheryl Trepagnier PhD

The Catholic University of America "Design Trials of the Virtual Buddy: Progress Report"

2:45 Anna Lockerd

Anthrotronix "Robotic Toolkit for Pediatric

Rehabilitation, Assessment and Monitoring"

3:00 Eamon Doherty PhD

Fairleigh Dickinson University "A Telerobotic System for Quadriplegic Persons"

3:15 Harvey Magee

TATRC

"Robotics in the operating room"

3:30 Gary Gilbert PhD

TATRC

"Robot Extractions on the Battlefield"

3:45 **BREAK**

4:15 Games for Health

Panel Discussion

Moderator: Mark D Wiederhold MD,

PhD, FACP

Participants: Stephane Bouchard PhD

Barbara Hayes-Roth PhD Giuseppe Riva PhD Albert "Skip" Rizzo PhD David Walshe PhD

5:30 Adjourn until June 2005 in

Switzerland...see you at the 10th Annual CyberTherapy Conference.