

# ICAT-EGVE 2014

## EuroVR 2014

8 - 10 December 2014  
University of Bremen, Germany





8:00	Registration	Foyer
	<i>You can also register at Sunday afternoon from 4 - 6 pm.</i>	
9:00	Opening & welcome	1400
9:20	Keynote talk by Prof. Dr. Naotaka Fujii	1400
	<b>Session chair: Kiyoshi Kiokawa</b>	
10:20	Coffee break	Foyer
10:40	Session 1: End-Users	1400
	<b>Session chair: Jérôme Perret</b>	
	Eduard Jundt: <i>Virtual Technologies at Volkswagen</i>	
	Renaud Deligny: <i>Usage of interactive simulation at Renault</i>	
	Agata Marta Soccini: <i>Virtual Reality Interface for Multidisciplinary Physical Analysis of Space Vehicles</i>	
	Peter Nickel, Eugen Pröger, Rolf Kergel, and Andy Lungfiel: <i>Development of a VR planning model of a river lock for risk assessment in the construction and machinery industry</i>	
12:20	Lunch	
13:20	Session 2: Tech-providers	1400
	<b>Session chair: Kaj Helin</b>	
	Ralf Rabaetje: <i>Realtime Physics in DELTAGEN</i>	
	JB de la Rivière and J. Castet: <i>Simpler Interfaces for Better 3D Simulation</i>	
	V. Verhille, B.Bayart, M.Piuzzi and A.Vartanian: <i>How to easily develop a VR experience from a 3D desktop application thanks to the TechViz TVZLib API</i>	
	Friedhelm Birk: <i>Visualisation trends 2014</i>	
	Michaela Dierking: <i>Visionary Render VR-Software - The usability of Virtual maintenance training in a VR environment</i>	
15:00	Coffee break	Foyer
15:30	Posters Fast-Forward	1090
16:10	Poster Session	Ground Floor
17:00	Local Lab Demos	Cartesium Building
	Computer graphics and virtual reality: haptics, camera-based hand tracking, space mission simulation, Fraunhofer Medical Imaging: surgery simulation, Robotics: catching balls, soccer-playing robots, Ambient assisted living lab, AI and robotics: popcorn-making robot and kitchen activity games in the robotics simulator, Augmented reality lab, Digital media, compArt: select old and new computer art, Neuro-Informatics: VirtuSphere	



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15:00	EuroVR EC meeting (for EC members)	1400
16:30	EuroVR General Assembly (for EuroVR Members)	1400
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9:45 Session 3: Avatars 1090

**Session chair: Takuya Nojima**

Rongkai Guo, John Quarles, Gayani Samaraweera: *The Effects of Avatars on Presence in Virtual Environments for Persons with Mobility Impairments*

Jeanine K Stefanucci, Michael Geuss, Betty Mohler, Uwe Kloos, Matthias Gutekunst, Greg Rauhöft: *Short Paper: A video self-avatar influences the perception of heights in an augmented reality Oculus Rift*

Yusuke Ujitoko, Koichi Hirota: *Interpretation of Tactile Sensation using an Anthropomorphic Finger Motion Interface to Operate a Virtual Avatar*

11:45 Coffee break Foyer

12:00 Keynote talk by Prof. Dr. Anthony Steed 1400

**Session chair: Oliver Staadt**

13:00 Lunch

14:30 Session 4: Presence and Tele-Operation 1090

**Session chair: Frank Steinicke**

Daniel Sjölie, Gregoria Kalpouzos, Johan Eriksson: *Neural correlates of disrupted presence: strange disruptions in a naturalistic virtual environment*

Maki Sugimoto, Naoya Maeda, Jun Morita: *Pathfinder Vision: tele-operation robot interface in consideration of the real environment of 3D geometry for supporting future prediction*

15:50 Coffee break Foyer

16:10 Demo Session 1380 & Ground Floor

17:50 End of official part of day 2

19:30 Dinner at „Haus am Walde“ Kuhgrabenweg 2, 28359 Bremen



9:45 Session 3: VISIONAIR 1400

**Session chair: Frédéric Noël**

Charles Pontonnier, Thierry Duval, Georges Dumont: *Ergonomics and Virtual Reality: VISIONAIR Project examples*

Channarong Trakunsaranakom, Philippe Marin, Frédéric Noël: *Assessment of Virtual Reality Environments for design activities*

Robert Jacob, Frédéric Noël: *Haptic Devices Evaluation for Industrial Use*

Mauro Todeschini, Enrica Romano, Giovanni Viganò, Marco Sacco: *DroneAGE: an Advanced Graphic Environment for planning and control of Drone missions*

Christian Weidig: *Classification of VR interaction techniques, based on user intention*

Mohamed Anis Dhuieb, Farouk Belkadi, Florent Laroche, Alain Bernard: *Thinking factory for the future: from PLM to augmented reality*

11:45 Coffee break Foyer

12:00 Keynote talk by Prof. Dr. Anthony Steed 1400

**Session chair: Oliver Staadt**

13:00 Lunch

14:30 Session 4: Tech-providers 1400

**Session chair: Mascha van der Voort**

Sebastien Kuntz: *The challenges of creating a VR application in Unity*

Eric Braux: *Collaborative and Immersive environments, Core technology update and new usages*

Markus Hocke, Sebastian Pena Serna, Jan Wurster: *Towards a new platform paradigm for synergetic Virtual Environments*

Frank Gross: *Head-Mounted-Displays - An Overview*

15:50 Coffee break Foyer

16:10 Session 5: Applied Research/Infrastructure 1400

**Session chair: Harshada Patel**

Mikel Sagardia, Theodoros Stouraitis, and João Lopes e Silva: *A New Fast and Robust Collision Detection and Force Computation Algorithm Applied to the Physics Engine Bullet: Method, Integration, and Evaluation*

Stefano Mottura, Marco Sacco, Radu Emanuil Petruse: *Experiencing Infrastructures Sharing for International Research Activities*

Victor Häfner: *PolyVR - A Virtual Reality Authoring System*

Heiko Herrmann, Emiliano Pastorelli, Marcel Padilla: *A.C.T.I.V.E. : A scalable superellipsoid-based CFD visualization for virtual and desktop environments*

17:50 End of official part of day 2

19:30 Dinner at „Haus am Walde“ Kuhgrabenweg 2, 28359 Bremen

# Exhibitors & Supporters of EuroVR 2014 and ICAT-EGVE 2014





9:00 Session 5: Manipulation and Head-Mounted Displays 1090

**Session chair: René Weller**

Andrei Sherstyuk, Kiyoshi Kiyokawa, Yuki Yano: *Investigation of Dynamic View Expansion for Head-Mounted Displays with Head Tracking in Virtual Environments*

Andrei Sherstyuk, Anton Treskunov: *Short Paper: Space-Time Maps for Virtual Environments*

Toshiyuki Amano, Isao Shimana, Kunioki Kono, Shun Ushida: *Successive Wide Viewing Angle Appearance Manipulation with Dual Projector Camera Systems*

10:20 Coffee break Foyer

11:00 Keynote talk by Prof. Dr. Indira Thouvenin 1400

**Session chair: Philippe Gravez**

12:00 Lunch

13:00 Session 6: Lab Presentations 1090

**Session chair: Thies Pfeiffer**

F. Ferrise: KAEMaRT Virtual Prototyping Lab, Politecnico di Milano, Italy

M. van der Voort: VRlab & DesignLab at the University of Twente, The Netherlands

U. Kloos: VRlab at Reutlingen University, Germany

A. M. Soccini: Collaborative System Engineering Lab, University of Torino / Thales Alenia Space

M. Poyade: Digital Design Studio, The Glasgow School of Art, UK

F. Steinicke: Human-Computer Interaction Lab, University of Hamburg, Germany

P. Häfner: Lifecycle Engineering Solutions Center, Karlsruhe Institute of Technology, Germany

Kaj Helin: Virtual/Mixed/Augmented Reality lab, VTT Technical Research Centre of Finland

L. Picinali: Interactive and Media Technologies lab (IMT), De Montfort University, Leicester, UK

14:20 Coffee break Foyer

14:50 Session 7: Virtual Environments 1090

**Session chair: Torsten Kuhlen**

João Guerreiro, Daniel Medeiros, Daniel Mendes, António Sousa, Joaquim Jorge, Alberto Raposo, Ismael Santos: *Beyond Post-It: Structured Multimedia Annotations for Collaborative VEs*

Bruno Arnaldi, Rozenn Bouville berthelot, Valérie Gouranton, Guillaume Claude: *Short Paper: #SEVEN: A Sensor Effector Based Scenarios Model for Driving Collaborative Virtual Environment*

Thierry Duval, Charles Pontonnier, Thi-Thuong Huyen Nguyen: *A New Direct Manipulation Technique for Immersive 3D Virtual Environments*

16:30 Closing and Awards 1400



9:00 Session 6: Applied Research / Use-cases 1400

**Session chair: Marco Sacco**

Mirabelle D'Cruz, Harshada Patel, Laura Lewis, Sue Cobb: *Feedback on in-flight applications of virtual reality to enhance comfort in future aircraft*

Polina Häfner, Julia Seeßle, Jana Dücker, Matthias Zientek, Filip Szeliga: *Designing Energy Efficiency Concepts Using Virtual Reality*

Cristian Postelnicu, Mihai Duguleana, Gîrbacia Florin, Doru Talaba: *Towards P300 based brain computer interface for Computer Aided Design*

Frederik Hoolhorst: *Evaluating Shelf-ready Packaging's On-shelf Performance in a VR Environment*

10:20 Coffee break Foyer

11:00 Keynote talk by Prof. Dr. Indira Thouvenin 1400

**Session chair: Philippe Gravez**

12:00 Lunch

13:00 Session 7: Applied Research / Augmented Reality 1400

**Session chair: Francesco Ferrise**

Joatan Preis Dutra, Ivana Raquel Ebel: *Cultural hARitage: Augmented Reality applied on Cultural Heritage*

Federico Bergenti: *Augmented Reality for Field Maintenance of Large Telecommunication Networks*

Monica Bordegoni, Francesco Ferrise, Ernesto Carrabba, Michele Di Donato, Michele Fiorentino, Antonio E. Uva: *A tool based on augmented reality and mobile technologies to support remote maintenance*

Alessandro Terenzi, Graziano Terenzi, Andrey L. Gorbunov: *Pocket-size Augmented Reality System for Flight Control*

14:20 Coffee break Foyer

14:50 Session 8: Applied Research / Interaction 1400

**Session chair: René Weller**

Mathieu Poyade, Anna Lysakowski, Paul Anderson: *Development of a Haptic Training Simulation for the Administration of Dental Anaesthesia based upon Accurate Anatomical Data*

Lorenzo Picinali, Liam O'Sullivan, Douglas Cawthorne: *Audio Tactile Maps (ATM) System for Environmental Exploration by Visually-impaired Individuals*

Simon Hummel, Victor Häfner, Polina Häfner, Jivka Ovtcharova: *New Techniques for Hand Pose Estimation Based on Kinect Depth Data*

Emmanuel Vander Poorten and J. Perret: *To Feedback or not to Feedback – the Value of Haptics in Virtual Reality Surgical Training*

16:30 Closing and Awards 1400



# Christmas Market

# Bremen



Located on the river Weser, City of Bremen is the second-largest city in Northern Germany. The 1,200 year old city has a nice walkable downtown with a metropolitan feel.

Nonetheless, due to its location on the river Weser, Bremen has historically been an important entrance to the world for the hanseatic traders and seafarers.

The quaint alleys of the „Schnoor“-quarter with centuries old half-timbered houses or the unique promenade „Schlachte“ at the river Weser will invite the visitor to linger and get a special insight into the city’s history.

Nowadays, Bremen is an important hub of modern logistics, and a place of innovations in high technology, space industry, and numerous scientific institutions. Sometimes, Bremen is informally called “Space City” or “Beck’s City” (as the world famous Beck’s beer is brewed in Bremen).



Bremen’s atmospheric Christmas market is considered to be one of the most attractive in Germany. With the town hall and the Roland statue as its backdrop and over 170 festively decorated stalls, it is perfect for browsing.

The historical setting, the romantic Christmas lights and the lovingly adorned booths create a special Christmas atmosphere that enchants more and more visitors every year.

Bremen also has another Christmas attraction: The Schlachte Magic Christmas Market on the popular river Weser embankment. Each day on the maritime promenade another little door is opened to reveal a special surprise – it is like a walk-through an Advent calendar.

At the Schlachte Magic Christmas Market there are many experiences to choose from: Christmas brunch on the Weser, a Christmas tree expedition, some seriously strong hot punch and a real Dutch Sinter Klaas on board a pirate ship.

Through out the Bremen Christmas Market the path to traditional handicrafts and medieval-style taverns are marked with wood fires and torch lights.

On the Weser waterfront, snow-covered chalet-style stalls offer a good selection of tasty delicacies and sizzling fish specialities. Here the aroma of steaming mulled wine, baked apples and cinnamon stars lies in the air, while softly the most beautiful Christmas carols ring out in the background.







## Conference site

EUROVR 2014 will take place on the 1st floor in the so-called “MZH building” which is located right in front of the tram and bus station “Universität Zentralbereich”. The building consists of eight floors and holds lecture space as well as learning areas and various computer labs for students.

Moreover, the MZH houses different institutes such as the German Research Center for Artificial Intelligence (DFKI), the Center for Multimedia in Teaching (ZMML), the center for networks (ZfN), the Center for Techno-Mathematics (ZeTeM), and is the main building of the Computer Science and Mathematics department (FB3). The rooms reserved for the entire conference are a large lecture hall with space for up to 200 people and additionally smaller seminar rooms with space for 40-70 persons. Furthermore, the lobby on the 1st floor as well as the lounge area at the entrance of the building can be used as presentation space.

## University of Bremen

The University of Bremen, founded in 1971, is well known as the science center in northern Germany and is one of 11 institutions awarded with the title “University of Excellence” in Germany. It is organized in twelve departments. The scientific areas with the most notably reputation are physics, mathematics, industrial engineering, digital media, microbiology, geosciences (especially marine geosciences), European law, and political science. Approximately 20,000 students study at University of Bremen with 51% female and 12% foreign students. The university employs around 3,400 people including 285 professors.

## Dinner

The ICAT-EGVE and EuroVR 2014 Dinner will take place at the „Haus am Walde“ (Kuhgrabenweg 2, 28359 Bremen) at 19.30 h on December 9th. The dinner place is a 15 minute walk from the conference site. Alternatively, you can take bus number 22 and exit at stop „Munte“. From there, it is only a 5 minute walk to the „Haus am Walde“.

