

# FINAL PROGRAM



29 November 2006-1 December 2006



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## **Alea iacta est! – Game-On**

“The die is cast” – a phrase coined by Julius Caesar in 49 B.C. when he crossed the river Rubicon, which was the boundary between ancient Italy and the province of Cisalpine Gaul, could be used as a metaphor for the technological decade we are heading to. We are learning while we are playing – nothing new so far – of course. But the digital technology allows us to play even more complex games in order to understand the complexity of our world much easier and faster than ever. Interactive and networked based communication in a playful, an emergent and narrative environment also lowers the boundary for Knowledge Media Design and Cognitive Design, which extends the socio-technical dynamic process of “semper et ubique” learning.

Structure is the key to complexity! We are programming the code while we are simulating our world. We are trying to optimize our AI routines as good as we can from the point of scientific and social research – whether randomly, empirically or through the rules of chaos retrieved and analyzed – but we should not forget, that these are tools meant to please us and simplify communicating between human beings. True or false – that might be the question at the end of the day.

Content is king! This issue is still most relevant and must be seen as a important matter of concern apart from the entertainment industries interests, or commercial and technological aspects. Where do we go and what do we expect in the future? Beside exploring our world as a gaming environment: what is the scientific knowledge and what are the key qualifications and disciplines we have to teach and our students will have to develop further to improve the benefits for future generations?

Still need a few more design related buzz words? Intermediation – Real Time Interaction – Autonomous Graphic User Interfaces – Consistent Immersion – Game Studies – this keynote will also discuss some of these strategies accompanied by visual examples of student works at the Institute for New Media.

I would like to welcome our guests to this 3 days event in Braunschweig as well as invite them to attend numerous interesting discussion panels, workshops and presentations and encourage everybody to open their minds to the variety of game related topics – no matter wether they are technical, contextual, audio-visual or socio-cultural driven. We have to consider these aspects on an academic level and therefore should use this Game-On platform for an intensive exchange and opportunity for networking between our universities. Alea iacta est!

Prof. Eku Wand  
Institute for New Media (IMF)  
Braunschweig University of Art (HBK)

# GAME-ON'2006 FINAL PROGRAMME

Overhead and LCD Projector are standard

The underlined authors are usually the presenters.

Conference Site: TU Braunschweig, Mühlenpfordtstraße 23, 1st Floor, 38106 Braunschweig Germany. There is a plaza on the first floor where the AIBO demo and coffee breaks will be. The Room for the presentations is IZ 161, first Floor. Tutorial Room is on the Gallery Floor.

## Wednesday, November 29, 2006

09.00 - 17.00 **Registration**

10.30 - 12.30 **Session I**

### TUTORIAL I – ROOM G40

**10.30-12.30** **Session Chairperson:**  
to be announced later

#### TUTORIAL PAPER

**The Myths (and Truths) of Java Games Programming**

Andrew Davison.....5

#### TUTORIAL PART I

**JOGL: Java and OpenGL**

Andrew Davison

12.30 - 14.00 **Lunch Break**

14.00 - 16.00 **Session II**

### TUTORIAL II – ROOM G40

**14.00-16.00** **Session Chairperson:**  
to be announced later

#### TUTORIAL PART II

**JOGL: Java and OpenGL**

Andrew Davison

## Wednesday, November 29, 2006

16.00 - 16.30 **Coffee Break**

16.30 - 17.30 **Session III**

### TUTORIAL III – ROOM G40

**16.30-17.30** **Session Chairperson:**  
to be announced later

**TUTORIAL PART III**  
**JOGL: Java and OpenGL**  
Andrew Davison



17.30 - 18.30

**AIBO Soccer Game and Get-together-Party**

**Thursday, November 30, 2006**

08.30 - 17.00 **Registration**

09.00 - 10.00 **Session IV**

### **KEYNOTE SPEAKER**

**09.00-10.00**

**Session Chairperson:**

**Marcus Magnor, TU Braunschweig, Braunschweig, Germany**

**Alea iacta est! – Game-On**

Ekü Wand

10.00 - 11.00 **Session V**

### **GAME GRAPHICS I**

**10.00-11.00-**

**Session Chairperson:**

**Andrew Davison, Prince of Songkla University, Songkla, Thailand**

**RENDER-01**

**Optimizing the Deferred Shading**

Frank Puig Placeres..... 13

**RENDER-02**

**Effective Multi-resolution Rendering and Texture Compression for  
Captured Volumetric Trees**

Christian Linz, Marcus Magnor, Alex Reche-Martinez and George

Drettakis..... 16

11.00 - 11.30 **Coffee/Tea Break**

10.00 - 11.00 **Session VI**

### **GAME GRAPHICS II**

**11.30-12.30**

**Session Chairperson:**

**Leon Rothkrantz, TU Delft, Delft, The Netherlands**

**RENDER-03**

**Realistic Rendering of Point Cloud Models with Ambient Shadowing  
and Environment Lighting**

Sushil Bhakar, Feng Liu, Thomas Fevens and Sudhir Mudur..... 22

## Thursday, November 30, 2006

### GRAPH-03

**Interactive Learning Interface for Automatic 3D Scene Generation**  
 Yoshiaki Akazawa, Yoshihiro Okada and Koichi Nijima ..... 30

12.00 - 14.15 **Lunch Break**

14.15 - 15.00 **Session VI**

### GAME DEMO

**14.15-15.00** **Session Chairperson:**  
**Ingo Steinhaeuser, Binary Illusions, Braunschweig, Germany**

**Rise of Atlantis demo**  
**Christoph Salge, Christian Lipski and Tobias Mahlmann**

15.00 - 15.30 **Coffee/Tea Break**

15.30 - 17.00 **Session VII**

### ARTIFICIAL INTELLIGENCE IN GAMES I

**15.30-17.00** **Session Chairperson:**  
**Lars Wolf, TU Braunschweig, Braunschweig, Germany**

#### AI-01

**Applying Robotic Techniques for Behavior Recognition in Game Agents**

Verena V. Hafner, Christian Bauckhage and Martin Roth ..... 39

#### AI-02

**AI System Designs for the First RTS-Game AI Competition**

Michael Buro, James Bergsma, David Deutscher, Timothy Furtak,  
Frantisek Sailer, David Tom and Nick Wiebe ..... 44

#### AI-03

**A Multiagent Soccer Simulator based on a Simplified Soccer Model**

Iwein J.J. Borm and L.J.M. Rothkrantz ..... 49

**Thursday, November 30, 2006**

17.00 - 17.30 **Coffee/Tea Break**

17.30 - 18.30 **Session VIII**

### **ARTIFICIAL INTELLIGENCE IN GAMES II**

**17.30-18.30**

**Session Chairperson:**

**Leon Rothkrantz, TU Delft, Delft, The Netherlands**

**AI-04**

**A Guided Genetic Algorithm for the Planning in Lunar Lander Games**

Zhangbo Liu ..... **55**

**DESIGN-01**

**A First Look at Build-Order Optimization in Real-Time Strategy Games**

Alex Kovarsky and Michael Buro ..... **60**

20.00 - 23.00 **Conference Dinner at: Wirtshaus am Kohlmarkt**

## Friday, December 1, 2006

08.30 - 09.00      **Registration**

08.30 - 09.30      **Session IX**

### INVITED SPEAKER

**08.30-09.30**

**Session Chairperson:**

**Lars Wolf, TU Braunschweig, Braunschweig, Germany**

**Is this the real thing? Realism and fun in computer games**

Maic Masuch

09.30 - 10.30      **Session X**

### ROBOTICS GAMING

**09.30-10.30**

**Session Chairperson:**

**Michael Buro, University of Alberta, Edmonton, Canada**

**ROBO-01**

**Robot Soccer Strategy Described By Text File**

Vaclav Snasel, Jan Martinovic, Pavel Kromer and Bohumil Horak ..... **67**

**ROBO-02**

**An Aibo Watchdog**

Zhenke Yang, Bou Tsing Hau and Leon Rothkrantz..... **74**

10.30 - 11.00      **Coffee/Tea Break**

11.00 - 12.30      **Session XI**

### MOBILE GAMING

**11.00-12.30**

**Session Chairperson:**

**Marcus Magnor, TU Braunschweig, Braunschweig, Germany**

**MMO-01**

**On guaranteeing Equity to Mobile Players in a Metaverse**

Stefano Cacciaquerra ..... **81**



**Friday, December 1, 2006**

**MOBILE-01**  
**On Bringing Adventure Games into the Mobile Gaming Scenario**  
Marco Furini..... 86

**MOBILE-02**  
**Using Mobile MultiHop Adhoc Networks for MultiPlayer Games**  
Oliver Wellnitz and Lars Wolf..... 91

12.30 - 12.45            **Session XII**

**CLOSING SESSION AND BEST PAPER AWARD**

**12.30-12.45**            **Session Chairperson:**  
**Philippe Geril, Ghent University, Ghent, Belgium**

12.45 - 14.45        **Lunch Break**

15.30 - 17.30        **Company Visit to DLR Braunschweig**

**SEE YOU NEXT YEAR IN**

**March 1-3, 2007**  
**SHIGA-KYOTO, JAPAN FOR GAMEON ASIA 2007**

**HOUSTON, USA OR MONTREAL CANADA FOR GAMEON NA 2007 (to be confirmed)**

**AND**

**November 2007**  
**BOLOGNA, ITALY FOR GAMEON 2007**

## How to reach the Conference Site:

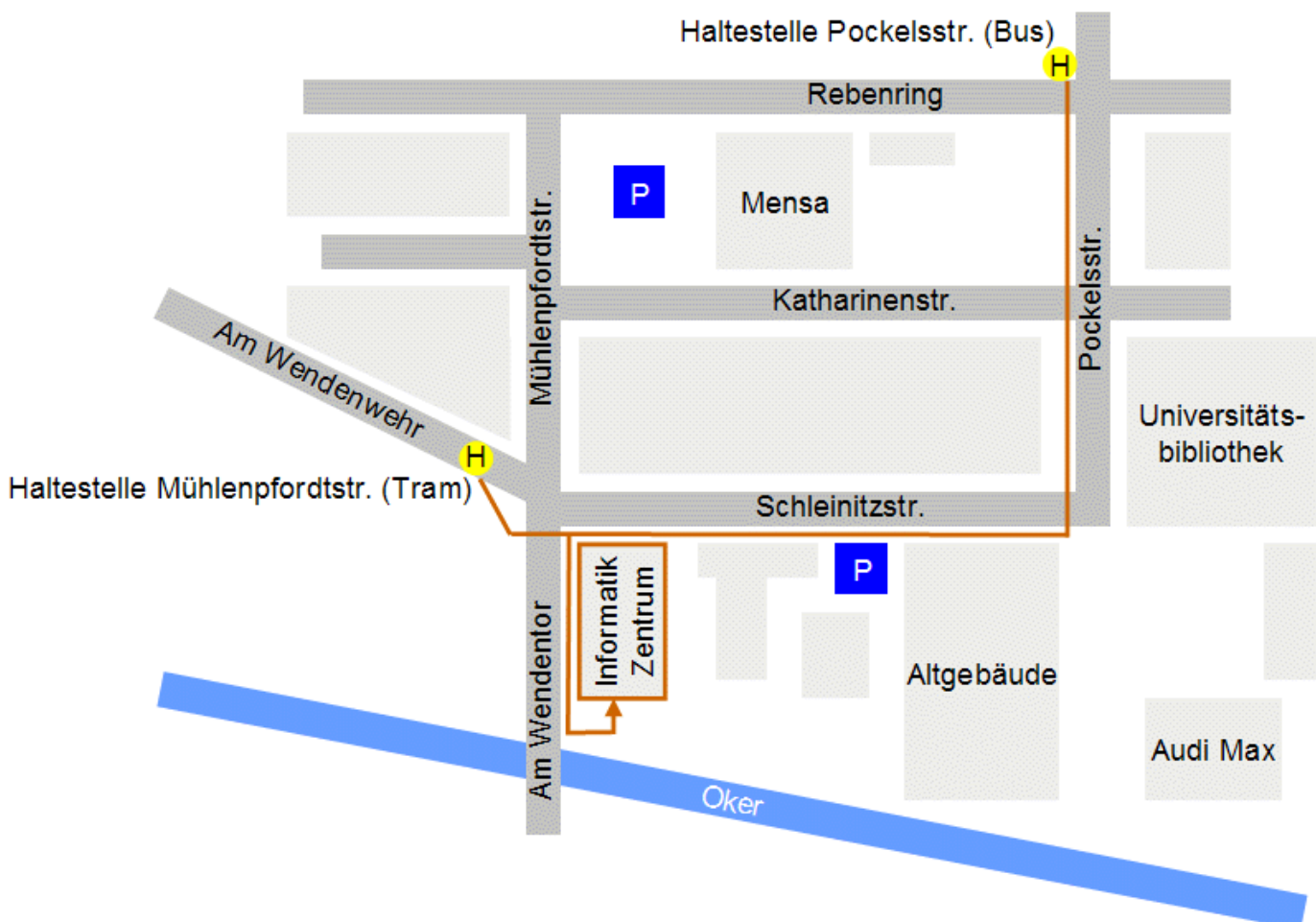
### By Public Transport

**From Hannover Airport (HAJ)** you have to pick train line S5 to Hannover Hauptbahnhof. At Hannover Hauptbahnhof there are several trains to Braunschweig.

**From Frankfurt Airport (FRA)** you have to change train at Frankfurt main station.

**Further train schedules** can be found using the web site of [Deutsche Bahn](http://www.deutschebahn.de). Queries can also be made in English.

**From Braunschweig Hauptbahnhof** you can proceed by taking tram line 2 heading Siegfriedviertel/Ottenroder Straße, leaving at [tram stop Mühlenpfordtstraße](#) right next to the [Computer Science Building](#). Alternatively, you can enter bus line 419 at Braunschweig Hauptbahnhof leaving at [bus stop Pockelsstraße](#) and walk into Pockelsstraße approx. 250 meter south heading University Central Area and then right (west) into Schleinitzstraße approx. additional 250 meters reaching the [Computer Science Building](#) at crossing Schleinitzstraße/Mühlenpfordtstraße



## How to reach the Conference Site:

### By Car

**Approaching from south on highway A7** you have to switch to highway A39 heading Salzgitter. Near Braunschweig you switch to A391 and follow the signs heading Exit Hamburger Straße.

**Approaching from other directions** you should reach Braunschweig on highway 2 and switch at highway crossing Braunschweig Nord to highway A391 heading Kassel (south). Then you have to follow the signs heading Exit Hamburger Straße.

**Leaving the highway at Exit Hamburger Straße** you have to turn right onto Hamburger Straße heading downtown (Stadtmitte). After approx. 600 meters at a huge crossing you have to turn left and at the next crossing right, still heading downtown. Proceeding just 200 meters you'll see the [Computer Science Building](#) at the left side. Parking facilities are quite limited in this area and there are some oneway streets so that it could take some time to find a parking lot nearby.

### At the Computer Science Building

**The main entrance of the Computer Science Building** is at the south west corner of the old tower block. The Institute of Operating Systems and Computer Networks is located on floor 1 (in Germany, this is not the ground level). Look for **IBR** signs. Please note that there's a separate "galerie floor" between the ground floor and the 1st floor.

**EXTRA GAMEON 2006 PROCEEDINGS** are available **on a cash-and-carry basis only at €30**

Extra tickets for the social event and lunches are available from the registration desk. Price: (or equivalent in another currency) for extra tickets

<b>Extra conference dinner</b>	<b>€60</b>
<b>Extra lunch ticket</b>	<b>€15</b>

# NOTES