

# FINAL PROGRAM



9 – 11 September 2014



University of Lincoln  
Lincoln, United Kingdom

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## GAME-ON'2014 FINAL PROGRAMME

Overhead and LCD Projector are standard

The underlined authors are usually the presenters.

Conference Site: Room MB1010, Main Academic Building (MAB), Bradford Campus, University of Lincoln, Lincoln, LN6 7TS. For any local information contact Patrick Dickinson: 📞 Tel. +44- 1522.886.946, ✉ Email: [pdickinson@lincoln.ac.uk](mailto:pdickinson@lincoln.ac.uk) 📠 University Tel: +44-1522.837.302 (Jacky Withey) and +44.1522.886.466 (Jane Chapman) College Office 3<sup>rd</sup> Floor MHT Building, website: <http://www.lincoln.ac.uk>.

Lunches and coffee breaks are held at the University of Lincoln

**Only papers in gray boxes are eligible for the best paper award**

**Tuesday, September 9, 2014**

08.30 - 17.00 **Registration**

09.00 - 09.10 **Welcome:**

**Welcome Address**

Patrick Dickinson, University of Lincoln, Lincoln, United Kingdom

Et al...

09.10 - 10.00 **Session I**

### KEYNOTE SPEAKER

**09.10-10.00**

**Session Chairperson:**

Patrick Dickinson, University of Lincoln, Lincoln, United Kingdom



**GAME\_KEY**

**AI and Games: Using All the Tools in the Toolbox**

Richard Bartle, University of Essex, Colchester, United Kingdom

10.00 - 10.30 **Coffee Break**

## Tuesday, September 9, 2014

10.30 - 12.30 **Session II**

### GAME LAYOUT DESIGN AND STORYTELLING

10.30-12.30

**Session Chairperson:**

Greg Cielniak, University of Lincoln, Lincoln, United Kingdom

**GAMEON\_DES\_08\_AI**

**Developing Player Movement Design Patterns in Multiplayer Video Games**

Richard Lannigan..... **83**

**GAMEON\_AI\_06**

**Procedural Generation of Race Tracks in an Open Source Racing Game**

Jordan Blake and Grzegorz Cielniak ..... **90**

**GAMEON\_STORY\_02\_AI**

**Procedural Story Generation in Games**

Kieran Wagg and Grzegorz Cielniak ..... **97**

**GAMEON\_STORY\_01**

**A Digital Approach to Storytelling with MOGRE**

Almir D.V. Santiago, Paul N.M. Sampaio, Luis R.S. Fernandes

and Valéria Farinazzo Martins ..... **104**

12.30 - 13.30 **Lunch**

13.30 - 15.00 **Session III**

### TUTORIAL

13.30-15.00

**Session Chairperson:**

John Murray, University of Lincoln, Lincoln, United Kingdom

**TUT\_01**

**[Gesture Recognition and Control using Microsoft Kinect](#)**

John C. Murray, University of Lincoln, Lincoln, United Kingdom

15.00 - 15.30 **Coffee Break**

**Tuesday, September 9, 2014**

15.30 - 17.00 **Session IV**

## **GAME HEURISTICS**

**15.30-17.00**

### **Session Chairperson:**

Patrick Dickinson, University of Lincoln, Lincoln, United Kingdom

#### **GAMEON\_DES\_05**

**VOX POPULI - A Case Study of User Comments on Contemporary Video Games in Relation to Video Game Heuristics**

Björn Strååt and Harko Verhagen..... **5**

#### **GAMEON\_DES\_07**

**An Investigation into the use of a Gamified Revision Solution for Primary School Mathematics and its Experimental Comparison to Traditional Revision Methods**

Tom Pendle..... **10**

#### **GAMEON\_SER\_01**

**Playing with Science: Gamised Aspects of Gamification found on the Online Citizen Science Project – ZOONIVERSE**

Anita Greenhill, Kate Holmes, Chris Lintott, Brooke Simmons, Karen Masters, Joe Cox and Gary Graham ..... **15**

17.00 -

**FREE EVENING**

## Wednesday, September 10, 2014

08.30 - 15.30 **Registration**

09.00 - 10.00 **Session V**

### INVITED SPEAKER

**09.00-10.00**

**Session Chairperson:**

Patrick Dickinson, University of Lincoln, Lincoln, United Kingdom



**INV\_01**

**Challenges and Opportunities of Developing for the HTML5 Platform**

Ewan Lamont, Legendary Games, Nottingham, United Kingdom

10.00 - 10.30 **Coffee Break**

10.30 - 12.30 **Session VI**

### GAME PROGRAMMING

**10.30-12.30**

**Session Chairperson:**

Andrew Elliot, University of Lincoln, Lincoln, United Kingdom

**GAMEON\_SER\_02**

**A Proposal to Program Contents for Teaching Children from 0 to 12 Years the Basics of Programming**

Laura L. Dias, Alex F. V. Machado, Lindomar M. de Paulo

and Euler R. Q. de Alvarenga ..... **37**

**GAMEON\_AI\_05**

**Teaching Intelligent Virtual Agents Programming through Simulated Children's Games**

Jakub Gemrot, Martin Černý and Cyril Brom ..... **43**

**GAMEON\_SER\_05**

**A Communication Tool to Support Caretaking of Senior Citizens**

Rajeeka Ponrasa, Teemu Jääskeläinen, Hannu Raappana, Wang Jizhe,

Eeva Leinonen and Petri Pulli ..... **50**

**Wednesday, September 10, 2014**

**GAMEON\_DES\_02**

**Development of a Game with KINECT for the Inclusion of Visually Impaired**

Paulo Roberto C. Faustino, Matheus M. Ramalho, Gabriel B. S. M.

Moreira, Alex F. V. Machado and Lucas D. Silva ..... **55**

12.30 - 13.30 **Lunch**

13.30 - 14.30 **Session VII**

**INVITED SPEAKER**

**13.30-14.30**

**Session Chairperson:**

Patrick Dickinson, University of Lincoln, Lincoln, United Kingdom



**GAMEON\_SER\_06**

[Can we and should we automatically design games? Which and how?](#)

Julian Togelius, IT University of Copenhagen, Copenhagen Denmark

14.30 - 15.00 **Coffee Break**

15.00 - 17.30 **Session VIII**

**IN-GAME SIMULATION AND GAME AI**

**15.00-17.30**

**Session Chairperson:**

Olivier Szymanczyk, University of Lincoln, Lincoln, United Kingdom

**GAMEON\_SIM\_01**

**Utilisation of Video Game Physics Techniques in Real Time Simulation of the Wheel Rail Interface for Predicted Derailment of Rail Vehicles**

Michael Simpson, William Blewitt, Gary Ushaw and Graham Morgan **25**

## Wednesday, September 10, 2014

### GAMEON\_TRAIN\_SER\_01

#### Game Mechanics of 3D Simulation for Surgery Training Suite

Anton Ivaschenko, Anton Skolznev and [Anton Kuzmin](#) ..... 30

### GAMEON\_AI\_02

#### Semantic Structures for RTS Army Prediction

Andreas Stiegler and [Daniel Livingstone](#)..... 65

### GAMEON\_SER\_04

#### Region Load Management and Architectural testing for the Alfil

#### Crowd Simulation Virtual Environment

[César García-García](#), Victor Larios-Rosillo and Hervé Luga..... 70

### GAMEON\_AI\_01

#### Implementing Racing AI using Q-Learning and Steering Behaviours

Blair P. Trusler and [Christopher Child](#) ..... 75

## CONFERENCE DINNER

19.30-21.30..



The conference dinner will be held at the

[Barge on the Brayford](#)

Brayford Wharf North

Lincoln Lincolnshire LN1 1YW



Tel: +44.1522.511.448



Email: [brayfordbarge@btconnect.com](mailto:brayfordbarge@btconnect.com)



**Thursday, September 11, 2014**

08.30 - 10.00 **Registration**

09.00 - 10.00 **Session IX**

## **GAME HARDWARE PROCESSING**

**09.00-10.00**

**Session Chairperson:**

Alladin Ayesh, De Montfort University, Leicester, United Kingdom

**GAMEON\_HARD\_01**

**Accelerating GPU Workload Simulation using Microsoft WARP**

Eric Nilsson..... 115

**SPEC\_01**

**Accelerating Graphics in Virtual Platforms**

Eric Nilsson

10.00 - 10.30 **Coffee Break**

## **CLOSING SESSION AND BEST PAPER AWARD**

**10.30-10.45**

**Session Chairperson:**

Patrick Dickinson, University of Lincoln, Lincoln, United Kingdom

Philippe Geril, EUROSIS-ETI

10.45 - 12.00 **WORKSHOP I**

## **GAME DEVELOPMENT METHODOLOGY - INTRO**

**10.45-12.00**

**Session Chairperson:**

Alladin Ayesh, De Montfort University, Leicester, United Kingdom



**WORK\_01**

**[Game Development Methodology -Agent Oriented Agile Based \(AOAB\) Workshop](#)**

Alladin Ayesh, De Montfort University, Leicester, United Kingdom

## Thursday, September 11, 2014

12.00 - 13.00      **Lunch**

13.00 - 15.00      **WORKSHOP II**

### GAME DEVELOPMENT METHODOLOGY – HANDS-ON

**13.00-15.00**

**Session Chairperson:**

Alladin Ayesh, De Montfort University, Leicester, United Kingdom

**WORK\_01**

[Game Development Methodology -Agent Oriented Agile Based \(AOAB\) Workshop](#)

[Aladdin Ayesh](#), De Montfort University, Leicester, United Kingdom

15.00 - 15.30      **Coffee Break**

15.30 - 16.30      **WORKSHOP III**

### GAME DEVELOPMENT METHODOLOGY – FEEDBACK

**15.30-16.30**

**Session Chairperson:**

Alladin Ayesh, De Montfort University, Leicester, United Kingdom

**WORK\_01**

[Game Development Methodology -Agent Oriented Agile Based \(AOAB\) Workshop](#)

[Aladdin Ayesh](#), De Montfort University, Leicester, United Kingdom

# SESSION CHAIR INFORMATION

## Information for Session Chairs

Session Chairs are chosen on a voluntary basis by proposals by either authors or local committee members or are appointed by the Track Chairs, General Program Chair or General Conference Chair. They are responsible for their assigned session. They make sure their speakers are available, take care of the timing within the session, chair the discussion after each presentation and introduce each speaker based on the CV's given to them by the authors. In case they chair a session featuring **extended papers**, then they are required to distribute and collect the reviews of that or those papers at the beginning and end of the session. If they have time they should also indicate in their papers the number of session participants.



**SEE YOU ALL NEXT YEAR AT  
GAMEON 2015,  
December 2015, University of  
Amsterdam, Amsterdam, The  
Netherlands**

**Proposals for special  
tracks/tutorials/demos can be  
sent in by January 30<sup>th</sup> 2015**

# CONFERENCE MAP LOCATION



## Lincoln City Centre

### Brayford (Main Campus)

- |   |  |
|---|--|
| 1 Accommodation Office<br>Graduate School                                     | 14 Sparkhouse Studios                                      |
| 2 Architecture Building   | 15 Sports Centre   |
| 3 Bridge House  | 16 Student Centre  |
| 4 Business & Law  | 17 Student Village   |
| 5 EMMTEC  | 18 Think Tank  |
| 6 Engineering Building  | 19 University Library                                      |
| 7 Enterprise@Lincoln  | 20 Village Hall  |
| 8 LSAD (coming 2013)  | 21 Witham House  |
| 9 Main Administrative Building  | 22 Chad Varah  |
| 10 Marina Building  | 23 Greestone Building /<br>Tithe Barn                      |
| 11 Media, Humanities & Technology   | 24 Thomas Parker House                                     |
| 12 Lincoln School of Performing Arts<br>LPAC (Lincoln Performing Arts Centre) | 25 Health Centre & Student Services                        |
| 13 Science Centre   | 26 Engine Shed, Students' Union,<br>SOAP Centre, Tower Bar |
|   | 27 College of Science<br>Science & Innovation Park         |

### Key

- Primary Route
- Secondary Route
- Pedestrianised

### University Parking

- Cycle Parking
- P Permit/Pay and Display  
Car Parking
- V Visitor Car Parking  
(Must be booked)
- P Public Car Parking

The Cathedral Quarter is 12  
minutes walk from the Brayford  
Main Campus.



UNIVERSITY OF  
LINCOLN

University of Lincoln  
Brayford Pool  
Lincoln  
LN6 7TS  
UK

Tel: 01522 882000  
Minicom: 01522 886055

This map last updated  
11 Feb 2013

# NOTES

# eurosis

EUROSIS was borne out of discussions with the European Community to set up a new kind of Society, which would be project driven instead of driven by pure membership and conferences.

The aim of the new Society is to set up topic related Technical Committees which link directly to European Projects in the field of computer simulation and related areas and to act as a knowledge pool for future European Networks of Excellence, like MOSAIC.

If you would like to receive more information about EUROSIS, please contact

**Philippe Geril**  
**EUROSIS-ETI**  
**European Simulation Office**  
**Greenbridge Science Park**  
**Ghent University – Ostend Campus**  
**Wetenschapspark 1**  
**Plassendale 1**  
**B- 8400 Ostend**  
**Belgium**  
 **Tel: +32.59.255.330**  
 **Fax: +32.59.255.339**  
 **Email: Philippe.Geril@eurosis.org**

Please send me info on EUROSIS:

Name:.....

Address:.....

.....

.....

Telephone: .....

Fax: .....

Email: .....

# GAMEON'2014 Registration Form

Please legibly print or type and fill out completely. (Check appropriate boxes where necessary)

FIRST NAME	LAST NAME	M.I.
COMPANY OR AFFILIATION		
Mailing address (tick one): <input type="checkbox"/> HOME <input type="checkbox"/> BUSINESS		
STREET		
CITY		
ZIPCODE	COUNTRY	
TELEPHONE	FAX	
E-MAIL		
DATE	SIGNATURE	
1. <input type="checkbox"/> EUROISIS member € 555 Member Number: _____		€ _____
2. <input type="checkbox"/> Members of Sponsor or Affiliate Society € 555		€ _____
3. <input type="checkbox"/> Non-Member Participant € 605		€ _____
4. <input type="checkbox"/> Students, <b>who are not authors</b> but who wish to attend the conference, or <b>ONE DAY PARTICIPANTS</b> pay: € 435		€ _____
(Above registration fees include, one copy of the PROCEEDINGS, all midday meals, cocktail, refreshments, coffees and social program,) One Day Participants and Non-Author Students cannot participate in the conference dinner.		
5. <input type="checkbox"/> Extra Conference Dinner Ticket € 60 <input type="checkbox"/> Lunch and breaks for Companion € 25/day		€ _____
6. <input type="checkbox"/> Extra Conference Proceedings € 40 Cash and Carry		€ _____
7. <input type="checkbox"/> Workshop Only Registration on September 11 Student: <input type="checkbox"/> € 50 <input type="checkbox"/> Other <input type="checkbox"/> € 100		€ _____
<b>TOTAL AMOUNT DUE</b>		€ _____
_____		€ _____
<b><u>ADD BANK CHARGE of € 15 in case you pay by BANK or CHEQUE.</u></b>		€ _____
<b>TOTAL AMOUNT REMITTED</b>		€ _____

- [1] 1) Make payment by **BANK TRANSFER** to account **IBAN CODE: BE03 0014 0814 7784** EUROPEAN TECHNOLOGY INSTITUTE, ETI Bvba, BNP PARIBAS FORTIS BANK, Torhoutsesteenweg 356, B-8400 Ostend, Belgium, **SWIFT/BIC CODE: GEBABEBB MENTION YOUR NAME and GAMEON'2014**
- [1] 2) Or pay by **CHEQUE** and send it to Philippe Geril, EUROSIS-ETI, European Simulation Office, Greenbridge Science Park, Ghent University – Ostend Campus, Wetenschapspark 1, Plassendale 1, B-8400 Ostend, Belgium.
- [1] 3) Or pay by **CREDIT CARD** and fill in the information below:  
 Charge my (tick one): ☐ Visa ☐ Euro/Mastercard ☐ American Express  
 CARD NO: \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ EXP.DATE: \_\_\_\_ / \_\_\_\_

Authorizing Signature:

Print Signature in CAPITALS