

# FINAL PROGRAM



**6 – 8 September 2017**

Institiúid Teicneolaíochta Cheatharlach



At the Heart of South Leinster

**Institute of Technology  
Carlow, Ireland  
Organized and Sponsored by**



## PROGRAMME AT A GLANCE

### September 6

08.30-15.00 Registration  
09.00-09.15 Welcome  
09.15-10.00 Keynote  
10.00-10.30 Coffee Break  
10.30-12.30 Session  
12.30-13.30 Lunch  
13.30-14.30 Session  
14.30-15.00 Coffee Break  
15.00-17.00 Session  
19.00 Social Programme - live music session at a well-known Irish music local bar.

### September 7

09.00-15.00 Registration  
09.00-10.00 Session  
10.00-10.30 Coffee Break  
10.30-12.30 Session  
12.30-13.30 Lunch  
13.30-14.30 Keynote  
14.30-15.00 Coffee Break  
15.00-17.30 Tutorial  
17.30-20.00 Social Programme – Games Galore  
20.30-23.00 Conference Dinner

### September 8

09.00-09.30 Registration  
09.00-10.00 Keynote  
10.00-10.30 Coffee Break  
10.30-12.00 Round Table Discussion  
12.00-12.15 Closing Session

## GAME-ON'2017 FINAL PROGRAMME

Overhead and LCD Projector are standard  
 The underlined authors are usually the presenters.  
 Conference Site: **Room K104 in the Dargan Centre, [Institute of Technology Carlow](#)**, Kilkenny Rd,  
 Moanacurragh, Carlow  
 For any local information contact Joseph Kehoe: 📞 Tel. +353 59 917 5000, ✉ Email:  
[Joseph.Kehoe@itcarlow.ie](mailto:Joseph.Kehoe@itcarlow.ie),  
 Coffee breaks and lunches at the Central Services Building - 1st Floor

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

### Wednesday, September 6, 2017

08.30 - 15.00      **Registration**

09.00 - 09.15      **ROOM K104 – DARGAN CENTRE - WELCOME**

#### **Welcome Address**

College President Dr. Patricia Mulcahy

09.15 - 10.00      **ROOM K104 – DARGAN CENTRE - SESSION I  
 KEYNOTE SPEAKER**

**09.15-10.00**

#### **Session Chairperson:**

**Joseph Kehoe, Institute of Technology Carlow, Carlow, Ireland**



#### **GAME\_KEY\_03**

**Making a Commercial Augmented Reality Game: Lessons Learned**

Demid Tishin, Fun Bakers Studio

## Wednesday, September 6, 2017

10.00 - 10.30 **Coffee Break**

10.30 - 12.30 **ROOM K104 – DARGAN CENTRE - SESSION II  
GAME DESIGN METHODOLOGY**

10.30-12.30

**Session Chairperson:**

**Joseph Kehoe, Institute of Technology Carlow, Carlow, Ireland**

**GAME\_ONL\_1**

**Communication verses Computation: A Survey of Cloud Gaming Approaches**

Robert J. Grigg and René Hexel..... **10**

**GAME\_SER\_DES\_04**

**Connecting Company and Consumer Expectations in Game Design: A Food Sector Case**

Tuomas Ranti, Henna Syrjälä, Tapani N. Joellson, Tuomas Mäkilä, Kaapo Seppälä, Saara Lundén, Mari Sandell and Harri T. Luomala... **26**

**GAME\_METH\_DES\_02**

**Co-Designing a Game Based Learning Platform for Active Ageing: The Case of “Jump”**

Liliana Vale Costa and Ana Isabel Veloso..... **31**

**GAME\_DES\_01**

**Building Successful Games: A Complete Analysis of the Key Features of League of Legends**

Gabriel B. S. M. Moreira, Matheus M. Ramalho, Victor R. Costa, Matheus F.O. Baffa, Leticia G.G. Ribeiro, Alex F. V. Machado and Leandro M. Borges ..... **5**

12.30 - 13.30 **Lunch**

13.30 - 14.30 **ROOM K104 – DARGAN CENTRE - SESSION III  
GAME DESIGN AND GAMIFICATION**

## Wednesday, September 6, 2017

13.30-14.30

**Session Chairperson:**

**Daire O'Broin, Institute of Technology Carlow, Carlow, Ireland**

**GAME\_METH\_DES\_06**

**To Gamify or not to Gamify? Analyzing the Effect of Game Elements to foster Progression and Social Connectedness**

Md Sanaul Haque, Daire O'Broin and Joseph Kehoe..... **43**

**GAME\_METH\_DES\_07**

**The Formation of Studying Habits in Third Level Students through the Use of Gamification**

Gavin Clarke, Joseph Kehoe and Daire O'Broin ..... **51**

14.30 - 15.00

**Coffee Break**

15.00 - 17.00

**ROOM K104 – DARGAN CENTRE - Session IV**

**GAME AI**

15.00-17.00

**Session Chairperson:**

**Oisín Cawley, Institute of Technology Carlow, Carlow, Ireland**

**GAME\_TOOLS\_AI\_01**

**HAIFU (Hybrid Artificial Intelligence for UNITY)**

Juan Luis Berenguel Forte and José Antonio Piedra Fernández ..... **57**

**GAME\_METH\_AI\_03**

**An Evaluation of Fast Multi-Layer Perceptron Training Techniques for Games**

David G. Robertson ..... **62**

**GAME\_AI\_05**

**Procedural Play Generation According to Play Arcs Using Monte-CarloTree Search**

Suguru Ito, Makoto Ishihara, Marco Tamassia, Tomohiro Harada, Ruck Thawonmas and Fabio Zambetta ..... **67**

19.00 -

**SOCIAL PROGRAMME – Live Music Session at a well-known Irish Music local bar**

## Thursday, September 7, 2017

09.00 - 15.00     **Registration**

09.00 - 10.00     **ROOM K104 – DARGAN CENTRE - SESSION V  
SERIOUS GAMING**

**09.00-10.00**

**Session Chairperson:**

**Sanaul Haque, Institute of Technology Carlow, Carlow, Ireland**

**GAME\_SER\_01**

**Global Strategy Game: A Serious Game for Teaching International Business**

Martin Prause and Juergen Weigand ..... **101**

**GAME\_SER\_02**

**Leveraging Personalised Feedback as a Motivation Tool in Active Games**

Joseph O'Connell and Colm O'Riordan ..... **106**

10.00 - 10.30     **Coffee Break**

10.30 - 12.30     **ROOM K104 – DARGAN CENTRE - SESSION VI  
GAME VR AND GAME CHARACTERS**

**10.30-12.30**

**Session Chairperson:**

**Joseph Kehoe, Institute of Technology Carlow, Carlow, Ireland**

**GAME\_VR\_01**

**Interactive Educational Contents Development Framework and its Extension for Web Based VR/AR Applications**

Yoshihiro Okada, Kosuke Kaneko and Ari Tanizawa ..... **75**

# Thursday, September 7, 2017

**GAME\_VR\_06**

**An Experiment Design: Investigating VR Locomotion & Virtual Object Interaction Mechanics**

Daniel P. O. Wiedemann, Peter Passmore and Magnus Moar..... 80

**GAME\_OP\_CHAR\_01**

**Believability Assessment for Fighting Game AI**

Mola Bogdan Georgyy, Maxim Mozgovoy, Toru Ito and Tatsuhiro Rikimaru ..... 87

**GAME\_AFF\_CHAR\_02**

**Affect and Believability in Game Characters – A review of the Use of Affective Computing in Games**

Salma Hamdy and David King.....90

12.30 - 13.30      **Lunch**

13.30 - 14.30      **ROOM K104 – DARGAN CENTRE - SESSION VII  
KEYNOTE**

**13.30-14.30**

**Session Chairperson:**

**Joseph Kehoe, Institute of Technology Carlow, Carlow, Ireland**



**GAME\_KEY\_02**

**[A Lifetime in Games: The Past, Present and Future of the Industry](#)**

John Romero

14.30 - 15.00      **Coffee Break**

**Thursday, September 7, 2017**

15.00 - 17.30 **ROOM K104 – DARGAN CENTRE - SESSION VII  
TUTORIAL**

**15.00-17.30**

**Session Chairperson:**

**Daire O'Broin, Institute of Technology Carlow, Carlow, Ireland**



**GAME\_TUT\_01**

**[Role Play Game Design Workshop](#)**

Brenda Romero

**17-30-20.00**

**Social Programme – GAMES GALORE**

**CONFERENCE DINNER**

**20.30-23.00**




The Conference dinner will be held on Thursday the 7th of September at the

[Woodford Dolmen Hotel](#)

Kilkenny Road

Carlow, Ireland

 Tel: +353 59 914 2002



**Friday, September 8, 2017**

09.00 - 09.30 **Registration**

09.00 - 10.00 **ROOM K104 – DARGAN CENTRE – SESSION X  
KEYNOTE**

**09.00-10.00**

**Session Chairperson:**

**Joseph Kehoe, Institute of Technology Carlow, Carlow, Ireland**



**GAME\_KEY\_01**

**[What it Means from Where I Am](#)**

**Brenda Romero**

10.00 - 10.30 **Coffee Break**

10.30 - 12.00 **ROOM K104 – DARGAN CENTRE – SESSION XI  
ROUND TABLE DISCUSSION**

**10.30-12.00**

**Session Chairperson:**

**Joseph Kehoe, Institute of Technology Carlow, Carlow, Ireland**

**Between Theory and Practice: Improving Interaction between  
Academia and the Games Industry**

## Friday, September 8, 2017

12.00 - 12.15 ROOM K104 – DARGAN CENTRE – SESSION XII  
CLOSING SESSION AND BEST PAPER AWARD

12.00-12.15

**Session Chairperson:**

**Joseph Kehoe, Institute of Technology Carlow, Carlow, Ireland**

**Philippe Geril, EUROSIS-ETI, Ostend, Belgium**

### SOCIAL PROGRAMME INFORMATION

#### Lunches and Coffee breaks



Coffee breaks and lunches will be served at the  
Central Services Building - 1st Floor

[Institute of Technology Carlow](#)  
Kilkenny Rd, Moanacurragh,  
Carlow, Ireland


#### Conference Dinner on the 7th of September



The Conference dinner will be held on Thursday the  
7th of September at the

[Woodford Dolmen Hotel](#)

Kilkenny Road  
Carlow, Ireland

 Tel: +353 59 914 2002

# 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 2018, September 18-  
20, 2018, [Abertay University](http://www.abertay.ac.uk),  
Dundee, Scotland, United  
Kingdom**

**Proposals for special  
tracks/tutorials/demos can be  
sent in by January 30<sup>th</sup> 2018**

# CONFERENCE LOCATION

## Conference Venue



Room K104 in the Dargan Centre

[Institute of Technology Carlow](http://www.itcarlow.ie)

Kilkenny Rd, Moanacurragh,  
Carlow, Ireland

Tel: +353 59 917 5000

[Joseph.Kehoe@itcarlow.ie](mailto:Joseph.Kehoe@itcarlow.ie)

## University Campus Map





# CONFERENCE LOCATION

## Carlow City Map



## How to Reach Carlow

### By Plane

When arriving in Ireland by plane, it can either be at [Dublin](#), [Shannon](#), [Galway Airport](#) or [Cork Airport](#). Dublin Airport is the most convenient of them all.

**Bus from Airport :** Several [companies](#) have bus services departing from the airport

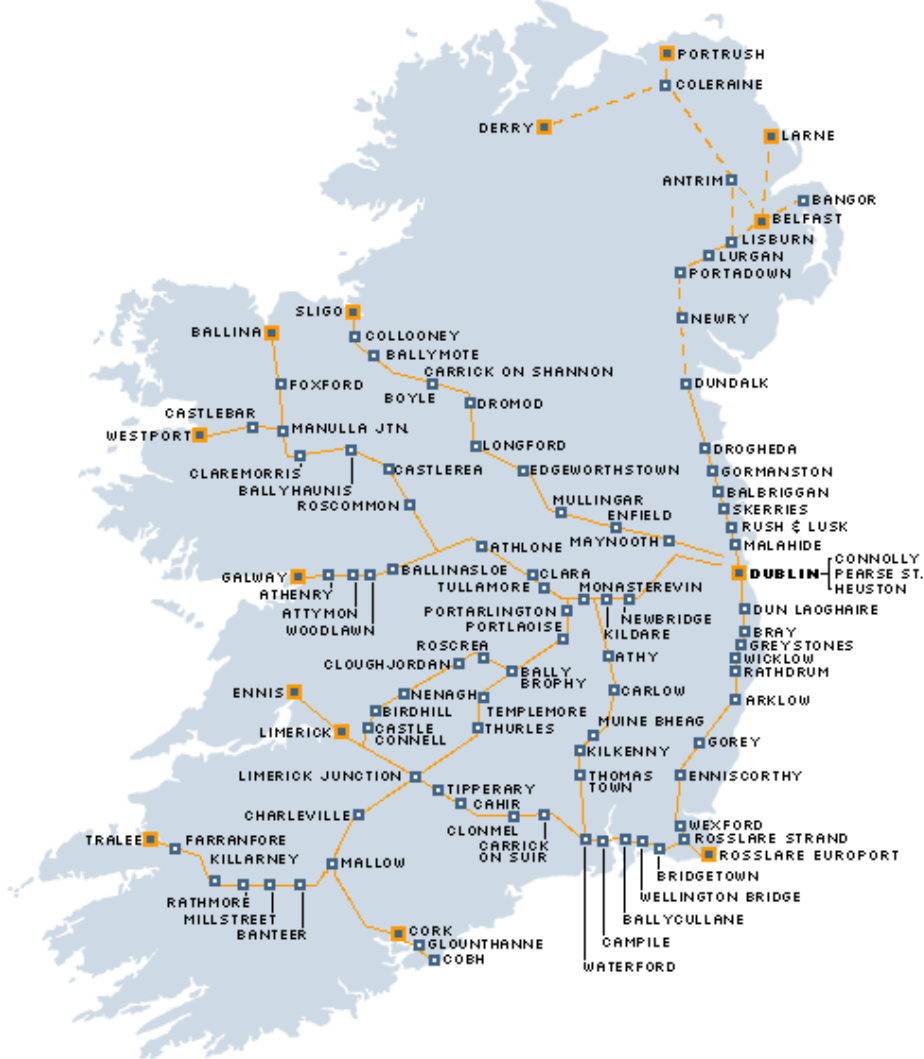
### By Sea

A variety of ferry services ([Stena Line](#) and [Irish Ferries](#)) are available from Britain and continental Europe to Ireland. Ports in Ireland include Dublin Port, Dún Laoghaire Harbour and Rosslare Harbour.

# CONFERENCE LOCATION

## By Rail

When you have arrived in Dublin and you wish to take the train then go to Heuston station from where all Carlow trains depart. There are direct links between Carlow and Dublin, Waterford. The single journey between Carlow and Dublin takes approx. 1 hour. [Carlow railway station](#) is approx. 35 minutes (on foot) from the Institute. See the [Irish Rail](#) site for details.



## By Coach and Bus : National coach services

The National coach services linking Dublin Airport with Carlow Station are the commercial [JJ Kavenagh](#) and the public run [Bus Eireann](#) service.

## By Taxi

These are the companies operating in Carlow:

[Carlow Cabs](#): 📞 + 353 59 9140000

[Ace](#): 📞 +353 59 9133366

[Fast Cabs](#): 📞 + 353 9143088 +353 86 8038553

## EUROSIS Forthcoming Conferences



[ESM'2017](#),  
25-27 October 2017,  
[IST Campus](#), Lisbon,  
Portugal.



[MESM'2017-GAMEON-ARABIA'2017](#),  
20-22 November 2017,  
Dubai



FOODSIM'2018,  
April 8-12, 2018,  
[Catholic University Louvain](#),  
Ghent, Belgium



## EUROSIS Forthcoming Conferences



Scifi-It'2018,  
April 18-20, 2018,  
Bruges, Belgium



ISC'2018,  
June 6-8, 2018,  
[University of Azores](#),  
Ponta Delgada, Portugal

NASTEC'2018, GAMEON-NA'2018, August 2018, [UQAM](#), Montreal, Canada

GAMEON'2018, September 18-20, [Abertay University](#), Dundee, Scotland, United Kingdom



# 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: .....

# GAME-ON'2017 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"/> <b>EUROSIS member € 565 Member Number:</b> _____		€ _____
2. <input type="checkbox"/> <b>Members of Sponsor or Affiliate Society € 565</b>		€ _____
3. <input type="checkbox"/> <b>Non-Member Participant € 610</b>		€ _____
4. <input type="checkbox"/> <b>Students, <u>who are not authors</u> but who wish to attend the conference, or <b>ONE DAY PARTICIPANTS</b> pay: € 450</b>		€ _____
(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"/> <b>Conference Dinner Ticket for Companion € 50</b> <input type="checkbox"/> <b>Lunch Ticket for Companion € 15/day</b>		€ _____
6. <input type="checkbox"/> <b>Extra Conference Proceedings € 40 Cash and Carry</b>		€ _____
VAT Number if applicable: _____		
<b>TOTAL AMOUNT DUE</b>		€ _____
		€ _____
<b>TOTAL AMOUNT REMITTED</b>		€ _____

Pay by **CREDIT CARD** and fill in the information below:

Charge my (tick one):  Visa  Euro/Mastercard  American Express

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