

# FINAL PROGRAM



**27-29 April 2015**

**IST, Lisbon**

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# NOTES

# ECEC'2015 – FUBUTEC'2015 – EUROMEDIA'2015 FINAL PROGRAMME

Overhead and LCD Projector are standard

The underlined authors are usually the presenters.

Conference Site: [Centro de Congressos do IST](http://www.centrodecongressosdoist.utl.pt), Room 02.3, Instituto Superior Técnico  
Campus Alameda, Av. Rovisco Pais, 1, 1049-001 Lisbon,  Tel: +351 218 418 069(ext. 2069),   
Fax: +351 218 418 070,  E-Mail: [ccongressos@ist.utl.pt](mailto:ccongressos@ist.utl.pt)

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

## Monday, April 27, 2015

08.30 - 15.30     **Registration**

09.00 - 09.15     **Welcome**

**Welcome Address**

Paulo Jorge Sequeira Gonçalves, Polytechnic Institute of Castelo Branco, Lisbon, Portugal

09.15 - 10.00     **Session I**

### NEW MEDIA FRONTIERS I

**09.15-10.00**

**Session Chairperson:**

Paulo Jorge Sequeira Gonçalves, Polytechnic Institute of Castelo Branco, Lisbon, Portugal

**WEBTEC\_01**

**Cloud Computing and (new) Mobile Storytelling in the Internet of Things**

Helena Barbas ..... **96**

10.00 - 10.30     **Coffee/Tea Break**

Coffee breaks will be served outside room 02.3

**Monday, April 27, 2015**

10.30 - 12.30 **Session II**

## DATA MANAGEMENT

**10.30-12.30**

**Session Chairperson:**

Paulo Jorge Sequeira Gonçalves, Polytechnic Institute of Castelo Branco, Lisbon, Portugal

**STAT\_01**

**Business Bankruptcy Prediction Based on Hybrid CBR Model**

Bruno Trstenjak and Dzenana Donko ..... 5

**ECEC\_07\_02**

**First Principles Simulation Model identification Based on real Industrial Process Data**

Igor Slastenov, Salimjan Tasanbaev and Victor Dozortsev ..... 11

**ECEC\_08\_02**

**XML-based Modeling Languages and Data Binding for Collaborative Design in Multidisciplinary Teams**

Martin Hoppen, Malte Rast, Michael Schluse, Juergen Rossmann, Lars Pfozter and Thomas Meschede ..... 15

12.30 - 14.00 **Lunch Break**



Lunches will be served at

[Café Imperio](#)

Av. Almirante Reis, 205 A,  
1000-048 Lisbon, Portugal

+351 212 471 765

: [cafeimperio@gmail.com](mailto:cafeimperio@gmail.com)

<https://goo.gl/maps/VqWiW>

**Monday, April 27, 2015**

14.00 - 15.00 **Session III**

**NEW MEDIA FRONTIERS II**

**14.00-15.00**

**Session Chairperson:**

Helena Barbas, Universidade Nova de Lisboa, Lisbon, Portugal

**ECEC\_HE\_01**

**Mediated Reality in Dental Technology**

Christian Steinmetz, Alexander Christ, Reinhard Heister, Marco Grimm, Reiner Anderl, Oliver Sandig and Christof Ellerbrock..... **89**

**MEDIATEC\_01**

**Toward Free and Open Source Film Projection for Digital Cinema**

Nicolas Bertrand, Jean-Denis Durou, Vincent Charvillat

and Carsten Griwodz..... **104**

15.00 - 15.30 **Coffee/Tea Break**

15.30 - 18.00 **Session IV**

**TUTORIAL**

**15.30-18.00**

**Session Chairperson:**

Helena Barbas, Universidade Nova de Lisboa, Lisbon, Portugal



**TUT\_01**

**[Image quality assessment for global illumination methods based on machine learning.](#)**

André Bigand,  
Littoral University  
Calais, France

**FREE EVENING**

## Tuesday, April 28, 2015

08.30 - 15.30 **Registration**

09.00 - 10.00 **Session V**

### VR BASED ENGINEERING

**09.00-10.00**

**Session Chairperson:**

Gerrit Janssens, Hasselt University, Hasselt, Belgium

**ECEC\_03\_01**

**Supporting Product Engineering by Technologies of Virtual and Augmented Reality**

Iris Gräßler and Patrick Taplick ..... **73**

**ECEC\_05\_03**

**A V-Model based Comparison of Systems Engineering Approaches**

Iris Gräßler and Julian Hentze ..... **80**

10.00 - 10.30 **Coffee/Tea Break**

10.30 - 12.30 **Session VI**

### LOGISTICS AND ROUTING OPTIMIZATION

**10.30-12.30-**

**Session Chairperson:**

Dan Predică, SISW Romania, Brasov, Romania

**ECEC\_FAC\_01**

**A Simulation Study of the Make to Stock and Make to Order Production**

Nuno O. Fernandes and Sílvia Carmo-Silva ..... **25**

**ECEC\_FAC\_02**

**Pickup and Delivery Selection with Compulsory Requests**

Katrien Ramaekers, An Caris, Gerrit K. Janssens

and Tabitha Maes ..... **28**

**Tuesday, April 28, 2015**

**ECEC\_FAC\_04**

**A Bi-Objective Simulation-Optimization Approach for solving the Dynamic Vehicles Routing Problem in Bicycle Sharing Systems**

Ahmed A. Kadri, Karim Labadi and Imed Kacem.....**34**

**COMTEC\_01**

**Adaptive Mobile Ad Hoc Networks (AMAN): A QOS Framework for Mobile Ad-Hoc Networks**

Benny M Nyambo, Gerrit K Janssens and Wim Lamotte .....**42**

12.30 - 14.00 **Lunch Break**

14.00 - 15.15 **Session VII**

**ENGINEERING APPLICATIONS**

**14.00-15.15**

**Session Chairperson:**

Paulo Jorge Sequeira Gonçalves, Polytechnic Institute of Castelo Branco, Lisbon, Portugal

**ECEC\_10\_05**

**FEM as a Tool for Concurrent Civil Engineering**

Ion Manea, Ștefan Sorohan, Daniela Vasiliu, Nicolae Vasiliu and Florin Rădoi .....**51**

**ECEC\_10\_03**

**Modern Concurrent Approach for Wind Turbine Drivetrain Dynamics and Durability Prediction**

Dan Predică and Nicolae Vasiliu .....**57**

**ECEC\_06\_01**

**Thermal and Structural Analysis of an Auxiliary Vehicle Heater System**

Rădoi Florin, Sorohan Ștefan, Vasiliu Nicolae and Călinoiu Constantin .....**63**

15.15 - 15.30 **Coffee/Tea Break**

**Tuesday, April 28, 2015**

15.30 - 18.00 **Session VIII**

## TUTORIAL

**15.30-18.00**

**Session Chairperson:**

André Bigand, Littoral University, Calais, France



**TUT\_02**

**Robotic Assisted and Computer-Integrated Surgery**

Paulo Jorge Sequeira Gonçalves,  
Polytechnic Institute of Castelo Branco,  
Lisbon, Portugal

19.30 -

**CONFERENCE DINNER**



The conference dinner will be held at the

[Holiday Inn Lisbon](#)

Avenida de António José de Almeida 28  
Lisboa, Portugal

+351 21 004 4000

Fax: +351.21.793.6672

Email: [hill@grupo-continental.com](mailto:hill@grupo-continental.com)



**Wednesday, April 29, 2015**

08.30 - 09.00 **Registration**

09.00 - 10.00 **VISIT**

### **VISIT TO THE IST LABS**



All participants are invited to come  
and visit the IST Labs

10.00 - 10.30 **Coffee/Tea Break**

10.30 - 12.00 **Session IX**

### **REMOTE EDUCATION**

**10.30-12.00**

**Session Chairperson:**

Paulo Jorge Sequeira Gonçalves, Polytechnic Institute of Castelo Branco, Lisbon, Portugal

**APTEC\_03**

**Augmenting Distance Education Skills Development in Paramedic Science through Mixed Media Visualisation**

Michael Cowling, Emma Moore and James Birt..... **113**

**APTEC\_01**

**Evaluation of the Process Operator Knowledge Formation Resulting from Computer Based Training**

Victor Dozortsev, Vladimir Nazin, Alexander Oboznov, Svetlana Gutsykova and Anastasia Mironova ..... **118**

**APTEC\_05**

**Teaching Fluid Power Systems by Remote Laboratories**

Marius D. Bontos, Daniela Vasiliu, Nicolae Vasiliu

and Bogdan Mihalescu ..... **124**

## Wednesday, April 29, 2015

12.00 - 12.15      **Session X**

### **CLOSING SESSION**

**12.00-12.15-**

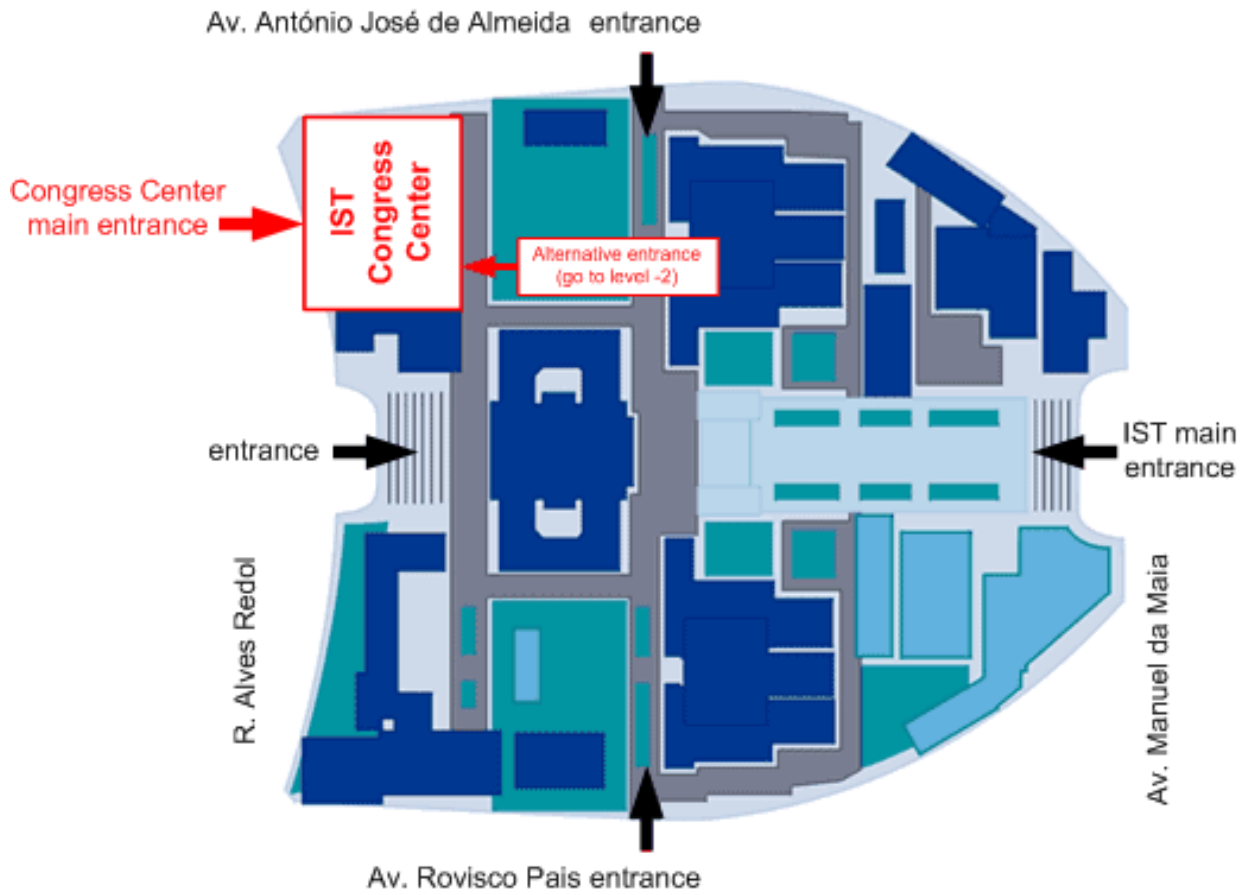
**Session Chairpersons:**

Paulo Jorge Sequeira Gonçalves, Polytechnic Institute of Castelo Branco, Lisbon, Portugal

Philippe Geril, EUROSIS, Ostend, Belgium

Best Paper Award Ceremony and closing statements

# CONFERENCE LOCATION MAP



## ECEC'2016-FUBUTEC'2016-EUROMEDIA'2016

**SEE YOU NEXT YEAR  
AT ECEC'2016- FUBUTEC'2016 - EUROMEDIA'2016  
April 13-15, 2016 – Plymouth University, Plymouth, United Kingdom**



**Suggestions for tracks and workshops can be sent in by  
September 1<sup>st</sup> 2015**

### **ALL SESSION CHAIRPERSONS IN THIS PROGRAM ARE PROVISIONAL**

**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. **If a session chair is not available then the first author takes on the responsibility to chair**

**THE NUMBERS NEXT TO THE PRESENTATIONS DENOTE THE PAGE-  
NUMBERS IN THE PROCEEDINGS. IF NO NUMBERS ARE MENTIONED THEN  
THIS PAPER IS NOT PUBLISHED IN THE PROCEEDINGS**

**THE AUTHORS WHO ARE UNDERLINED ARE NORMALLY THE PRESENTERS**

**PAPERS IN GREY BOXES ARE THE EXTENDED PAPERS ELIGIBLE FOR THE  
BEST PAPER AWARD**

**CHECK OUT THE OTHER EUROSIS EVENTS ON OUR WEBSITE:**

**<http://www.eurosis.org>**

# 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 Society is to set up topic related Technical Committees which will 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**  
**Greenbridge Science Park**  
**Ghent University – Ostend Campus**  
**Wetenschapspark 1**  
**Plassendale 1**  
**B-8400 Ostend Belgium**  
 **Tel: +32.59.255330**  
 **Fax: +32.59.255339**  
 **Email: [Philippe.Geril@eurosis.org](mailto:Philippe.Geril@eurosis.org)**

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

FIRST NAME	LAST NAME	M.I.
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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: € 425</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 Tutorial only € 100</b>		€ _____
6. <input type="checkbox"/> <b>Conference Dinner Ticket for Companion € 60</b> <input type="checkbox"/> <b>Lunch Ticket for Companion € 25/day</b>		€ _____
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<hr style="border: 1px solid red;"/>		
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<b>TOTAL AMOUNT REMITTED</b>		€ _____

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- [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:  
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