

# Editorial Preface

## Special Issue on the Portuguese Meeting of Computer Graphics and Interaction, 2017 Edition (EPCGI)

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### INTRODUCTION

The Portuguese Group for Computer Graphics (GPCG - Grupo Português de Computação Gráfica<sup>1</sup>), the Eurographics Portuguese chapter, is the main promoter for research dissemination in the domains of Computer Graphics, Computer Vision, and Image Processing in Portugal.

The Portuguese Meeting of Computer Graphics and Interaction is the main event where all researchers across Portugal meet to discuss their ideas and promote research partnerships. The meeting has already a long history, with the first one taking place in June 1988 in Lisbon. The meetings are organized locally by Universities, Polytechnics and research institutes in full cooperation with GPCG, providing a full national coverage throughout the years.

This special issue covers the 24<sup>th</sup> edition of these meetings, which took place in Guimarães, in October 2017<sup>2</sup>. The Portuguese Meeting of Computer Graphics and Interaction 2017 (EPCGI 2017 - 24<sup>o</sup> Encontro Português de Computação Gráfica e Interação) was a joint organization between Center for Computer Graphics, with the support of University of Minho, and GPCG.

From a total of 46 submissions, refereed using a double-blind peer review process, they were selected 23 long papers, arranged in seven sessions: Applications, Virtual and Augmented Environments, Visualization, Videogames, Usability and User Experience, Modelling and Simulation, and Computer Vision.

We also had the privilege of having two notable invited keynote speakers; Alessandro Artusi, from the Kios Center of Excellence for Research and Innovation, University of Cyprus, with a communication related to the new image format JPEG XT; and from Nuno Correia Professor at Universidade NOVA de Lisboa and group coordinator at NOVA LINCS, in the areas of Multimodal Systems and Interaction, with a talk devoted to interaction, multimedia and computer graphics.

During the event it was also delivered the “Professor José Luís Encarnação” 2017 award, promoted by GPCG, which annually distinguishes the best journal international paper, developed by a Portuguese student researcher in the field of computer graphics and interaction.

From all contributions to EPCGI 2017, a subset was selected to create this issue and provide a glimpse of the research being carried out in Portugal nowadays in these domains.

## IN THIS ISSUE

For this special issue of IJCICG we invited the authors of a selection of contributions to submit an extended and updated version of their previously presented work. This issue is the result of their work.

The first article “Leveraging Pervasive Games for Tourism: An Augmented Reality Perspective,” is devoted to the development of pervasive games for tourism; in particular those that make use of augmented reality. The authors address the multi-disciplinary nature of the game development and present solutions for media acquisition, interactive storytelling and game-design interface. The article describes a methodology for fast prototyping of a multimedia mobile application dedicated to urban tourism storytelling using augmented reality.

The second contribution, entitled “Mobile AR Performance Issues in a Cultural Heritage Environment,” makes a comprehensive analysis of the use of current mobile augmented reality technologies in the scope of their application in cultural heritage sites. The authors focus on several aspects including performance and user experience and conclude important insights and guidelines regarding performance issues about the adoption and development of mobile augmented reality applications.

The last contribution is entitled “Visualizing Historical Patterns in Large Educational Datasets” and it tackles the problem to conduct analysis on historical educational data, i.e. academic data from courses and degrees including approvals, grades, credits, quality evaluations, etc. The main achievement is a tool based on interactive visualizations that allows the users to explore and conduct an effective analysis of such a huge dataset. Usability and utility were assessed, and the authors claim from the presented results that the developed tool allows perceiving and identifying problems of the different degrees enabling their improvement and consequently reducing course failure.

## FURTHER IN THIS ISSUE

This issue embraces a fourth article selected from the regular pipeline, “The Lives of Others: An interactive installation,” Rui António et al. presents an interactive audiovisual installation based on the concept of voyeuristic that exploits the binomial inside / outside and private / public. The installation “The Lives of Others” aims at questing for a demystification of the separation of the visual apparatus and the mechanism that generates this external system, making both visible and bringing to the public sphere the elements usually hidden in the computer arts artifact.

We expect this journal issue will provide important insights into the research and development underway in the Portuguese computer graphics and arts community. We wish you interesting, playful and delightful read-throughs.

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*Guest Editors*

*IJCICG*

## ACKNOWLEDGMENT

This special issue would not have been possible without the contribution of the authors who accepted to present extended and updated versions of their work previously submitted at the meeting. We are thankful to all the reviewers for their constructive and timely reviews. The organization of the

Portuguese Meeting of Computer Graphics and Interaction, Edition of 2017, including both the local organization committee as well as the Portuguese Group for Computer Graphics, was flawless and an incentive for both authors and reviewers to support us arranging this issue together. Finally, we must thank the editor-in-chief of IJCICG for their invitation, and support, to present this work to a broader audience.

## REFERENCES

Gonçalves, A., Moreira, P. M., & Magalhães, L. (Eds.). (2017). Atas do EPCGI2017 - 24º Encontro Português de Computação Gráfica e Interação. In *Proceedings of the 24<sup>th</sup> Portuguese Meeting of Computer Graphics and Interaction*. Guimarães: Centro de Computação Gráfica.

## ENDNOTES

<sup>1</sup> <http://gpcg.pt/en/>

<sup>2</sup> <http://gpcg.pt/epcgi2017/en/>