

# VISIGRAPP 2018

13th International Joint Conference on Computer Vision,  
Imaging and Computer Graphics Theory and Applications

## PROCEEDINGS

Volume 1: GRAPP

Funchal, Madeira, Portugal

27-29 January, 2018

### EDITORS

Dominique Bechmann  
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# VISIGRAPP 2018

Proceedings of the  
13th International Joint Conference on  
Computer Vision, Imaging and Computer Graphics  
Theory and Applications

Volume 1: GRAPP

Funchal, Madeira - Portugal

January 27 - 29, 2018

Sponsored by  
**INSTICC - Institute for Systems and Technologies of Information, Control and Communication**

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# INVITED SPEAKERS

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## SELECTED PAPERS BOOK

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A number of selected papers presented at GRAPP 2018 will be published by Springer in a CCIS Series book. This selection will be done by the Conference Chair and Program Co-chairs, among the papers actually presented at the conference, based on a rigorous review by the GRAPP 2018 Program Committee members.

# FOREWORD

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This book contains the proceedings of the 13th International Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISIGRAPP 2018) which was organized and sponsored by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC), in cooperation with AFIG and Eurographics.

The proceedings here published demonstrate new and innovative solutions and highlight technical problems in each field that are challenging and worthwhile being disseminated to the interested research audiences.

VISIGRAPP 2018 was organized to promote a discussion forum about the conference's research topics between researchers, developers, manufacturers and end-users, and to establish guidelines in the development of more advanced solutions.

We received a high number of paper submissions for this edition of VISIGRAPP, 321 in total, with contributions from all five continents. This attests to the success and global dimension of VISIGRAPP. To evaluate each submission, we used a double-blind evaluation method where each paper was reviewed by two to six experts from the International Program Committee (IPC).

The IPC selected for oral presentation and for publication as full papers 14 papers from GRAPP, 6 for HUCAPP, 12 papers for IVAPP, and 40 papers for VISAPP, which led to a result for the full-paper acceptance ratio of 22% and a high-quality program. Apart from the above full papers, the conference program also features 83 short papers and 68 poster presentations. We hope that these conference proceedings, which are submitted for indexation by Thomson Reuters Conference Proceedings Citation Index, INSPEC, DBLP, and EI, will help the Computer Vision, Imaging, Visualization and Computer Graphics communities to find interesting research work. Moreover, we are proud to inform that the program also includes four plenary keynote lectures, given by internationally distinguished researchers, namely Carol O'Sullivan (Trinity College Dublin, Ireland), Alexander Bronstein (Israel Institute of Technology, Tel Aviv University and Intel Corporation, Israel), Falk Schreiber (University of Konstanz, Germany and Monash University Melbourne, Australia) and Catherine Pelachaud (CNRS/University of Pierre and Marie Curie, France), thus contributing to increase the overall quality of the conference and to provide a deeper understanding of the conference's interest fields.

Furthermore, a short list of the presented papers will be selected to be expanded into a forthcoming book of VISIGRAPP Selected Papers to be published by Springer during 2018 in the CCIS series. All papers presented at this conference will be available at the SCITEPRESS Digital Library. Two awards are delivered at the closing session, to recognize the best conference paper and the best student paper for each of the four tracks.

The meeting is complemented with the Special Session on Visual Computing in Engineering Applications (VCEA) and two tutorials entitled "Visual Intelligence in Egocentric (First-Person) Vision Systems" and "Understanding Human Motion Primitives".

We would like to express our thanks, first of all, to the authors of the technical papers, whose work and dedication made possible to put together a program that we believe to be very exciting and of high technical quality. Next, we would like to thank the Area Chairs, all the members of the program committee and auxiliary reviewers, who helped us with their expertise and time. We would also like to thank the invited speakers for their invaluable contribution and for sharing their vision in their talks. Special thanks should be addressed to the INSTICC Steering Committee whose invaluable work made this event possible.

We wish you all an exciting conference and an unforgettable stay in Funchal, Madeira, Portugal. We hope to meet you again for the next edition of VISIGRAPP, details of which are available at <http://www.visigrapp.org>.

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