

# Preface

This volume contains a selection of refereed and extended versions of papers presented at the 10th IAPR Workshop on Graphics Recognition (GREC 2013), held in Bethlehem, PA, USA during August 20–21, 2013.<sup>1</sup>

The GREC workshops take place every two years, and aim at providing a unique atmosphere, fostering a very high level of interaction, discussion, and exchange of ideas (distinctly different from classical conference-like presentations) while providing high quality and good impact post-proceedings. It therefore forms an excellent opportunity for researchers and practitioners at all levels of experience to meet colleagues and to share new ideas and knowledge about graphics recognition methods. Graphics recognition is a subfield of document image analysis that deals with graphical entities in written documents, engineering drawings, maps, architectural plans, musical scores, mathematical notation, tables, diagrams, etc.

GREC 2013 has continued the tradition of past workshops held at Penn State University (USA, 1995), Nancy (France, 1997), Jaipur (India, 1999), Kingston (Canada, 2001), Barcelona (Spain, 2003), Hong Kong (China, 2005), Curitiba (Brazil, 2007), La Rochelle (France, 2009), and Seoul (South Korea, 2011), the post-proceedings of which have consistently been published as LNCS volumes by Springer Verlag. In this edition, once again, the GREC workshops have proven to live up to the expectations, and we are grateful to all attendees for contributing actively to the intense and rich level of interaction.

The program was, as usual, organized in a single-track two-day workshop. It comprised several sessions dedicated to specific topics related to graphics in document analysis and graphic recognition. Each session began with an introductory talk by the session chairs, describing the state of the art, putting the presented talks in a more global perspective, and stating the current open challenges of session topics. This introduction was then followed by a number of short talks presenting solutions to some of these questions or presenting results of the speaker's work. Each session was concluded by a panel discussion. This year, the session topics were: spotting, graphics recognition in context, perceptual-based approaches and grouping, low-level processing, content-based image retrieval, structure-based approaches and performance evaluation and ground truthing and, the presentation of the results from the ICDAR/GREC 2013 Competition on Music Scores and the GREC 2013 Arc and Line Segmentation Contest. In these contests, for each contestant, test images and ground truths were prepared in order to have objective performance evaluation conclusions on their methods.

In total, 32 papers were submitted and 29 participants registered for the workshop. After the event, and after extension of the submitted work by the authors based upon

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<sup>1</sup> A similar version of this report was published in the January 2014 IAPR newsletter <http://www.iapr.org/docs/newsletter-2014-01.pdf>.

remarks and discussions during the workshop, all papers were reviewed again. As a final result, 18 of the presented papers plus both reports on the contests were selected for publication in this volume. Represented countries were Brazil, China, France, Germany, India, Japan, Luxembourg, Malaysia, Spain, Switzerland, and USA.

The opening talk was given by Prof. Jean-Marc Ogier from the Université de La Rochelle, France, GREC 2013 Program Chair and IAPR TC-10 Chair, and the closing talk and final panel discussion was chaired by the former IAPR TC-10 Chair Prof. Josep Lladós from the Universitat Autònoma de Barcelona, Spain.

We would particularly like to thank the authors for the quality of their submitted papers, the contest organizers for their time, great efforts, and availability, the Program Committee members for having contributed in a timely and professional manner to the reviewing process, and the session chairs for their insight and dedication. We also wish to gratefully acknowledge the group of organizers at Lehigh University for their great help in the local arrangements of the workshop.

The 11th IAPR Workshop on Graphics Recognition (GREC 2015) is planned to be held in Tunisia.

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