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Bart Lamiroy · Rafael Dueire Lins (Eds.)

# Graphic Recognition

## Current Trends and Challenges

11th International Workshop, GREC 2015

Nancy, France, August 22–23, 2015

Revised Selected Papers

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## Preface

As for all previous editions, the 11th International Workshop on Graphics Recognition (GREC 2015) was organized by IAPR TC-10. The workshop, which was held August 22–23, 2015, took place in Nancy, France, after having been preventively relocated twice, following the Bardo and Sousse terrorist attack at the originally planned locations in Tunisia. It is extremely regretful that the initial chosen locations for GREC 2015 had to be cancelled for safety reasons, following the tragic terrorist strikes there. We warmly extend our sympathy and support to the Tunisian people and especially to our Tunisian colleagues who actively supported and contributed to the relocation in Nancy, France, notwithstanding all efforts made for a successful event in Tunis. We sincerely hope GREC will be held in Tunisia in the near future. Although GREC in Nancy was a success, subsequent events have unfortunately shown that relocating to France could have been just as dreadful.

GREC is organized every two years, in close conjunction with ICDAR, and aims at providing a unique atmosphere, fostering a very high level of interaction, discussion, and exchange of ideas (distinctly different from classic conference-like presentations) while providing high-quality and good-impact post-proceedings. It therefore represents 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 2015 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), Seoul (South Korea, 2011), and Lehigh University (USA, 2013).

With this edition, once again, the GREC workshops have proven to live up to the series expectations: The level of interaction was intense and rich, despite the sad context of the relocation.

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.

For this edition, the program consisted of 19 scientific presentations and one contest report. It contained both classic and emerging topics of graphics recognition. Session topics included symbol spotting, recognition in context, perceptual-based approaches and

grouping, low-level processing, off-line to on-line and interactive systems, structure-based approaches, performance evaluation and ground truthing, and content-based retrieval.

We would like to thank the SAGE research group in Sousse, for their initial commitment, strong contributions, and their kind help transferring the event to Tunis: Amira Bacha, Anis Kricha, Bassem Seddik, Hédi Yazid, Imen Abroug Abdelghani, Karim Kalti, Khawla Jayech, Mohamed Ali Mahjoub, Mohamed Aymen Charrada, Mohamed Neji Maâtouk, Ramzi Chaieb, and Sami Gazzah.

The current post-proceedings contain the reviewed and extended versions of ten selected works presented at the workshop.

Enjoy!

December 2016

Rafael Dueire Lins  
Bart Lamiroy

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