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Pattern Recognition

37th German Conference, GCPR 2015
Aachen, Germany, October 7–10, 2015
Proceedings

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Germany

Peter Gehler
MPI for Intelligent Systems
University of Tübingen
Tübingen
Germany

Bastian Leibe
Computer Vision Group
Visual Computing Institute
RWTH Aachen
Aachen
Germany

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Preface

It was a pleasure to organize the 37th German Conference on Pattern Recognition (GCPR), which was held in Aachen during October 7–10, 2015. This time, GCPR was co-located with the 20th International Symposium on Vision, Modeling and Visualization (VMV).

For GCPR 2015, we received 108 submissions from institutions of 28 countries. Each paper underwent a rigorous double-blind reviewing procedure by at least three Program Committee (PC) members, sometimes with support from additional experts. Afterward, one of the involved PC members served as moderator for a discussion among the reviewers and prepared a consolidation report that was also forwarded to the authors in addition to the reviews. The final decision was made during a PC meeting held in Aachen based on all reviews, discussions, and, if necessary, additional reviewing. As a result of this rigorous reviewing procedure, 45 of the 108 submissions were accepted, which corresponds to an acceptance rate of 42 %. Finally, these accepted papers were presented either as oral talks (18) or posters (27) in a single-track program. All accepted papers are published in these proceedings and cover the entire spectrum of pattern recognition, machine learning, image processing, and computer vision. Following the tradition of this conference series, GCPR 2015 also featured a Young Researchers Forum to promote scientific interaction between excellent young researchers and our community. From eight submissions, five works were selected for a poster presentation and one was additionally included as a short paper in the proceedings.

In addition, we were very happy to have three internationally renowned researchers as our invited speakers to present their work in three fascinating areas: Andrew Blake (Microsoft Research Cambridge, UK), Niloy J. Mitra (University College London, UK), and Max Welling (University of Amsterdam, The Netherlands and University of California Irvine, USA). The technical program was complemented by one workshop and one tutorial. The Workshop on New Challenges in Neural Computation (NC2) was organized by Barbara Hammer (Bielefeld University), Thomas Martinetz (University of Lübeck), and Thomas Villmann (University of Applied Sciences Mittweida). The Tutorial on Causality was held by Jonas Peters (Max Planck Institute for Intelligent Systems).

The success of GCPR 2015 would not have been possible without the support of many institutions and people. First of all, we would like to thank all authors of the submitted papers and the invited speakers for their contributions. All PC members and additional reviewers deserve great thanks for their timely and competent reviews. We are grateful to our sponsors for their support as well. Finally, special thanks go to the

Proceedings and Website Chairs and the Local Organizing Committee. We would like to thank Springer for giving us the opportunity of continuing to publish GCPR proceedings in the LNCS series.

October 2015

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Awards 2014

Deutscher Mustererkennungspreis 2014

The “Deutscher Mustererkennungspreis 2014” was awarded to

Prof. Dr. Juergen Gall

for his outstanding work on interacting particle systems and random forests with applications to human pose estimation, object detection, and action recognition.

GCPR 2014

Best Paper Award

Daniel Scharstein, Heiko Hirschmüller, York Kitajima, Greg Krathwohl, Nera Nesic, Xi Wang, and Porter Westling:

High-Resolution Stereo Datasets with Subpixel-Accurate Ground Truth

Honorable Mention

Dmitry Laptev and Joachim M. Buhman:

Convolutional Decision Trees for Feature Learning and Segmentation

Rene Ranftl and Thomas Pock:

A Deep Variational Model for Image Segmentation

Young Researchers Forum

Ilya Kostrikov, RWTH Aachen University:

Random Forests for 3D Pose Estimation from 2D Images

Christian Rupprecht, TU Munich:

Image Segmentation in Twenty Questions

Miroslava Slavcheva, TU Munich:

Implicit-to-Implicit Registration for Real-Time 3D Reconstruction from RGB-D Data

David Stutz, RWTH Aachen University:

Superpixel Segmentation: An Evaluation

Felix Widmaier, University of Tübingen:

Robot Arm Tracking with Random Decision Forests

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