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Volker Roth · Thomas Vetter (Eds.)

# Pattern Recognition

39th German Conference, GCPR 2017  
Basel, Switzerland, September 12–15, 2017  
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# Preface

It was an honor and a pleasure to organize the 39th German Conference on Pattern Recognition (GCPR) in Basel during September 12–15, 2017. This year’s call for papers resulted in 60 submissions. Each paper underwent a rigorous double-blind reviewing procedure by typically three Program Committee (PC) members. Afterwards, 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 reviewers. The final decision was made during a PC meeting held in Basel based on all reviews, discussions, and, if necessary, additional reviewing. As a result of this reviewing procedure, 33 submissions were accepted. The organizers selected 16 papers for oral presentation in a single-track program and 17 for poster presentation. In accordance with the conference tradition, we organized a Young Researchers Forum to promote scientific interaction between outstanding young researchers and our community.

The accepted papers cover the entire spectrum of pattern recognition, machine learning, image processing, and computer vision. We thank all authors for their submissions to GCPR 2017 and all reviewers for their valuable assessment. In addition to the presentations from the technical program we were also happy to welcome three internationally renowned researchers as our invited speakers to give a keynote lecture at GCPR 2017: Marcello Pelillo (Ca’ Foscari University of Venice, Italy), Pietro Perona (California Institute of Technology, Pasadena, USA), and Kilian Q. Weinberger (Cornell University, Ithaca, USA). The technical program was complemented by a workshop on New Challenges in Neural Computation and by two tutorial sessions: one on Interpretable Machine Learning and one on Medical Image Analysis.

The success of GCPR 2017 would not have been possible without the support of many institutions and people. We would like to thank MVTec Software GmbH, Adobe, the University of Basel, Kanton Basel-Stadt, and DAGM (Deutsche Arbeitsgemeinschaft für Mustererkennung e.V.) for their sponsorship. Special thanks go to the members of the Technical Support and the Local Organizing Committee. Finally, we are grateful to Springer for giving us the opportunity of continuing to publish GCPR proceedings in the LNCS series.

This year’s conference city, Basel, is located where the Swiss, French, and German borders meet. Almost 40 museums make Basel the city with the highest density of museums in the country. Founded in 1460, the University of Basel is the oldest university in Switzerland and has a history of success going back over 550 years. As one of the most dynamic and productive economic regions in Europe, Basel is a key location for the life-sciences industry. However, Basel is also a very green city, with several parks, the botanical gardens, the banks of the Rhine, and its famous zoo.

July 2017

Volker Roth  
Thomas Vetter

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# Awards 2016

## German Pattern Recognition Award

The **Deutscher Mustererkennungspreis 2016** was awarded to Sebastian Nowozin for his outstanding work on Inference in Structured Probabilistic Models with Applications to Computer Vision.

## DAGM MVTec Award

The **DAGM MVTec Award 2016** was awarded to Christoph Vogel for his dissertation on Robust and Accurate 3D Motion Estimation under Adverse Conditions.

## GCPR Awards 2016

The **GCPR Best Paper Award 2016** was awarded to David Hafner, Peter Ochs, Joachim Weickert, Martin Reißel, and Sven Grewenig for the paper FSI Schemes: Fast Semi-iterative Solvers for PDEs and Optimization Methods.

## GCPR 2016 Honorable Mentions

Jonas Uhrig, Marius Cordts, Uwe Franke, and Thomas Brox: Pixel-Level Encoding and Depth Layering for Instance-Level Semantic Segmentation.

Manuel Ruder, Alexey Dosovitskiy and Thomas Brox: Artistic Style Transfer for Videos.

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