

Deutscher Mustererkennungspreis 2014

Laudatio for Dr. Jürgen Gall

The German Pattern Recognition Prize 2014 is awarded to Jürgen Gall in recognition of his outstanding and groundbreaking scientific work in the areas of **interacting particle systems** and **random forests** with applications to human pose estimation, object detection, and action recognition.

Dr. Jürgen Gall works for more than eight years in the field of computer vision. His research covers both general algorithmic contributions but also application-specific systems using probabilistic models and algorithms that are established in probability theory and machine learning. In particular, he has specialized on interacting particle systems, which approximate a flow of distributions by a finite number of weighted random variable that interact with each other over time. Secondly, he has explored random forests, which are ensembles of randomized decision trees that learn a mapping from an input sample like an image patch to a distribution over a parameter space. Based on these methods, he has developed state-of-the-art systems for human pose estimation, object detection, and action recognition. In contrast to most existing works that have treated these three challenges as separate tasks, he has focused on modeling and exploiting their commonalities.

Jürgen Gall has an impressive publication record that includes 31 publications at highly renowned conferences and journals. The google scholar scores show how well his works are received in the computer vision community. E.g. his works on Hough Forests (TPAMI-11, CVPR-10, MIA-13) accumulate to more than 600 citations, followed by two Motion Capture Papers at IJCV-10 and CVPR-09) which sum up to more than 300 citations. These works are well suited candidates for research which will withstand the test of time. Additionally his works found their way to neighboring scientific communities in Mathematics, Machine Learning and Medical Image analysis. Finally, he is not only an open-minded, excellent and influential researcher, he is also a very supportive and active DAGM member.