

# Deutscher Mustererkennungspreis 2015

## Laudatio for Prof. Stefanie Jegelka

The German Pattern Recognition Award 2015 is awarded to Stefanie Jegelka, currently an Assistant Professor at the Massachusetts Institute of Technology, in recognition of her outstanding and groundbreaking contributions in the area of **submodular optimization in machine learning and computer vision**.

Prof. Stefanie Jegelka has been active in the area of machine learning and computer vision for ten years. In her research, she develops new theory and algorithms for solving combinatorial optimization problems arising in learning and inference tasks, and also pursues their practical applications. In particular, Stefanie Jegelka has made fundamental contributions to large-scale, constrained submodular optimization problems arising in machine learning and computer vision. As a prime example serves her work on cooperative cuts – generalizations of graph cuts, where the cost of a set of edges is not simply the sum of weights, but a general submodular function. This approach allows her to model diminishing costs when cutting similar edges, resulting in substantially improved accuracy in difficult, fine-grained, high-resolution segmentation tasks. She has furthermore made important contributions to large-scale submodular minimization, developing algorithms that empirically scale far better than existing algorithms at no or little cost in accuracy.

Stefanie Jegelka has an impressive publication record including more than 25 publications at premier machine learning and computer vision conferences and journals. Her work on semi-differential based submodular optimization received the Best Paper Award at ICML 2013. Her research has already resulted in a substantial amount of follow-up work, and has a high chance to stand the test of time. She also very actively contributes to the community by giving tutorials at summer schools and conferences such as CVPR, ICML and DAGM, and by organizing workshops.

Please join me to welcome Stefanie Jegelka for her award lecture.