EMNLP 2017

# The Conference on Empirical Methods in Natural Language Processing

# Proceedings of the 2nd Workshop on Structured Prediction for Natural Language Processing

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# Introduction

Welcome to the Second workshop on structured prediction for NLP!

Many prediction tasks in NLP involve assigning values to mutually dependent variables. For example, when designing a model to automatically perform linguistic analysis of a sentence or a document (e.g., parsing, semantic role labeling, or discourse analysis), it is crucial to model the correlations between labels. Many other NLP tasks, such as machine translation, textual entailment, and information extraction, can be also modeled as structured prediction problems.

In order to tackle such problems, various structured prediction approaches have been proposed, and their effectiveness has been demonstrated. Studying structured prediction is interesting from both NLP and machine learning (ML) perspectives. From the NLP perspective, syntax and semantics of the natural language are clearly structured and advances in this area will enable researchers to understand the linguistic structure of data. From the ML perspective, a large amount of available text data and complex linguistic structures bring challenges to the learning community. Designing expressive yet tractable models and studying efficient learning and inference algorithms become important issues.

Recently, there has been significant interest in non-standard structured prediction approaches that take advantage of non-linearity, latent components, and/or approximate inference in both the NLP and ML communities. Researchers have also been discussing the intersection between deep learning and structured prediction through the DeepStructure reading group. This workshop intends to bring together NLP and ML researchers working on diverse aspects of structured prediction and expose the participants to recent progress in this area.

This year we have eight papers covering various aspects of structured prediction, including neural networks, deep structured prediction, and imitation learning. We also invited four fantastic speakers. We hope you all enjoy the program!

Finally, we would like to thank all programming committee members, speakers, and authors. We are looking forward to seeing you in Copenhagen.

**Organizers:**

Kai-Wei Chang, UCLA
Ming-Wei Chang, Microsoft Research
Alexander Rush, Harvard University
Vivek Srikumar, University of Utah

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