CSTFRS 2021

ESSLLI 2021 Workshop on Computing Semantics with Types, Frames and Related Structures

Proceedings of the Workshop

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Preface

The series of workshops on Computing Semantics with Types, Frames and Related Structures (CSTFRS) is intended as a forum for people interested in structured representations of linguistic information, especially from a computational perspective. A first edition of the workshop took place in Gothenburg as part of IWCS 2019. The second edition, whose proceedings are presented here, was hosted by the 32nd European Summer School in Logic, Language and Information (ESSLLI 2021).

Structured representations play a central role in the study of natural language semantics, especially in cognitively oriented approaches in the tradition of Fillmore, Jackendoff, and Langacker. Formal semantics in the Montague-tradition, on the other hand, is less concerned with the structure of representations but with logical expressions, truth conditions, and model-theoretic interpretations. In recent years, however, there has been a growing body of research which aims to integrate structured entities into formal semantic accounts. Important developments in this field are the uses of rich type systems and frame-based representations in lexical and compositional semantics. A key feature of these approaches is that semantic representations can themselves be used to compute semantic content and have yielded a way of combining compositional and lexical semantics by providing a single representational system for different modalities.

The topics of this workshop cover both foundational issues (e.g. developments in rich type theoretical semantics) and applications of theories that employ structured representations to specific linguistic phenomena.

We would like to thank the organizers of ESSLLI 2021 for hosting our workshop online.

Stergios Chatzikyriakidis
Rainer Osswald

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Invited Speakers

Jean-Philippe Bernardy, University of Gothenburg (Sweden)
Robin Cooper, University of Gothenburg (Sweden)
Justyna Grudzińska, University of Warsaw (Poland)

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Jean-Philippe Bernardy (Invited Speaker)

11:30–12:10 *On the Dual Interpretation of Nouns as Types and Predicates in Semantic Type Theories*
William Babonnaud

12:15–12:55 *Analytical, Symbolic and First-Order Reasoning within Neural Architectures*
Samuel Ryb & Marten van Schijndel

14:00–14:40 *Donkey Anaphora: Type-Theoretic Semantics with Both Strong and Weak Sums*
Zhaohui Luo

14:45–15:30 *General discussion*

Tuesday, July 27

09:45–11:15 *So what's all this structure good for? Some uses of record types in TTR*
Robin Cooper (Invited Speaker)

11:30–12:10 *Improving DRS Parsing with Separately Predicted Semantic Roles*
Tatiana Bladier, Gosse Minnema, Rik van Noord & Kilian Evang

12:15–12:55 *Semantic Learning in a Probabilistic Type Theory with Records*
Staffan Larsson, Jean-Philippe Bernardy & Robin Cooper

14:00–15:30 *Dependent Types in Action: An Investigation into a Connection between Preposition Senses and the Logic of Scope*
Justyna Grudzinska (Invited Speaker)

16:00–16:40 *Feature Structures in the Wild: A Case Study in Mixing Traditional Linguistic Knowledge Representation with Neural Language Models*
Gerald Penn & Ken Shi

16:45–17:30 *General discussion and concluding remarks*