

CMCL 2020

**The Workshop on Cognitive Modeling and Computational
Linguistics**

Proceedings of the Workshop

November 19, 2020

Online event



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Introduction

Welcome to the Workshop on Cognitive Modeling and Computational Linguistics (CMCL)!

Since the early editions, CMCL has been a reference point for the research at the intersection between Computational Linguistics and Cognitive Science. The edition of this year, because of the COVID-19 pandemic, will not be held in Punta Cana as we originally planned, but it will be the first to be held entirely online. Despite this, we still received 17 regular paper submissions and 10 were accepted for publication (the total acceptance rate is 58%, the same of the 2019 edition), proving that CMCL is followed by a strong and active research community. We also received 2 cross-submissions, and we accepted one for presentation at the workshop.

The program of this year is rich, stimulating and diversified, with topics ranging from language acquisition to models of linguistic alignment and language disorders. We would like to deeply thank all the reviewers of our PC, without whom we would not have been able to select the best papers for our program.

We also thank Prof Suzanne Stevenson and Prof Richard Futrell, for having accepted our invitation to deliver the keynote speeches.

Finally, thanks to our sponsors, we were able to offer registration fee waivers to PhD students and to offset the costs of participation of the invited speakers: we gratefully acknowledge support from the Laboratoire Parole et Langage (LPL), Aix-en-Provence (France) and from the Japan Society for the Promotion of Science.

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Victoria Yaneva (University of Wolverhampton)
Yao Yao (Hong Kong Polytechnic University)
Frances Yung (Saarland University)

Invited Speakers:

Richard Futrell (University of California Irvine)
Suzanne Stevenson (University of Toronto)

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Conference Program

November 19, 2020

9:30–9:45 **Introduction**

9:45–10:45 **Keynote Talk**

How Languages Carve Up the World: Cognitive Explanation through Computational Modeling

Suzanne Stevenson

10:45–11:15 **Break**

11:15–12:15 **Session 1: Oral Presentations**

What Determines the Order of Verbal Dependents in Hindi? Effects of Efficiency in Comprehension and Production

Kartik Sharma, Richard Futrell and Samar Husain

Images and Imagination: Automated Analysis of Priming Effects Related to Autism Spectrum Disorder and Developmental Language Disorder

Michaela Regneri, Diane King, Fahreen Walji and Olympia Palikara

12:15–13:30 **Lunch Break**

November 19, 2020 (continued)

13:30–13:45 Poster Booster

13:45–14:45 Poster Session

Production-based Cognitive Models as a Test Suite for Reinforcement Learning Algorithms

Adrian Brasoveanu and Jakub Dotlacil

Evaluating Word Embeddings for Language Acquisition

Raquel G. Alhama, Caroline Rowland and Evan Kidd

Guessing the Age of Acquisition of Italian Lemmas through Linear Regression

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Word Co-occurrence in Child-directed Speech Predicts Children's Free Word Associations

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Thomas Misiak, Benoit Favre and Abdellah Fourtassi

Conditioning, but on Which Distribution? Grammatical Gender in German Plural Inflection

Kate McCurdy, Adam Lopez and Sharon Goldwater

Probabilistic Weighting of Perspectives in Dyadic Communication (cross-submission)

Rachel A Ryskin, Suzanne Stevenson, Daphna Heller

Pressures on Language Emergence: Least Effort, Object Constancy and Frequency (Findings of EMNLP)

Diana Rodriguez Luna, Edoardo Maria Ponti, Dieuwke Hupkes, Elia Bruni

Inferring Symmetry in Natural Language (Findings of EMNLP)

Chelsea Tanchip, Lei Yu, Aotao Xu, Yang Xu

November 19, 2020 (continued)

14:45–15:45 Session 2: Oral Presentations

Learning Pronoun Case from Distributional Cues: Flexible Frames for Case Acquisition

Xiaomeng Ma, Martin Chodorow and Virginia Valian

Probabilistic Predictions of People Perusing: Evaluating Metrics of Language Model Performance for Psycholinguistic Modeling

Yiding Hao, Simon Mendelsohn, Rachel Sterneck, Randi Martinez and Robert Frank

15:45–16:45 Keynote Talk

Information Processing, Communication, and Word Order

Richard Futrell

16:45–17:00 Closing Remarks

