Friday PhD Talks 2024-2025
#21
Sasha Ceolho
28th May

Natural Language Processing and Human-Robot Interaction

Abstract:

I have always been interested in the intersection of linguistics and computational linguistics, and I aim to integrate both fields in my research. The first study I would like to present focuses on human–robot interaction and investigates the use of speech acts in conversations with robots. This research is based on a Wizard-of-Oz experiment involving a simple collaborative task—either with another human or with a robotic arm. The robot is telemanipulated by a researcher using a 3D mouse and responds with pre-defined utterances.

The second study applies a sentiment analysis approach to a science communication database, using the VADER library in Python. With the increasing prevalence of positive language in scientific discourse, this study compares sentiment trends in science communication before and after the COVID-19 pandemic.

Finally, I will discuss ongoing research and software development at the Chair of English and Digital Linguistics at TU Chemnitz, where we are working on building sustainable software for language learning and research.

Bionote:

I obtained my Bachelor's degree in Psychology from St. Xavier's College in Mumbai, India. Following which, I pursued a Master's degree in Psychology at Annamalai University in Tamil Nadu, India. My interest in German as a foreign language led me to pursue the *Grünes Diplom* (German Teacher Training Program) at the Goethe-Institut in Mumbai, where I also worked as a German language teacher and teacher's trainer for 5 years.

In the year 2019 I received the Confucius Institute Scholarship to attend the C1 course at the Tianjin University of Technology. I have also taught HSK 2 and HSK 3 Mandarin courses at the Confucius Institute in Mumbai.

In 2023 I completed my Master's in Applied Linguistics at the University of Erfurt with a scholarship from the Friedrich Naumann Stiftung. My Master's Thesis compared the processing and understanding of the genitive vs. dative cases in *leichte Sprache* (easy German texts) by

learners of German as a foreign language.

Currently I am a research associate at the TU Chemnitz as well as Fraunhofer Institute for Machine Tools and Forming Technology.