Colloquium „Statistische Methoden in der empirischen Forschung“

When: 26. Oktober 2020, 17:00 – 18:30
Where: Online

Interplay between COVID-19 and social dynamics on the Internet

Andrzej Jarynowski[1], **Alexander Semenov**[2], **Vitaly Belik**[1]

[1]System Modeling Group, Institute for Veterinary Epidemiology and Biostatistics, Freie Universität Berlin
[2]Herbert Wertheim College of Engineering, University of Florida, Gainesville, FL, USA

In our study we leverage Internet media sources (e.g Twitter and Telegram) to understand the driving mechanisms behind COVID-19-related social dynamics and how they interact with the epidemic. To this end, we use the methods of data mining, network analysis, and natural language processing. Moreover, we demonstrate, using deep learning BERT model, how mild adverse effects of a Gam-COVID-Vac vaccine can be extracted from a dedicated public group on Telegram achieving the accuracy superior to official reports [1]. The obtained results could be used to propose recommendations for effective and targeted communication and control measures.

[1] Jarynowski A, Semenov A, Kamiński M, Belik V. Mild Adverse Events of Sputnik V Vaccine in Russia: Social Media Content Analysis of Telegram via Deep Learning. Journal of Medical Internet Research. 28/09/2021:30529 (forthcoming/in press) https://doi.org/10.2196/30529