

When the Bad Is Good and the Good Is Bad: Understanding Cyber Social Health Through Online Behavioral Change: Part 2

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Following the Special Issue on Cyber Social Health: Part 1 in the January/February 2021 issue, in this issue, we highlight another five papers that were accepted based on the quality of the analysis, results, and presentation.

In "Towards Hate Speech Detection at Large via Deep Generative Modeling," the authors developed an approach to improve supervised hate speech detection on social media by creating a large dataset of hate speech from a small seed set. They introduced a big ground truth dataset and assessed the generalizability of models to the variability in communications with hate speech. This work attempts to overcome the lack of diversity and improve coverage in the input dataset, and the data imbalance. The authors employ GPT-2 fine-tuned on the existing labeled datasets, to generate a larger diverse hate speech dataset. They also perform a comparative analysis on the inductive biases of DL methods during training on individual hate-speech datasets.

The paper "Emotional Communication During Crisis Events: Mining Structural OSN Patterns" highlights the importance of online emotional contagion in order to understand and support the emotional state of online users during disasters. The authors analyzed the structural network patterns on Twitter that arise as people exchange emotional messages online, using the emotion-exchange motifs, which provide insights on the variability of emotions in different contexts across different types of disasters.

The paper "Session-Based Cyberbullying Detection: Problems and Challenges" provides an overview and road-map of research for cyberbullying. The authors define session-based cyberbullying and describe challenges characterizing cyberbullying through features that account for multimodality, temporality, hierarchical structure, and user interactions.

In "Approaches for Fake Content Detection: Strengths and Weaknesses to Adversarial Attacks," the authors provide a folksonomy of models for fake content detection with their characteristics that are susceptible to different adversarial attacks, and the ways to mitigate the impact of these attacks on the model. They categorize these models based on key characteristics that would potentially affect the adversarial attack performance, and briefly explain the current state of research in these categories.

The paper "Analysing Public Opinion and Misinformation in a COVID-19 Telegram Group Chat" analyzes the content posted in a Telegram channel from Singapore, with a particular focus on the spread and interaction with misinformation related to COVID-19. The authors specifically investigate how opinions of users in the group change over time and how users react to fact-checked information. They analyze misinformation through sentiment, topics, and psychological features, and notably show how negative sentiment increased when the alert level was raised by the government. Although anxiety seemed to decrease as the disease progressed, anger, and sadness started to increase. The authors found that misinformation was either largely denied or challenged by users, and skepticism toward misinformation was a driving factor in this behavior. The insights and observations concerning how the sentiment and emotions toward misinformation evolve during pandemic provide avenues for further research.

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Please join us in welcoming Vijay Gopalakrishnan, Shadi Ibrahim, Xiaohui Peng, Sriparna Saha, and Angelos Stavrou to the *IEEE Internet Computing* editorial board:

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