Special Issue on Disinformation, Hoaxes and Propaganda within Online Social Networks and Media

It is our great pleasure to present the Special Issue on Disinformation, Hoaxes and Propaganda of the Online Social Networks and Media (OSNEM) journal. This special issue lies on the key aspect that Online Social Networks and Media are optimized for posting and sharing catchy and sensationalist news. Problematic messages may span biased information aiming to influence communities and agendas with deliberate lies meant to mislead users. We thus asked the scientific community to present their results on the analysis of hoaxes, propaganda, and disinformation fabrication and spread on social media, as well as automatic techniques, that could be embedded in OSNEM platforms, to block/prevent their diffusion, and countermeasures to dissuade people to believe/diffuse them.

We received 18 submissions and accepted 6 for publication. The result is an exciting mix of hot research topics in this challenging and fascinating area.

The paper *Birds of a Feather Check Together: Leveraging Homophily for Sequential Rumour Detection* by Shital Lathiya, J S Dhobi, Arkaitz Zubiaga, Maria Liakata, and Rob Procter introduces a novel approach to rumour detection on Twitter that learns the dynamics of information during breaking news and classifies a piece of information as a rumour or non-rumour by leveraging the context learnt as the event unfolds. The classifier exploits homophily as a feature: a user will be more likely to post a rumour if they follow users who posted or spread rumours in the past. Beating competitive performances, this research proves the effectiveness for the development of rumour detection systems.

In *Investigating Clickbait in Chinese Social Media: A Study of WeChat,* Canyu Zhang and Paul D. Clough investigate the phenomenon of Clickbait, the intentional use of exaggerated and misleading content to entice people to click on a link to a particular web page. Using WeChat as a benchmark, the authors show that approximately 70% of the investigated WeChat samples are likely to be clickbait. Specifically, the phenomenon is more evident for specific content categories, like e.g. Anime, Entertainment and Culture and for users who post from specific Chinese regions.

The paper *The Strength Of Weak Bots* by Marijn A. Keijzer, and Michael Mäs considers the extent to which social bots are able to spread false content on social media. Surprisingly, the paper shows that bots may be successful in spreading falsehoods not despite their limited direct impact on human users, but because of this limitation. The proposed model suggests that bots with limited direct impact on humans may be more effective in spreading their views in the social network, because their direct contacts keep exerting influence on users that the bot does not reach directly.

Jieyu Ding Featherstone, George Barnett, Jeanette Ruiz, Yurong Zhuang, and Benjamin Millam authored *Exploring Childhood Anti-vaccine and Pro-vaccine Communities on Twitter – A Perspective from Influential Users* that proposes a study on tweets from influential users about childhood vaccines, to determine vaccine (mis)information on Twitter. Results on the emotional content of tweets confirm the popularity of negative sentiment on social media about the topic, while the outcome of the interactions analysis indicates a well-connected anti-vaccine community where influential users widely share vaccine misinformation.

In *An Exploratory Study of COVID-19 Misinformation on Twitter,* Gautam Kishore Shahi, Anne Dirkson, and Tim A. Majchrzak analyse a collection of tweets with false claims related to COVID-19 and share the corpus with the community. Results of the analysis are that verified accounts, like celebrities and brands, are involved in either creating or spreading false claims, which propagate even faster than partially false claims. In addition, with respect to another corpus of COVID-19 related tweets, the false stories specifically point to discredit other sources of information.

Last but not least, the paper *FactRank: Developing Automated Claim Detection for Dutch-Language Fact-Checkers* by Bettina Berendt, Peter Burger, Rafael Hautekiet, Jan Jagers, Alexander Pleijter, and Peter Van Aelst presents FactRank, a novel claim detection tool for journalists specifically created for the Dutch language. FactRank complements existing online claim detection tools for English and (a small number of) other languages. Features of FactRank are an interdisciplinary and iterative process in which it was created, which includes a high-performance deep-learning neural network architecture and the operationalisation of the concept of check-worthiness via a detailed codebook.

As a whole, this special issue collects a very interesting set of papers presenting original results on disinformation spreading and related detection techniques in OSNEM. We would like to thank all the authors for their high quality contributions, and the reviewers who provided timely and constructive feedback to the authors to improve the quality of this special issue.

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