HLF Workshop on Misinformation and Social Bots

Nowadays the Internet provides immediate reach to information, and we enjoy access to a vast amount of knowledge and an ability to communicate without borders. However malicious actors work toward abusing online systems to disseminate disinformation, disrupt communication, and manipulate individuals, with automated tools such as social bots.

Workshop plan outlined below matches with the interest on the subject "*Computational social sciences and social networking*". I hope this workshop brings participants from different disciplines and research fields to participate and discuss issues around **misinformation** and **misuse of automation** on social networks.

Workshop schedule

Time	Activity	Notes
15:30 – 15:35	Introductions and meeting kick-off	
15:35 – 16:00	Presentation on "Misinformation and social bots on social networks"	Presentation by Onur Varol
16:00 – 16:05	Break and study groups setup	Please find your study group from the attendance forms.
16:05 – 16:40	Discussions between study groups Emerging technologies and detection techniques Integrity of elections over the world Ethics and platform responsibilities Crowd-sourced efforts for data collection Media literacy and pro-active awareness campaigns Brave ideas for the new world	
16:40 – 17:00	Discuss topics identified by working groups Key takeaways and next steps	

Introduction and overview of the topic

In this workshop, I want to **introduce current challenges and overview of the recent papers** on fake news, social bots, and platform manipulations. Researchers have been developing **public tools to analyze conversations on social networks**. I will introduce OSoMe[1] platform developed by Indiana University researcher for tracking online conversations and detecting social bots.

Platform manipulations pose a significant threat to free speech and electoral systems in many countries. However, mechanisms to regulate social network and prevent malicious activities require difficult policy decision. I want to open a discussion for proposals for health metrics to improve social networks. Study groups are based on essential subjects that are worth further discussions.

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[1] OSoMe platform: http://osome.iuni.iu.edu/

Topics for study groups

HLF brings amazing researchers with diverse background and interests. This part of the workshop opens the platform for discussion and study groups for essential aspects of the subject.

Emerging technologies and detection techniques

Recent advances in using deep-learning technologies introduced challenges for content curators and journalists. Use of deep learning poses a significant threat to democracy since these techniques can be employed to orchestrate misinformation campaigns and platform manipulation using social bots. This study group discusses the impact of these technologies and how research efforts can help to mitigate those malicious efforts.

Integrity of elections over the world

Important elections will be held in 2020 for the US, France, UK, Greece, and more. Social media is a valuable platform for disseminating news and fostering public debate. Unfortunately, there has been numerous evidence supporting information operations to manipulate elections, suppressing voters voice, and spread disinformation. Historically candidates' airtime regulated by the election committees, while many-to-many communication nature of social media makes it challenging to regulate. However, legislations for controlling spending on political advertisements are promising steps forward. This study group discusses the current state of the social systems and risks involved in the elections.

Ethics and platform responsibilities

In the past two years, most social media platforms shared concerns on platform manipulations and acknowledged their responsibilities for the public. Social media companies' willingness to respond to government requests are important. However, such collaborations can be concerning in certain governments due to censorship and account removals. These platform actions also bring ethical questions. This study group will discuss risks involved due to control power of the platforms and ethical concerns that need further consideration.

Media literacy education and pro-active awareness campaigns

In our modern society, media literacy has crucial importance to detect misleading information, censorship, and bias in online content. This study group discusses how to build a curriculum around media literacy and what age groups should benefit from it the most.

Brave ideas for the new world

Rapid changes how we use technology requires innovative solutions to the problems. In recent years, blockchain technologies and distributed social media platforms introduced. Although these advancements promise a solution to some of the issues, their adoption rates are also low. This study group discusses, dreams, and bravely speculates about the future of the Internet.

Post-Workshop plans

I hope this workshop will stimulate further discussion during the HLF, despite its lengths allocated to discuss such an important topic. I am preparing a survey study to collect inputs from Laureates and researchers participating in the forum to understand their opinions on specific issues discussed in the study groups. Question and the depth of the survey will be shaped with the inputs of working groups.

I am organizing a special issue on "Social Engineering and Online Manipulation" for the Information journal. I want to prepare a contributed article with the help of other participants to this issue or a venue like Communications of ACM.

Recommended reading:
- Lazer, David MJ, et al. "The science of fake news." Science 359.6380 (2018): 1094-1096.
- Ferrara, Emilio, et al. "The rise of social bots." Communications of the ACM 59.7 (2016): 96-104.
- Vosoughi, Soroush, Deb Roy, and Sinan Aral. "The spread of true and false news online." Science 359.6380 (2018): 1146-1151.
- Shao, Chengcheng, et al. "The spread of low-credibility content by social bots." Nature communications 9.1 (2018): 4787.
- Aral, Sinan, and Dean Eckles. "Protecting elections from social media manipulation." Science 365.6456 (2019): 858-861.
- Bessi, Alessandro, and Emilio Ferrara. "Social bots distort the 2016 US Presidential election online discussion." First Monday 21.11-7 (2016).

Information about this workshop and the materials will be available online on the workshop website (onurvarol.com/hlf-workshop)

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