

CALL FOR PAPERS

Neurocomputing (Elsevier, Impact Factor: 4.438)

Special Issue on *Learning to Combat Online Hostile Posts in Regional Languages during Emergency Situations*

Overview:

The increasing accessibility of the Internet has dramatically changed the way we consume information. The ease of social media consumption not only encourages individuals to freely express their opinion (freedom of speech), but also provides content polluters with ecosystems to spread hostile posts (hate speech, fake news, cyberbullying, etc.). Such hostile activities are expected to increase greatly during emergencies such as the COVID-19 pandemic and in politicized events, like highly contested elections across the world. At the local level, most hostile posts are written in regional languages, and can therefore easily evade online surveillance engines, the majority of which are trained on the posts written in resource-rich languages such as English and Chinese. In much of Asia, Africa, and South America, where low-resource regional languages are used for day-to-day communication, there is no benchmark datasets and AI tools for identifying and mitigating the effects of hostile posts. This problem is faced even in developed countries, such as Italy and Spain, where local languages (like Sicilian and Catalan) are used widely for everyday communication.

The special issue will encourage researchers working on multilingual social media analytics, text processing, learning technologies, and multimodal computation to think beyond the conventional ways (e.g., manual investigation, lexicon/dictionary/thesaurus-based matching, crowd-sourcing, etc.) of combating online hostile posts. The special issue will emphasize the following four major points and the solutions that connect these four points: (i) **Regional Language:** The offensive posts under inspection should be written in low-resource regional languages (e.g., Tamil, Urdu, Bangali, Polish, Czech, Lithuanian, etc.); however, solutions underpinning the barrier of resource-rich languages are also encouraged. (ii) **Emergency Situation:** The proposed solutions should be able to tackle misinformation during emergency situations where, due to the lack of enough historical data, learning models need to adopt additional intelligence (exogenous signals) to handle emerging and novel posts. (iii) **Early Detection:** Since the effect of misinformation during emergency situations is highly detrimental for society (e.g., health-related mis-advice during a pandemic may take human life), the solutions should be able to detect such hostile posts as early as possible after their appearance on social media. (iv) **Machine Learning Solution:** The advent of recent machine learning and deep learning technologies have encouraged researchers to develop automated approaches to combat hostile posts on social media. While statistical learning approaches are useful when the size of the datasets is small, recent neural approaches have shown tremendous improvement in terms of accuracy. However, the latter need a significant amount of data for training, which may not be feasible with resource-constrained languages. The challenge is to bring the best out of both into a single model in solving emerging crises related to abundant use of abusive texts on social media.

Topics of Interests

We invite the submission of high-quality manuscripts reporting relevant research in the area of collecting, managing, mining, and understanding hostile posts on social media. The proposed solutions should build

learning technologies (machine learning, deep learning) to solve the problem of fewer resources in regional languages to combat online hostile posts. Topics of interest include, but are not limited to:

- Learning to detect hostile posts in regional languages
- Modeling the evolution of online hostile posts
- Analyzing and modeling user behavior for hostile post propagation
- Developing real-world tools for combating hostile posts
- Behavioral study of the spreaders of hostile posts
- Predicting the virality and severity of hostile posts—pre- and post-facto study
- Hate speech normalization—alerting users about the hatefulness of the content during posting
- Information extraction, ontology design, and knowledge graph for combating hostile posts
- Early detection technologies of hostile posts on social media
- Designing lightweight machine learning tools with less data for hostile post detection
- Code-mixed and code-switched hostile post analysis
- Open benchmark (tools, datasets) and dashboard related to regional hostile posts
- Specific case studies and surveys related to hostile posts
- Claim detection and verification related to misinformation
- Fact-check worthiness of misinformation
- Utilizing multimodality (audio, video, text, etc.) in combating misinformation
- Impact/role of memes in spreading hostility on social media
- Cross-region language analysis for hostile posts
- Utilizing cross-platform learning and exogenous signals to combat misinformation
- Computational social science analysis for hostile posts
- Graph mining for fake news spreading and evolution

Papers Considered for the Special Issue

We plan to consider about 10 high-quality papers to be published in the special issue. We will invite authors of the top 4-5 papers accepted in [CONSTRAINT-2021 workshop](#), collocated with AAAI'21 to submit an extended version to the special issue. The remaining papers will be selected through regular calls. All papers will go through a peer review process by at least three reviewers.

Paper Submission Instruction: Follow the “Guideline for Authors” in <https://www.journals.elsevier.com/neurocomputing>

Important Dates (Tentative)

Paper submission due: Mar 1, 2021

Initial review Feedback: June 1, 2021

Revision Due: July 1, 2021

Final review decision: August 1, 2021

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