

# The Anti-Social Behavior of Spam

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## Abstract

Spam mitigation strategies that aim at detecting spam on the network level, should classify email senders based on their sending behavior rather than the content of what they send. To achieve such goal, we have performed a social network analysis on a network of email communications. Such a network captures the social communication patterns of email senders and receivers. Our social network analysis on e-mail traffic have revealed that structural properties of networks of e-mail communications differ from other types of interaction and social networks such as online social networks, the web, Internet AS topology, and phone call graphs. The difference is caused by extensive amount of unsolicited email traffic which therefore can be used to discriminate spam senders from legitimate users. Deployment of such social network-based spam detection strategy on a small network device makes it possible to stop spam closer to its source and without inspecting email contents. In this talk, we will look at the anti-social behavior of spam and how it can be used for detection of spam senders.

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