

**DISCOVERING USER RELATIONSHIPS ON TWITTER
USING BEHAVIORAL COMMUNICATION FEATURES**

By

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ABSTRACT

Due to the increasing use of social networks and their importance in propagating information, analyzing user personality and finding credible content in social media have become popular topics of study. Most work to this end augments features based on textual content with features that represent users' social ties and the strength of these ties. Social ties are crucial in understanding users' social networks, but a social relation can be used for many different purposes. For example, friends from different circles provide information on many different topics. The level of discourse also depends on the type of relationship one has: close friend, family vs. a colleague from work or a team member. This thesis aims to find these different types of relationships between people based on their behavior in the social network. We would like to study the "function" of relationships between people by comparing the behavior to the textual content. We present a new genre of behavioral features based on the statistical properties of communication patterns between individuals such as reciprocity, assortativity, attention and latency. We introduce a new methodology for determining how such features can be compared to textual features, and attempt, using Twitter data, to discern the type of relationship between users of this social network.