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**Localization of social communication** DASHUN WANG, CHAOMING SONG, ALBERT-LASZLO BARABASI, CCNR, Northeastern University — A fundamental problem in the social science and network theory is a gap between local communication and global information sharing. Due to the limited availability of empirical data, previous works on large-scale social communication mainly focused on the topological structure, lacking of knowledge on human behavior and individual activity, such as where individual lives, how far one lives from his friends, which are expected to play important roles in social communication. Here we studied the contribution of individual activity to social communication as well as the interplay between individual activity and topological structure, finding emergence of a typical communication distance between two friends, indicating a localization feature in social networks. Moreover, this localization phenomenon is associated with typological clustering, suggesting an integrating theory in understanding social behaviors.

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