Consider the power of global interconnectedness: One person’s tweet about a product can influence a purchase half a world away, another person’s email to a group about dissatisfaction with rules can lead to a public protest, and someone else’s real-time video during a natural disaster can result in an outpouring of aid. All are astounding outcomes from social networking.

Although social networking is flourishing on today’s Internet, it does not make the most of our everyday interaction, Augustin Chaintreau argues. “This is because the technology that personalizes the web to your need does not mirror how you make and keep social connections,” said Chaintreau. “When you ask a friend their opinion about a good movie, you do not first have to tell her about your most recent purchases, places you have been and the websites you have visited. But that’s more or less what today’s computers require you to do.” Today’s social networking software also requires that you are connected at all times to a server on the Internet, even to interact with nearby people (or objects).

“In real life, we collect and communicate useful data sparingly, and we interact much more with our immediate environment,” he said. “Why can’t we do that to use the Internet socially—to update a Facebook status, email a friend, collaborate on plans?” One challenge is that humans are incredibly efficient at social interaction. By better understanding natural social networking, which predates its online counterpart, we can then mathematically model that to enhance computer networking performance and outcomes.

Chaintreau works on building algorithms that connect online social networkers more efficiently and more intuitively. What makes these algorithms unique is that they use only local information and exploit mathematical models describing users’ behaviours and interactions in groups and organizations. It shows in particular that users should not surrender their privacy. “Many believe that handing out your data is necessary to connect efficiently with your friends. We want to give the users a choice,” he said.

These techniques could also allow us to interact socially with many more people and objects, reaching new applications. “When you look at most urgent environmental issues, to save water or organize electricity distribution from renewable sources, many of them could greatly benefit from involving people through a fast, mobile, social Internet,” he concluded.

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