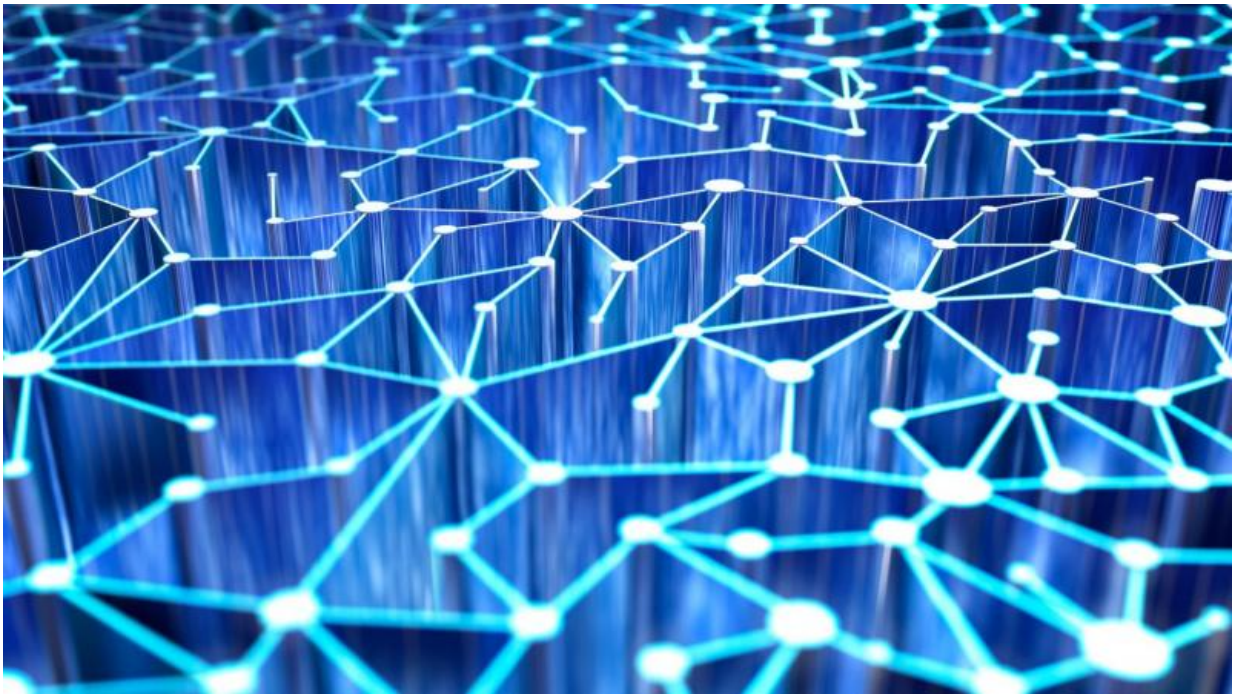
# Using algorithms to make a campaign go viral

December 14 2015



Marketers want to create buzz, but it's not always so easy. For a marketing message to spread like wildfire, not only does it have to reach the target audience, but it also has to be well-timed and well-placed. SThAR, an EPFL spin-off, has developed algorithms that improve the chances of getting it right.

The software developed by the start-up offers both geographic and temporal targeting for electoral and advertising campaigns. The ideal times and places are not necessarily remarkable in terms of the number of people directly reached, but these people are connected to others, who are in turn connected to others. The resulting dynamic increases the message's impact.

The fledgling company, based at the EPFL Innovation Park, also helps develop various communications-related actions throughout the campaign. It estimates the number of people reached for each event and shows how to maximize the reach of the message: this includes, for example, the actions to take with both traditional and social media in order to further boost the spread of the message.

## Messages spread in accordance with the laws of physics

To develop a reliable forecasting model, the start-up's founders – who are physicists – use demographic and economic data from telephone companies over the course of several years. This anonymous big data set, when fed into algorithms, is useful for modeling connectivity among people, their mobility patterns and collective behavior relative to specific times and places.

SThAR, an EPFL spin-off, draws on large quantities of telecommunications data to identify where and when to deliver a message most effectively. This software could be useful in both electoral and advertising campaigns.

The link with physics is not as tenuous as one might think, since these calculations were originally developed to determine the degree of disorder of a large chemical system in equilibrium. It turns out that laws

at work in one field can often apply to a very different one. "A campaign message is the result of interactions among its members, logical reasoning, coordinated decisions and overall strategies – as well as inconsistency, improvisation and panic," said Alberto Hernando de Castro, the company's CEO. These calculations have also been tested to quantitatively project the growth of cities, organizations and companies.

## Successfully tested in Spanish elections

The system has already proved its worth. "One of the things we did was develop one party's campaign during local elections in Spain. The party saw a 100,000 increase in voters in just a few days after following the recommendations of our system," said Hernando de Castro. The company has also entered into a partnership with a Zurich-based communications agency.

Provided by Ecole Polytechnique Federale de Lausanne