

Video: Why traffic apps make congestion worse

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Has your smartphone traffic app ever led you into a traffic jam? Join the club.

Traffic expert Alexandre Bayen, director of UC Berkeley's Institute of Transportation Studies and a professor of electrical engineering and computer science and of civil and environmental engineering, has experienced the dysfunction created by apps such as Google Maps and Waze as they guide cars off the freeway onto [city](#) streets unprepared to deal with them. Many cities are banning nonresidents from streets during commute hours, while citizens are erecting fake detour signs and trying to trick the [mobile apps](#) to prevent them from sending cars into their neighborhoods.

A pioneer in using commuters' mobile phones to sense [traffic](#) flow, Bayen is now working on smarter apps that will actually talk to one another to prevent clogged freeways and city streets. Since "we can't build our way out of [congestion](#)," he says, the only way this will work is if the apps collaborate and steer different people along different routes to prevent congestion.

As an example, traffic-flow models that optimally split flows of commuters along parallel routes can help solve the congestion problem by providing app users equally good routes, but ones that work well with the road and highway infrastructure.

In a May 2017 talk at the Cal Future Forum, Bayen described how UC

Berkeley transportation researchers are developing the science and technology to "enable collaboration both at the commuter level—you and me—and the city level."

Provided by University of California

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