

COVID-19: Social distancing is more effective than travel bans

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Forecasting the spreading of a pandemic is paramount in helping governments to enforce a number of social and economic measures, apt at curbing the pandemic and dealing with its aftermath.

Now researchers present an efficient model to study and forecast the spreading dynamics and [containment](#) across different regions of the world.

"We discovered that social distancing measures are more effective than travel limitations across borders in delaying the epidemic peak," says Professor of theoretical physics, Francesco Sannino, University of Southern Denmark and Danish Institute of Advanced Science, continuing:

"The results corroborate our finding that the travel across regions sparks the epidemic diffusion, which then develops in each [region](#) independently."

Virus-induced pandemics like COVID-19 are a threat to humans not only because of the number of human lives taken but also because of the profound and long-lasting impact on the economy and [social dynamics](#).

While different empirical models already exist to describe the epidemic dynamics locally and globally, a coherent framework is missing. Using a powerful language and methodology borrowed from [high energy physics](#), Professor Sannino and his colleague Giacomo Cacciapaglia from University of Lyon, can now study and forecast the spreading dynamics and containment across different regions of the world.

"We plan on embarking on a world-wide monitoring to make global projections that will help governments and industries make containment plans and strategize about reopening society and how to best implement border control," says Professor Sannino.

More information: Giacomo Cacciapaglia et al, Interplay of social distancing and border restrictions for pandemics via the epidemic renormalisation group framework, *Scientific Reports* (2020). [DOI:](#)

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