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WHEN SOCIAL SCIENCE MEETS COMPUTER SCIENCE...

Webinar of Computational Social Science Laboratory (CSSL@CUHK)

Inequality (and epidemics) in Cities at High Resolution

20 October 2021 (Wednesday), 09:00-10:30 (UTC+8, HKT)

Abstract

Inequality and segregation are hurting our societies and specially our cities, where the fact that we live apart from other racial, economical or social groups carries tremendous economical and societal consequences. Not only for the people living in poor neighborhoods, but for the region as a whole. Most studies still describe people's segregation patterns using census areas. However, encounters between people happen in places, not census areas, so our understanding of segregation still relies on very coarse-grained spatial description of how people interact or encounter in our cities.

Using a massive dataset of high spatial resolution movements of 4.5 million people in 11 of the largest metropolitan areas in the U.S., we have studied how encounters of different economic groups happen in our cities to determine the economic segregation at the level of places and individual users. We've found that some type of places (some restaurants, education, religious places) are constantly segregated across U.S., while some other (art exhibits, science museums, hospitals, etc.) are not. Furthermore, we were able to model individual segregation and found that most of the segregation/ isolation that individuals experience in their daily lives does not depend on where they live, but on their individual behavioral patterns (type of places visited, social exploration, etc.). We discuss the implications of our results in the context of future development of areas and in the ever-changing evolution of our cities. Recent results about the use of the same modeling and data to understand the COVID-19 epidemic evolution and potential exit strategies in the Boston area will also be presented.

Biography

Professor Esteban Moro is a researcher, data scientist and professor at MIT Connection Science and Universidad Carlos III (UC3M) in Spain; whose work lies in the intersection of big data and computational social science, with special attention to human dynamics, collective intelligence, social networks and urban mobility in problems. He has published extensively throughout his career and have led many projects funded by government agencies and/or private companies. He has received numerous awards for his research, including the "Shared University Award" from IBM in 2007 for his research in modeling viral marketing in social networks and the "Excellence in Research" Awards in 2013 and 2015 from UC3M. His work appeared in major journals including Nature, PNAS or Science Advances and is regularly covered by media outlets The Atlantic, The Washington Post, The Wall Street Journal, El País (Spain).



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