Special Issue

Mathematical Analysis of Urban Spatial Networks

Message from the Guest Editor

Cities are the largest and most complex editors of human interactions that cause chief social and economic impacts on the lives of not only the present inhabitants, but also of the generations to come. Through spatial organization of a surrounding place, we can create new rules for how neighborhoods are combined into a strongly inhomogeneous network providing space where people can move and provoking chance encounters and interactions. Space structure and its impact on movement are critical to the link between the built environment and its social functioning. Many neighborhoods are cut off from other parts of the city by poor transport links and haphazard urban planning, which can often lead to social ills. In the proposed Special Issue, we aim to organize a broad discussion on urban morphology, urban forms, spatial networks, and structures, offering a much-needed mathematical perspective. Entropy and information theory methods would provide new insights into urban complexity and self-organization as tools and frames to disentangle the ideas that pervade arguments about form and function of the city.

Guest Editor

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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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