

Outline

1. The model and its mathematical description
2. Some applications
 - (a) Mesoscopic localization**
 - (b) Heterogeneous transmission settings
 - (c) Context-sensitive behavior

Mesocopic localization

Localization: an epidemic **sustains** itself via a **limited** (and localized) number of nodes, traditionnally around **hubs** or within the **inner-most core**.

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Localization and Spreading of Diseases in Complex Networks

A. V. Goltsev,^{1,2} S. N. Dorogovtsev,^{1,2} J. G. Oliveira,^{1,3} and J. F. F. Mendes¹

nature > scientific reports > articles > article

Article | [Open access](#) | Published: 20 April 2012

Competing activation mechanisms in epidemics on networks

[Claudio Castellano](#) & [Romualdo Pastor-Satorras](#)

PHYSICAL REVIEW X 7, 011014 (2017)

Disease Localization in Multilayer Networks

Guilherme Ferraz de Arruda,^{1,2} Emanuele Cozzo,^{2,3} Tiago P. Peixoto,^{4,5} Francisco A. Rodrigues,^{1,*} and Yamir Moreno^{2,3,5,†}

PHYSICAL REVIEW E 93, 032314 (2016)

Collective versus hub activation of epidemic phases on networks

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Network Localization Is Unalterable by Infections in Bursts

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