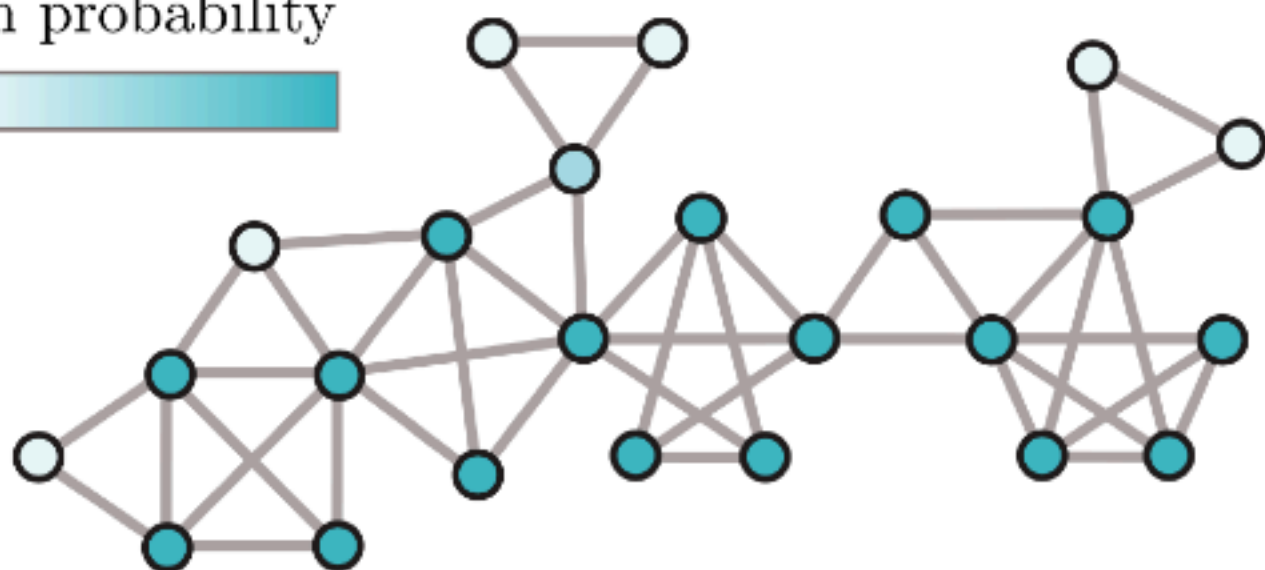




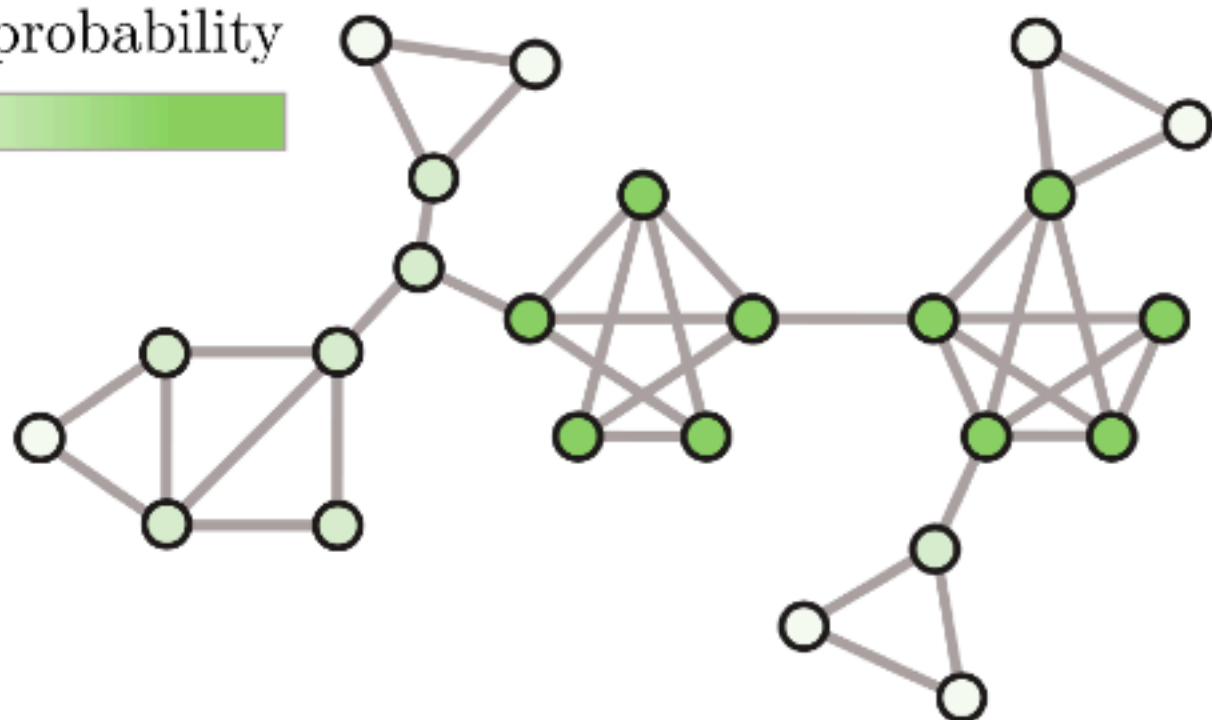
Delocalized regime

Infection probability



Mesoscopic localization regime

Infection probability



Mesodoppio localizzazione

[nature](#) > [scientific reports](#) > [articles](#) > [article](#)

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Competing activation mechanisms in epidemics on networks

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

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,†}

Localization and Spreading of Diseases in Complex Networks

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Network Localization Is Unalterable by Infections in Bursts

Qiang Liu[✉] and Piet Van Mieghem[✉]

PHYSICAL REVIEW E 93, 032314 (2016)

Collective versus hub activation of epidemic phases on networks

Silvio C. Ferreira,¹ Renan S. Sander,¹ and Romualdo Pastor-Satorras²

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

Mesocopic localization

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

PRL 109, 128702 (2012) PHYSICAL REVIEW LETTERS week ending 21 SEPTEMBER 2012

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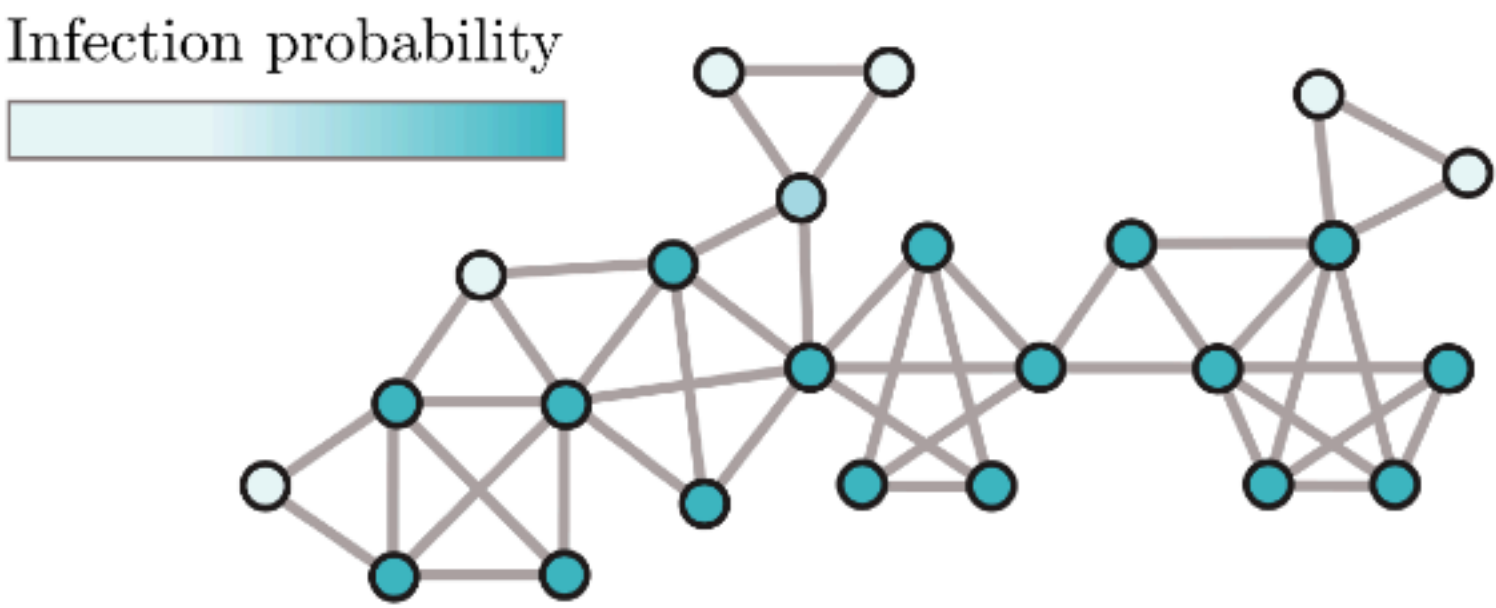
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IEEE TRANSACTIONS ON NETWORK SCIENCE AND ENGINEERING, VOL. 6, NO. 4, OCTOBER-DECEMBER 2019

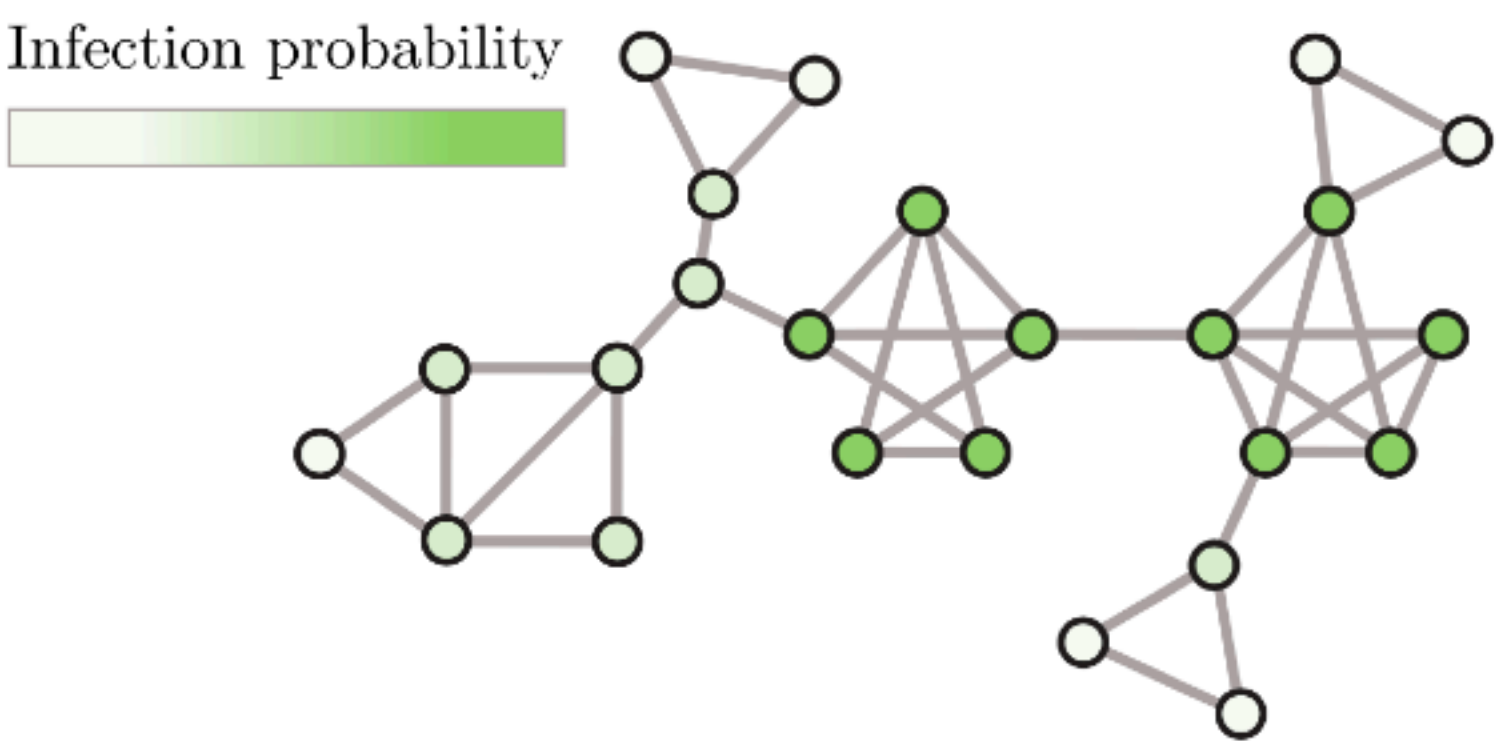
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Delocalized regime



Mesoscopic localization regime



Mesoscopic localization

Message #1: Mesoscopic localization can be observed.

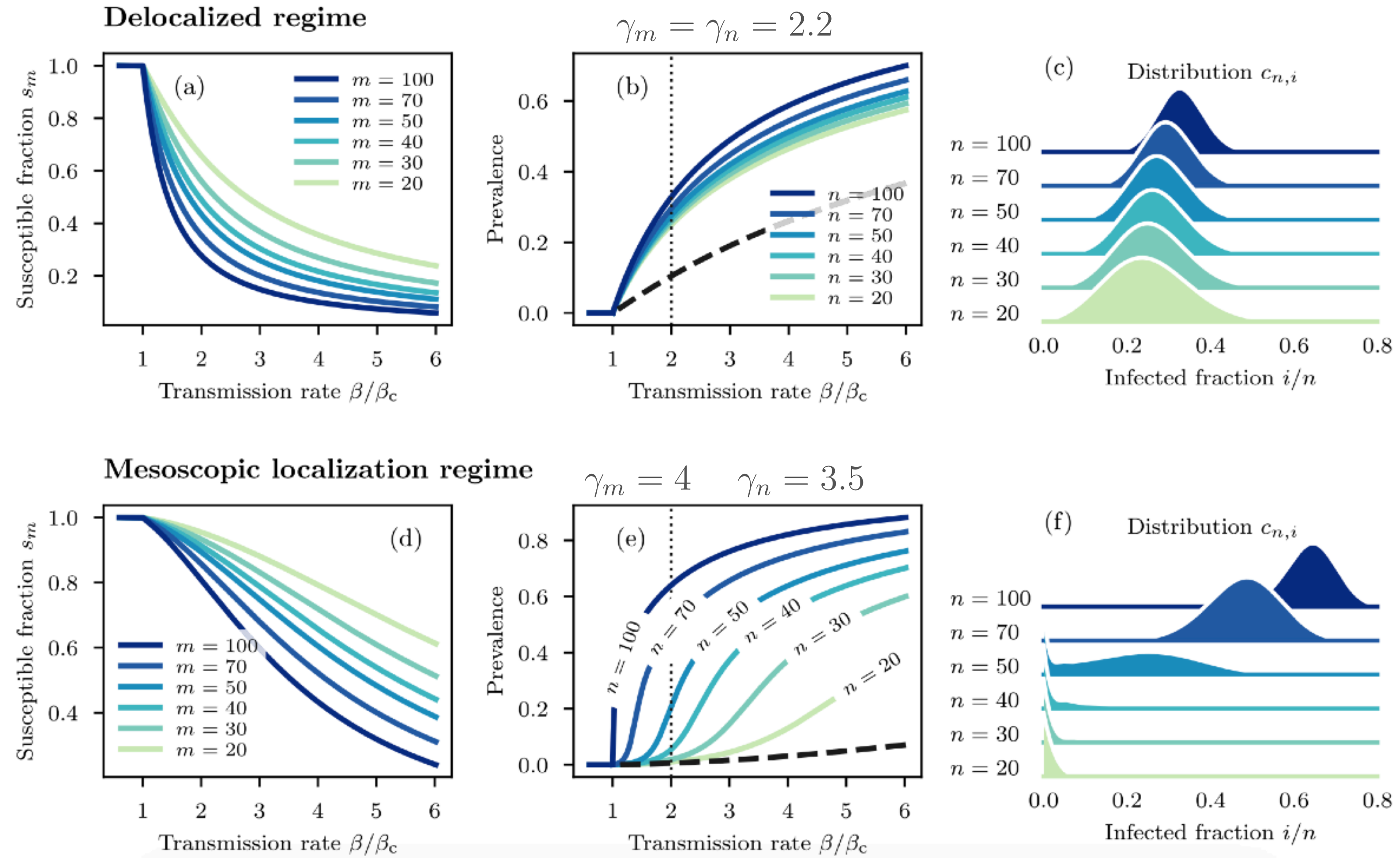
$$\Theta_{n,i,\beta} = \beta i n^{-\nu}$$

$$\nu \in [0, 1]$$

$$p_n \propto n^{-\gamma_n}$$

$$g_m \propto m^{-\gamma_m}$$

$$\mu = 1$$



Notation: $s_m = S_m$ and $c_{n,i} = G_{n,i}$. β_c is the epidemic threshold.