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Encounter times in overlapping domains and aplication to epidemic spread PAULINA SOLíS, DAVID P. SANDERS, Departamento de Física, Facultad de Ciencias, Universidad Nacional Autónoma de México — We present results on encounter times for random walkers modeling territorial animals. The walkers are confined to habitats in one or two dimensions with reflecting boundaries, and neighboring habitats overlap. Using Monte Carlo simulations and numerically-exact calculations, we calculate encounter times as a function of the size of the habitats, and the size of the overlap region. These results are applied to model the spread of epidemics in populations of such animals; the speed of propagation of the epidemic is determined in terms of the role of the spatial organization.

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