



**EINLADUNG**  
zum  
**ZIH-Kolloquium**

**Titel:** Speed influence in the epidemic SIRS dynamics

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**Abstract:**

We study the propagation of diseases exhibiting a S-I-R-S dynamics in a system of self-propelled agents moving on a plane and interacting through volume exclusion. The infection transmission depends on the time elapsed during the physical contact between a healthy agent and an infected one. The model allows us to explore a wide range of densities, bridging the gap between non-spatial and lattice models.

We also study the role of the velocity of the agents and show that there exists a counter intuitive upper bound for the epidemic size, which prevents the disease to take over the entire system even when the agent-contact rate goes to infinity.

**Ort:** Informatik-Neubau, Nöthnitzer Str. 46, Raum E07

**Zeit:** Donnerstag, 27. November 2008, 14:00 Uhr

gez. Prof. Dr. Wolfgang E. Nagel