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1 Active Particles and Herbert Simon's Artificial Worlds

- N. Bellomo, D. Burini, G. Dosi, L. Gibelli, D. A. Knopoff, N. Outada, P. Terna, and M. E. Virgillito, What is life? A perspective of the mathematical kinetic theory of active particles, *M3AS*, **31**, 1821–1866, (2021).

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- D. Burini, N. Chouhad and N. Bellomo, Waiting for a Mathematical Theory of Living Systems from a Critical Review to Research Perspectives, *Symmetry*, **15(2)**, n. 351, (2023).

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- N. Bellomo and M. Egidi, From Herbert A. Simon's legacy to the evolutionary artificial world with heterogeneous collective behaviors, *M3AS*, **34**, 145–180, (2024).

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2 Behavioural Crowds and Swarms → Artificial Intelligence

- N. Bellomo, L. Gibelli, A. Quaini, and A. Reali, Towards a mathematical theory of behavioral human crowds, *M3AS*, **32(2)**, 321–358, (2022).

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- N. Bellomo, J. Liao, A. Quaini, L. Russo, and C. Siettos, Human behavioral crowds review, critical analysis, and research perspectives, *M3AS*, **33**, 1511–659, (2023), 1511-1659.

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3 Multiscale Methods for SARS-CoV-2

- N. Bellomo, R. Bingham, M. A. J. Chaplain, G. Dosi, G. Forni, D. A. Knopoff, J. Lowen-grub, R. Twarock, and M. E. Virgillito, A multi-scale model of virus pandemic: Heterogeneous interactive entities in a globally connected world, *M3AS*, **30**, 1591–1651, (2020).

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- N. Bellomo, D. Burini, and N. Outada, Multiscale Models of Covid-19 with Mutations and Variants, *Networks Heter. Media*, **17**(3), 293–310, (2022).
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4 Reaction-Diffusion Systems

- N. Bellomo, N. Outada, J. Soler, Y. Tao, and M. Winkler, Chemotaxis and crossdiffusion models in complex environments: Models and analytic problems toward a multiscale vision, *M3AS*, **32**, 713–792, (2022).
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