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**Reaction-diffusion equations with nonlocal viscosity:
from attractors to exponential attractors**

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In recent works we studied the nonlocal problem

$$u_t - a\left(\int_{\Omega} g(x)u(x,t)dx\right)\Delta u = f(u) + h(t) \quad \text{in } \Omega \times (\tau, \infty)$$

fulfilled with homogeneous Dirichlet boundary conditions in a bounded domain Ω with smooth boundary. The extra term in the viscosity represent the dependence on the *overall* population, allowing different diffusion effects.

The existence of (semi-)flows (if autonomous) or (semi-)processes (if non-autonomous) and their long time behavior in term of attractors were analyzed in several papers, mainly in term of pullback attractors. Some robustness properties were also considered.

We aim to go a step further, considering now the possible construction of exponential attractors for these kind of models.

This is a joint work with Tomás Caraballo and Marta Herrera-Cobos (Universidad de Sevilla) in the first part, and with Álvaro Aguilar-Reyes (Universidad de Sevilla) in the more recent part.

References

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