

3.1 - Publicaciones






Campos de fase

Quimiotaxis

Crecimiento tumoral

Modelo de Keller-Segel:

$$\begin{aligned}\partial_t u &= k_0 \Delta u - k_1 \nabla \cdot (u \nabla v), & \text{en } \Omega \times (0, T), \\ \partial_t v &= k_2 \Delta v - k_3 v + k_4 u, & \text{en } \Omega \times (0, T), \\ \nabla u \cdot \mathbf{n} &= 0, \quad \nabla v \cdot \mathbf{n} = 0, & \text{sobre } \partial\Omega \times (0, T), \\ u(0) &= u_0, \quad v(0) = v_0, & \text{en } \Omega.\end{aligned}$$

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-  T. Li, D. Acosta-Soba, A. Columbu, y G. Viglialoro. Dissipative Gradient Nonlinearities Prevent δ -Formations in Local and Nonlocal Attraction–Repulsion Chemotaxis Models. *Studies in Applied Mathematics*, 154(2):e70018, 2025.
-  D. Acosta-Soba, F. Guillén-González, y J. R. Rodríguez-Galván. An Unconditionally Energy Stable and Positive Upwind DG Scheme for the Keller–Segel Model. *Journal of Scientific Computing*, 97(1):18, 2023.
-  D. Acosta-Soba, A. Columbu, y J. R. Rodríguez-Galván. On a linear DG approximation of chemotaxis models with damping gradient nonlinearities. En *Analysis, approximation and control of chemotaxis models*. SEMA SIMAI Springer Series, 2025 (aceptado).
-  D. Acosta-Soba, A. Columbu, y G. Viglialoro. Boundedness in a nonlinear chemotaxis-consumption model with gradient terms. En *Analysis, approximation and control of chemotaxis models*. SEMA SIMAI Springer Series, 2025 (aceptado).