3.1 - Publicaciones

Campos de fase | Quimiotaxis | Crecimiento tumoral

Modelo de Cahn-Hilliard:

$$
\begin{aligned}
\partial_t u &= \nabla \cdot (M(u)\nabla\mu) && \text{en } \Omega \times (0,T),\\
\mu &= F'(u) - \varepsilon^2 \Delta u && \text{en } \Omega \times (0,T),\\
\nabla u \cdot \boldsymbol{n} &= M(u)\nabla\mu \cdot \boldsymbol{n} = 0 && \text{sobre } \partial\Omega \times (0,T),\\
u(0) &= u_0 && \text{en } \Omega.
\end{aligned}
$$

- D. Acosta-Soba, F. Guillén-González, J. R. Rodríguez-Galván, y J. Wang. Property-preserving numerical approximation of a Cahn–Hilliard–Navier–Stokes model with variable density and degenerate mobility. *Applied Numerical Mathematics*, 209:68-83, 2025.
- D. Acosta-Soba, F. Guillén-González, y J. R. Rodríguez-Galván. An upwind DG scheme preserving the maximum principle for the convective Cahn–Hilliard model. *Numerical Algorithms*, 92(3):1589–1619, 2022.