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A biophysical model of tumor invasion

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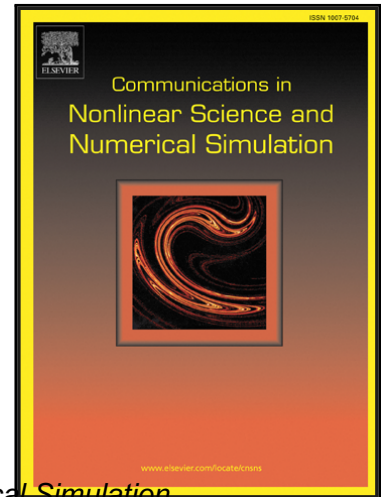
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Highlights

- A 3D finite element scheme for the solution of a cancer invasion PDE model is proposed.
- Strongly coupled model with nonlinear density-dependent diffusion and haptotaxis functions is considered.
- Effects of different nonlinear diffusion and haptotaxis functions during the cancer invasion are investigated.
- Computations of cancer invasion in realistic breast geometry are performed.
- The proposed computational model can be used to predict the location and the shape of the tumor in realistic geometries at a particular instance during the cancer growth and invasion.

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