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Parallel fast isogeometric L2 projection solver with GALOIS system for 3D tumor growth simulations

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Highlights (for review)

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- We derive the 3D isogeometric model of the melanoma growth.
- We model tumor cell density, extracellular matrix, oxygen, tumor angiogenic factor.
- We couple continuous model with discrete vasculature growth model, that provides oxygen to the system.
- We apply fast isogeometric L2 projection solver implementing alternative direction implicit method for solution of the tumor growth model.
- We parallelize the simulation using GALOIS framework

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