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HOMOGENIZATION OF SOME REACTION-DIFFUSION SYSTEMS IN BIOLOGICAL TISSUES

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In this talk I shall derive a macro-model for the diffusion of species in biological tissues which can be viewed as poro-elastic materials. It is assumed that at the micro-scale, these tissues contain highly heterogeneous components periodically distributed. The macro-model is then obtained by the use of the two-scale convergence technique [1].

References

- [1] G. Allaire. (1992). *Homogenization and two scale convergence*. SIAM J. Math. Anal, 23(6), 1486–1518.
<https://doi.org/10.1137/0523084>