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Theoretical and numerical study of an two-phase flow problem

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In recent years we have increasingly witnessed an accentuated degradation of the environment in general and of certain water reservoirs in particular. This situation is due in most cases to human action; but we often encounter a natural process. This is the focus of this present work where a model respecting the physical aspect of the problem of eutrophication of lakes is made [1], followed by a theoretical and numerical analysis of the model. Results of numerical simulations confirm the accuracy of our approach [2].

Mots-clés: Eutrophication of water, Navier-Stokes Equation, Vlasov equation, Finite Volume Methods,

References

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[2] R. J. Leveque. Finite Volume Methods for Hyperbolic Problems. Cambridge University Press 16 (2002) 415?438.