

Pauline Lafitte - Towards a scheme of uniform order in time for the Fokker-Planck equation

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The sensitive issue of the discretisation of Neumann's boundary condition for a Fokker-Planck equation while preserving self-adjointness led us to the study of an inconsistent scheme for the evolutionary or stationary heat equation. Together with Guillaume Dujardin, we showed the *uniform convergence in time* at order $1/2$ for this last scheme, under a classical stability condition, and pursue this study for the Fokker-Planck equation. This order of convergence is also the one obtained numerically.