Asymptotic Analysis to a Phase-Field Model with a Nonsmooth Memory Kernel

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Abstract: A phase-field model based on the Gurtin-Pipkin heat flux law is considered. The resulting system has been investigated by Colli and Laurencot who proved existence and uniqueness results, when the time relaxation coefficient is strictly positive. The aim of this paper is the study of the asymptotic behaviour of such a solution, as the time relaxation goes to zero, and of the related limit problem.

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