



PERIODIC SOLUTIONS TO KOBAYASHI–WARREN–CARTER SYSTEMS *

Dedicated to Professor Nobuyuki Kenmochi on the occasion of his 77th birthday

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Abstract. In this paper, a system of parabolic PDEs, called the Kobayashi–Warren–Carter system, is considered as a possible phase-field model of planar grain boundary motion. The Main Theorem is concerned with the existence of a time-periodic solution to the Kobayashi–Warren–Carter system, and the principal objective is to obtain the result under unknown-dependent setting of the mobility in time.

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