

Perona-Malik Equation: Properties of Explicit Finite Volume Scheme

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Abstract: The Perona–Malik nonlinear parabolic problem, which is widely used in image processing, is investigated in this paper from the numerical point of view. An explicit finite volume numerical scheme for this problem is presented and consistency property is proved.

Keywords: Perona–Malik equation; finite volume method; consistency; stability monotonicity property;

AMS Subject Classification: 35K55; 65M12;

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