

1147-65-235

Gerard Awanou* (awanou@uic.edu). *Uniform limit of discrete convex functions.*

We consider mesh functions which are discrete convex in the sense of Oberman. We prove that the uniform limit on compact subsets of discrete convex functions which are uniformly bounded and which interpolate a Dirichlet boundary data is a continuous convex function which satisfies the boundary condition strongly. The domain of the solution needs not be uniformly convex. The result is applied to the convergence of some numerical methods for the Monge-Ampere equation. (Received January 13, 2019)