

On the motion of polygons by crystalline curvature

Tetsuya Ishiwata (Gifu university)

We consider a motion of polygons in the plane by $\beta(N_j)V_j = U - H_j$ and its generalization, where V_j, N_j and H_j denote an outward velocity, an outward normal vector and a crystalline curvature of the j -th edges of solution polygon $\Omega(t)$, respectively. The function β describes an anisotropy of the mobility and U describes an effect of the bulk (See Angenent-Gurtin(1989)). We discuss the motion of polygons in the special class of polygons, – called "admissible class" –, and the behavior of solution polygon, especially the convexity phenomena.