

Phase field approximation of the Steiner problem : a numerical investigation.

vendredi 12 octobre 2018 15:50 (50 minutes)

We analyze in this talk the ability of different phase field models to approximate solutions of the Steiner problem. In particular, we will first focus on the recent phase field model introduced by Bonnivard, Lemenant and Santambrogio that couples a Cahn Hilliard type functional with a penalized term forcing the compactness of the desired set. We then propose and justify the convergence of some slightly modified versions, which improve the regularity of its solution and use a better uniform contribution of the penalized term. In particular, we show that this phase field model are able to consider a large number of points in dimension 2 and 3.

Finally, we also propose in comparison some numerical experiments using the approach of Chambolle, Ferrari and Merlet.

Summary

Auteur principal: BRETIN, Elie (Institut Camille Jordan)

Orateur: BRETIN, Elie (Institut Camille Jordan)