

# UNAMalla: a system for generating quality structured meshes on irregular regions on the plane

Pablo Barrera,\* Guilmer González Flores,† Gustavo García Cano ‡  
Isidro Abelló Ugalde,§ Victoria Hernández Mederos¶

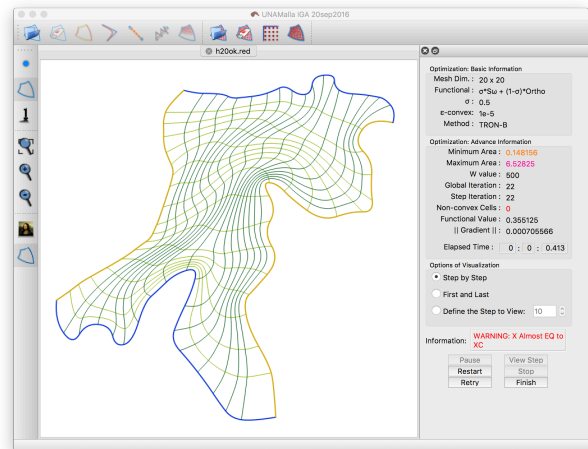
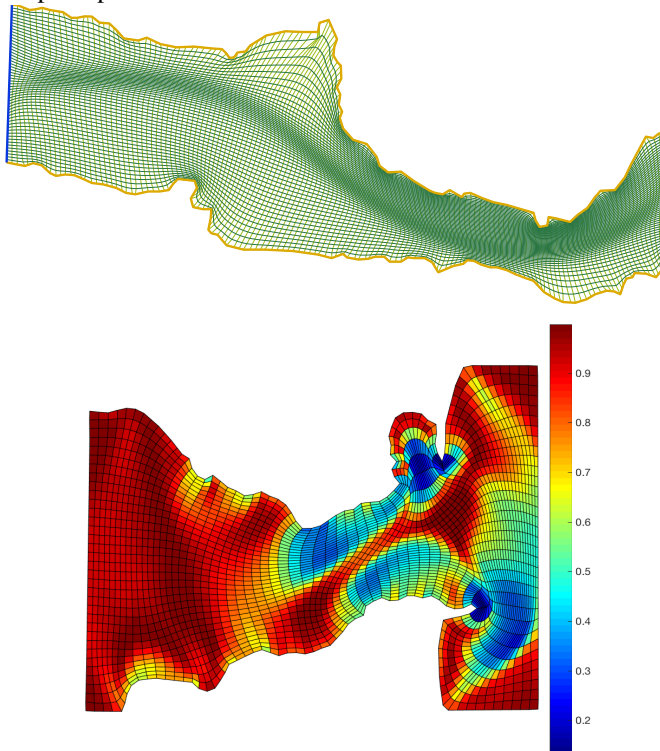
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**Mathematics Subject Classification (2010):** 65N50, 65M50.

UNAMalla is a system for generating quality structured meshes on irregular plane regions.

The grids generated by UNAMalla have different geometric properties which can be combined according the problem where they will be used. The meshes are generated via a non-linear large-scale optimization procedure, starting from an initial mesh which is often non convex, until a smooth and convex grid is obtained.

In this new version has added tools to: a) distribute points on the boundaries b) improvement the distribution of the areas of the cells c) geometric adaptation d) quality measures e) *B*-spline parametrization for IGA.



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\*Facultad de Ciencias, UNAM, (MÉXICO). Email: pablobarrera@ciencias.unam.mx

†Facultad de Ciencias, UNAM, (MÉXICO). Email: guilmerg@ciencias.unam.mx

‡INE, (MÉXICO). Email: avis.phoenix@gmail.com

§CEPES, Universidad de la Habana, La Habana (CUBA). Email: isidro@cepes.uh.cu

¶ICIMAF, La Habana (CUBA). Email: vicky@icimaf.cu