

SEMINARIO

OPTIMIZACIÓN Y EQUILIBRIO

EXPOSITOR

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TITULO

Stability in shape optimization with second variation

Resumen :

This is a joint work with Jimmy Lamboley from University Paris Dauphine. We are interested in the question of stability in the field of shape optimization. Precisely, we prove that under structural assumptions on the hessian of the considered shape functions, the necessary second order minimality conditions imply that the shape hessian is coercive for a given norm. Moreover, under an additional continuity condition for the second order derivatives, we derive precise optimality results in the class of regular perturbations of a domain. These conditions are quite general and are satisfied for the volume, the perimeter, the torsional rigidity and the first Dirichlet eigenvalue of the Laplace operator. As an application, we provide non trivial examples of inequalities obtained in this way.

Miércoles 11 de Noviembre a las 16:30 hrs, Sala de Seminarios John Von Neumann CMM, séptimo piso, torre norte, Beauchef 851.

