

APPLIED MATHEMATICS seminar

ROTORS IMBALANCE SUPPRESSION BY OPTIMAL CONTROL

SPEAKER: Dario Pighin (UAM)

DATE: Wednesday, 8th May 2019 - 14:30

VENUE: Aula 320, Departamento de Matemáticas, UAM

ABSTRACT: Rotors are employed in several industrial devices. Oftentimes, the material is not homogeneous and therefore the mass distribution of the rotor might be heterogeneous. This generates an imbalance, which in turn produces dangerous vibrations in the rotation.

Our goal is to minimize the vibrations, by moving some balancing masses, which compensate the imbalance.

To this extent, we derive an optimal control problem. We apply turnpike theory, to conceive a control strategy.