Optimal control of nonmonotone semilinear elliptic equations

Arnd Rösch[1]   Eduardo Casas[2]   Mariano Mateos[3]

In this talk we study optimal control problems governed by a semilinear elliptic equation. The equation is nonmonotone due to the presence of a convection term, despite the monotonicity of the nonlinear term. The resulting operator is neither monotone nor coercive. We present several theoretical and numerical results.

[1]Universität Duisburg-Essen
  arnd.roesch@uni-due.de
[2]Universidad de Cantabria
  eduardo.casas@unican.es
[3]Universidad de Oviedo
  mmateos@uniovi.es