

Stability for a Nicholson's equation with mixed monotonicities

Teresa Faria^a and Henrique Prates^b

^aDepartamento de Matemática and CMAFCIO, Faculdade de Ciências,
Universidade de Lisboa
e-mail: teresa.faria@fc.ul.pt

^bFaculdade de Ciências, Universidade de Lisboa
henrique.cal.prates@gmail.com

Abstract: We consider a Nicholson's equation with multiple pairs of time-varying delays, where each nonlinear term incorporates two delays and is given by a mixed monotone function. Sufficient conditions for the permanence and the global attractivity of its positive equilibrium are established. Our criteria depend on the size of some delays and generalize results in recent literature.