Title: On fixed point theorems in partially ordered Banach spaces and applications.

Author: Rocío Balderrama

In this work we establish some fixed point theorems of nonlinear mixed monotone operators in Banach spaces partially ordered by a cone. As its application, some easy-to-verify sufficient conditions for the existence of nonlinear differential equations are obtained. In addition, we also provide some applications to biological models to illustrate our main results.