Some control and inverse problems with medical applications

Enrique Fernández-Cara *

The goal of this talk is to present some mathematical techniques that can help to understand, assess and/or solve medical problems in oncology. In particular, some recent methods in control theory and inverse problems techniques will be considered. This includes the theoretical and numerical analysis of several problems: optimal control and null controllability problems oriented to therapy in radiology; the identification of the shape of a tumor in a soft tissue and its applications to elastography, etc.

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*Universidad de Sevilla, email: cara@us.es