

Insalate di Matematica

presents

Quasilinear hyperbolic system of balance laws for modeling blood flow



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Abstract

The widespread recognition that mathematical models and numerical simulations can aid in a better understanding of the physiological process motivates the effort and the interest about this type of models. In this talk we will introduce briefly the theory of the hyperbolic system of balance laws and we will apply this mathematical theory to study a one-dimensional model for blood flow. We will focus on the physical and physiological aspects which are arising from the mathematical expressions but some technical details will still be given.



Keywords:

Hyperbolic system · Balance laws · Mathematical modeling

"Obvious" is the most dangerous word in mathematics. - Eric Temple Bell