

Optimal control and parameter estimation problems with applications in biomedicine

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Short Description

Several problems in data assimilation and parameter estimation can be seen as optimal control problems. This is the case of problems related with computational modeling of blood flow, of cerebral spinal fluid, or mucociliary transport. In such cases, fluid equations as well as elastodynamics equations are required, often in a coupled fashion to describe the dynamics being handled. Solving associated optimal control problems, both from the mathematical and computational point of view, raises some relevant challenges. The minisymposium will address some of these challenges both from more theoretical and practical perspectives.