

1163-35-1299

Sarah Strikwerda* (slstrikw@ncsu.edu) and **Lorena Bociu** (lvbociu@ncsu.edu). *Optimal Control in Fluid Flows through Deformable Porous Media*. Preliminary report.

We consider an optimal control problem subject to a nonlinear poro-visco-elastic model with applications to fluid flows through biological tissues. In particular, our goal is to optimize the fluid pressure using either distributed or boundary control. We present results on the existence of optimal control and the associated necessary optimality conditions. (Received September 15, 2020)