

# Space-time methods for controllability problems: towards a space-time domain decomposition

Munch Arnaud \*  
Université de Clermont-Ferrand, France  
arnaud.munch@uca.fr

## **Abstract**

The talk focuses on the approximation of exact controls for linear and nonlinear PDEs. For simplicity, we shall discuss mainly the case of the wave equation. We first present recent iterative methods to address the nonlinear case then discusses space-times formulations leading to numerical approximation for linear problems: we point out the advantages/drawbacks of these space-time approaches, and finally emphasize that (space-time) domain decomposition methods could be employed.