Application of Wavelets in Optimal Control Problems

Mehdi Radjabalipour
radjab@arg3.uk.ac.ir
Department of Mathematics, University of Kerman, Kerman,, Iran

The paper presents a method for solving optimal control problems as well as differential equations with boundary conditions using wavelets. The method needs no knowledge of a bound on the trajectory and the approximate solutions satisfy the exact boundary conditions imposed on $x(t)$ or $x'(t)$ at the boundary points. The errors are compared with those of similar problems and in almost all cases are found to be smaller.