



CLOSED-FORM DESIGN OF DIGITAL FRACTIONAL-DELAY FILTERS WITH CONSTANT MAGNITUDE AND VARIABLE DELAY (WedAmOR7)

✳ Author(s) :

Zhang Xiaojing
Timo Laakso
Martin Makundi

(Helsinki University of Technology, Finland)

(Helsinki University of Technology, Finland)

(Helsinki University of Technology, Finland)

✳ Abstract :

In most approximation techniques for implementing a variable fractional delay, like Lagrange interpolation, the magnitude response varies considerably with the delay. Instead, it would be desirable to keep the magnitude response the same for all delay values. In this paper, we propose a novel method for optimizing the parameters of the least-squared error spline transition band fractional delay FIR design to achieve good delay approximation with delay-independent magnitude response.