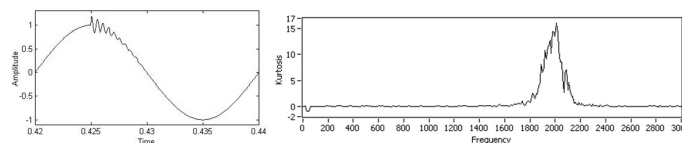




13TF036 Detection and characterization of oscillatory transient using Spectral Kurtosis

Jose Maria Sierra-Fernandez¹⁰¹, Juan José González de la Rosa¹⁰¹, Agustín Agüera-Pérez¹⁰¹, José Carlos Palomares-Salas¹⁰¹

This paper describes a new procedure for analyze oscillatory transient, based in the Spectral Kurtosis (SK). It gives the kurtosis of each frequency component, and they are related to the amplitude evolution. With all this any frequency which amplitude keeps constant or suddenly change will be identified. This second case is the oscillatory transient, in which a specific frequency appears. SK detects and characterizes that frequency univoquely.

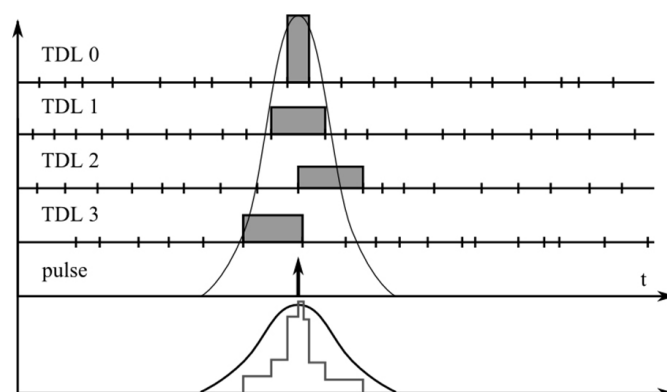


On the left graph is shown the defect introduced and on the right graph the SK result.

13TF041 Architecture of the Multi-Tap-Delay-Line Time-Interval Measurement Module Implemented in FPGA Device

Marek Zielinski¹⁰³, Maciej Gurski¹⁰³, Dariusz Chaberski¹⁰³

This paper describes architecture of the Multi-Tap-Delay-Line (MTDL) time-interval measurement module of high resolution implemented in single FPGA device. A new architecture of the measurement module enables to collect of sixteen time-stamps during single measuring cycle. It means that measured time-interval can be precisely interpolated from collection of the sixteen time-stamps after each measuring cycle. Such architecture of the measurement module leads straight to increase of resolution, to limit total duration time of the measurements and to decrease of duty cycle of the measurement instrument.



The idea of multiple TDLs measurement