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## Improving the time-frequency image of newborn EEG seizure like signal using ambiguity domain characteristics of a general signal model

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Newborn EEG seizure signals appear as piecewise segments in the time frequency domain. Improving the time frequency image can be done using a quadratic-time frequency distribution which has the disadvantage of introducing undesirable interference commonly called cross terms. Using a signal model which mimics the typical behaviour of newborn EEG seizure signals, cross-terms can be characterized in the ambiguity domain. A filter can then be defined and an improvement of the time frequency image quality of newborn EEG seizure signals can be made possible. The filter is tested on both simulated and real signals and compared with current ones.

### Biography

Brahim Khalil Jawad has completed his PhD in Electrical Engineering at École des Mines de Nantes, France. He worked as a Postdoctoral Fellow on Electromagnetics Modeling in the Faculty of Electrical Engineering, Prague, Czech Republic in 2012. He then completed a new Postdoctoral degree, working on time-frequency signal analysis in Prof Boashash's group in 2014, in the Department of Electrical Engineering at Qatar University, Doha. Since 2017, he is working as an Assistant Professor at Esme Sudria School, Lille, France. His research interests focus on numerical modeling of magnetic fields exerted by actuators and time-frequency signal analysis theory.

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