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A novel approach on the newborns’ cry analysis using professional recording and feature extraction from the “first cry” with labview

(Conference Paper)

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Abstract

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Newborn cry analysis has been a subject of interest for both the medical and engineering field together, more pronounced for the past 20 years. In this timeframe, as the acquisition instruments have developed a lot and new equipment with broader analysis spectrum arose, these studies became more and more interesting. Crying is one of the few signals that can be studied in case of a newborn, without going into invasive medical tests, in order to determine a physiological and psychological state. This paper is aimed to propose another feature extraction technique using a professional sound acquisition tool (studio recorder) and a specialized signal processing tool, LabVIEW. This new approach is tested on a newborn cry after birth and proposed for the “first cry” analysis, a novel approach in newborn cry analysis, where the first vocalizations of the newborn are recorded and analyzed. © Springer International Publishing Switzerland 2016.

Author keywords

LabVIEW; Newborn cry analysis; Signal processing; “First cry” analysis

Indexed keywords

Engineering controlled terms: Biomedical signal processing; Extraction; Feature extraction; Soft computing

Acquisition tools; Cry analysis; Engineering fields; Feature extraction techniques; LabViEW; New approaches; Psychological state

Engineering main heading: Signal processing

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