Title (en)

METHOD AND ARRANGEMENT FOR INCREASING THE SIGNAL-TO-NOISE RATIO OF EVOKED AND EVENT-RELATED POTENTIALS IN THE RECORDINGS OF A NEURONAL ACTIVITY

Title (de)

VERFAHREN UND ANORDNUNG ZUR VERGRÖßERUNG DES SIGNAL-RAUSCHABSTANDES VON EVOZIERTEN UND EREIGNISKORRELIERTEN POTENZIALEN IN DEN ABLEITUNGEN EINER NEURONALEN AKTIVITÄT

Title (fr)

PROCÉDÉ ET DISPOSITIF D'AUGMENTATION DU RAPPORT SIGNAL-SUR-BRUIT DE POTENTIELS ÉVOQUÉS ET DE POTENTIELS EN CORRÉLATION AVEC UN INCIDENT DANS LES DÉDUCTIONS D'UNE ACTIVITÉ NEURONALE

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Application

EP 15727570 A 20150518

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Abstract (en)

[origin: WO2015177080A1] The invention specifies a method and an associated arrangement for increasing the signal-to-noise ratio of evoked potential signals and event-related potential signals of a neuronal activity. The method comprises the following steps: – transforming single sweep signals of the neuronal activity for obtaining current phases of the single sweep signals from an original time interval, – providing a time representation of the current phases in a 2D single sweep matrix, – changing the current phases in such a way that the circular variance along at least one phase track in the 2D single sweep matrix is reduced, and – performing a back transformation with the modified current phases into the original time interval for forming phase-regularized single sweep signals. The invention offers the advantage that the signal-to-noise ratio of evoked potential signals and event-related potential signals of a neuronal activity is significantly improved by the phase regularization.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2015177080A1

Citation (examination)

F. CORONA-STRAUSS ET AL.: "Phase Stability Analysis of Chirp Evoked Auditory Brainstem Response by Gabor Frame Operators", IEEE TRANSACTIONS ON NEURAL SYSTEMS AND REHABILITATION ENGINEERING, vol. 17, no. 6, December 2009 (2009-12-01)

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