

Title (en)
SYSTEM AND METHOD FOR CHARACTERIZING CIRCULATORY BLOOD FLOW

Title (de)
SYSTEM UND VERFAHREN ZUR CHARAKTERISIERUNG EINES ZIRKULIERENDEN BLUTFLUSSES

Title (fr)
SYSTÈME ET PROCÉDÉ DE CARACTÉRISATION DE FLUX SANGUIN CIRCULANT

Publication
EP 2967502 A4 20161116 (EN)

Application
EP 14762395 A 20140314

Priority
• US 201313839534 A 20130315
• US 2014028167 W 20140314

Abstract (en)
[origin: WO2014143962A2] A computer-implemented method for characterizing circulatory blood volume and autoregulatory compensatory mechanisms to maintain circulatory blood volume is disclosed. A biological signal that emulates the arterial pulse wave is collected from a sensor. Three derived parameters are extrapolated from the biological signal. The first parameter, circulatory stress, reflects of the changes of the heart rate frequency. The second, circulatory blood volume, reflects the changes in the frequency strength of the heart rate frequency. The third, Pulse Volume Alteration (PVA) Index is a ratio of the sum of the strengths of the heart rate frequency harmonics to the strength of the heart rate frequency of the unprocessed biological signal. Each parameter is compared to a threshold value and assessed to determine an adequacy of circulatory blood volume and an appropriateness of the autoregulatory mechanisms used to maintain circulatory blood volume adequacy.

IPC 8 full level
A61B 8/14 (2006.01); **A61B 5/00** (2006.01); **A61B 5/026** (2006.01)

CPC (source: EP)
A61B 5/026 (2013.01); **A61B 5/4848** (2013.01); **A61B 5/4869** (2013.01); **A61B 5/4884** (2013.01); **A61B 5/7253** (2013.01); **A61B 5/7264** (2013.01); **A61B 5/7275** (2013.01); **G16H 50/20** (2017.12)

Citation (search report)
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Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2014143962 A2 20140918; WO 2014143962 A3 20150409; WO 2014143962 A4 20150528; AU 2014227994 A1 20150917;
CA 2904682 A1 20140918; EP 2967502 A2 20160120; EP 2967502 A4 20161116

DOCDB simple family (application)
US 2014028167 W 20140314; AU 2014227994 A 20140314; CA 2904682 A 20140314; EP 14762395 A 20140314