



(11)

EP 2 696 771 B8

(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see
Bibliography INID code(s) 73

(51) Int Cl.:
A61B 8/08 (2006.01) A61B 8/06 (2006.01)

(86) International application number:
PCT/US2012/033584

(48) Corrigendum issued on:
28.11.2018 Bulletin 2018/48

(87) International publication number:
WO 2012/142455 (18.10.2012 Gazette 2012/42)

(45) Date of publication and mention
of the grant of the patent:
12.09.2018 Bulletin 2018/37

(21) Application number: **12715304.7**

(22) Date of filing: **13.04.2012**

(54) **VASCULAR CHARACTERIZATION USING ULTRASOUND IMAGING**
VASKULÄRE CHARAKTERISIERUNG MIT ULTRASCHALLBILDGEBUNG
CARACTÉRISATION VASCULAIRE UTILISANT L'IMAGERIE ULTRASONORE

(84) Designated Contracting States:
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

(30) Priority: **14.04.2011 US 201161475550 P**

(43) Date of publication of application:
19.02.2014 Bulletin 2014/08

(60) Divisional application:
18193572.7

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(56) References cited:
WO-A2-2008/053457 US-A1- 2012 083 692

• **TRAHEY G E ET AL: "Angle independent**
ultrasonic blood flow detection by frame-to-frame
correlation of B-mode images", ULTRASONICS,
IPC SCIENCE AND TECHNOLOGY PRESS LTD.
GUILDFORD, GB, vol. 26, no. 5, 1 September 1988
(1988-09-01), pages 271-276, XP025824234, ISSN:
0041-624X, DOI: 10.1016/0041-624X(88)90016-9
[retrieved on 1988-09-01]

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- GRONNINGSAETER A ET AL: "Vessel wall detection and blood noise reduction in intravascular ultrasound imaging", IEEE TRANSACTIONS ON ULTRASONICS, FERROELECTRICS AND FREQUENCY CONTROL, IEEE, US, vol. 43, no. 3, 1 May 1996 (1996-05-01), pages 359-369, XP011437389, ISSN: 0885-3010, DOI: 10.1109/58.489392
- E.S. EBBINI: "Phase-coupled two-dimensional speckle tracking algorithm", IEEE TRANSACTIONS ON ULTRASONICS, FERROELECTRICS AND FREQUENCY CONTROL, vol. 53, no. 5, 1 May 2006 (2006-05-01), pages 972-990, XP055054547, ISSN: 0885-3010, DOI: 10.1109/TUFFC.2006.1632687

专利名称(译)	使用超声成像的血管表征		
公开(公告)号	EP2696771B8	公开(公告)日	2018-11-28
申请号	EP2012715304	申请日	2012-04-13
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IPC分类号	A61B8/08 A61B8/06		
代理机构(译)	LATZEL , KLAUS		
优先权	61/475550 2011-04-14 US		
其他公开文献	EP2696771A2 EP2696771B1		
外部链接	Espacenet		

摘要(译)

超声方法和/或系统提供血管壁运动和血流的运动跟踪 (例如, 使用高帧率超声脉冲回波数据和斑点跟踪, 可以同时跟踪壁运动和流动) 。