Publications, Patents, Talks

2016

Philips Lehrstuhl für Medizinische Informationstechnik
Helmholtz-Institut für Biomedizinische Technik
Rheinisch-Westfälische Technische Hochschule Aachen

Philips Chair for Medical Information Technology
Helmholtz-Institute for Biomedical Engineering
RWTH Aachen University

Director:
Univ.-Prof. Dr.-Ing. Dr. med. Steffen Leonhardt

Bücher 2016 / Books 2016

[1] S. Leonhardt, M. Walter (Hrsg.), “Medizintechnische Systeme - Physiologische Grundlagen, Gerätetechnik und automatisierte Therapieführung”, Springer Verlag Berlin Heidelberg, 2016. DOI 10.1007/978-3-642-41239-4, eBook ISBN 978-3-642-41239-4, Softcover ISBN 978-3-642-41238-7.

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[1] B. Eilebrecht, J. Lem, M. Mathissen, A. Lindner, R. Vogt, M. Walter, S, Leonhardt, „CONTACTLESS ELECTROCARDIOGRAPHIC MEASUREMENT SENSOR, US9468390B2, granted 18.10.2016.

[2] S. Leonhardt, T. Baier-Löwenstein, S. Mersmann, R. Pikkemaat, E. Teschner, „DEVICE AND METHOD FOR PROCESSING TOMOGRAPHIC DATA“, US9384549B2, granted 05.07.2016.

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[6] M. Mathissen, R. Vogt, J. Lem, H.-J. Lindner, T. Wartzek, L. Leicht, S. Leonhardt, „LICHTTHERAPIE-BELEUCHTUNGSSYSTEM FÜR EINEN FARHZEUGINNENRAUM“, DE 102016203164A1, published 01.12.2016.

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mit anonymem Gutachterwesen 2016 /

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[1] P. Fonseca, R.M. Aarts, X. Long, J. Rolink, S. Leonhardt, “Estimating actigraphy from motion artifacts in ECG and respiratory effort signals”, ***Physiol Meas.*** 2016 Jan;37(1):67-82. doi: 10.1088/0967-3334/37/1/67.

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[3] S. Lehmann, S. Leonhardt, C. Ngo, L. Bergmann, S. Schrading, K. Heimann, N. Wagner, K. Tenbrock, „Electrical Impedance Tomography as possible guidance for individual positioning of patients with multiple lung injury“, ***Clin Respir J.*** 2016 Apr 5. doi: 10.1111/crj.12481. [Epub ahead of print].

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[1] J. Kühn, A. Stollenwerk, C. Brendle, Th. Janisch M. Walter, R. Rossaint, S. Leonhardt, S. Kowalewski, R. Kopp, " Sensor Supervision and Control Value Limitations in in Networked Intensive Care", 2nd Workshop on Fail Safety in Medical Cyber-Physical Systems, February 26, 2016, Wien, Austria

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[38] B. Venema, T. Nemecek, N. Blanik, V. Blazek, S. Leonhardt, “Pulse Oximetry Imaging – Practical Feasibility and Theoretical Limitations”, 26th Annual Meeting of the European Society for Computing and Technology in Anaesthesia and Intensive Care (ESCTAIC2016), Timisoara, Romania, Sep. 22nd - 24th, 2016.

68. Kongress der Deutschen Gesellschaft für Urologie, Leipzig, Sept. 28th – Oct. 1st, 2016

[39] C. Castelar, D. Leonhäuser, T. Schlebusch, M. Rohm, R. Rupp, I. Zraik, S. Leonhardt, M. Walter, JO. Grosse, „Feasibility of Electrical impedance tomography (EIT) as a novel cystovolumetric technique – a comparative study to standard ultrasound methods”, 68. Kongress der Deutschen Gesellschaft für Urologie, Leipzig, Sept. 28th – Oct. 1st, 2016.

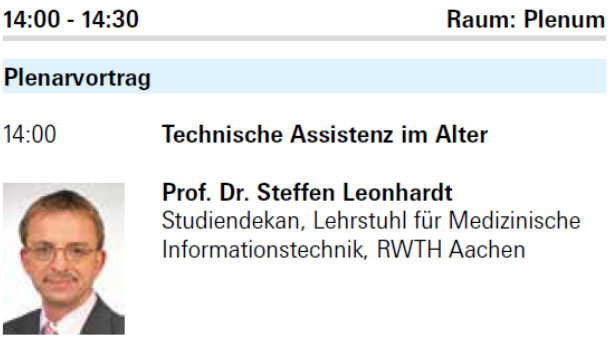
ESICM 2016 (LIVES 2016 - ESICM), Congress of the European Society of Intensive Care Medicine, Milan, Italy, 1. - 5. Oct. 2016.

[40] A. Pomprapa, P.A. Pickerodt, M.B.T. Hofferberth, M. Russ, W. Braun, M. Walter, R. Francis, B. Lachmann, S. Leonhardt; "Minimal arterial blood gas analysis based on the average carbon dioxide elimination during automatic ventilation therapy using the ARDSNet protocol"; European Society of Intensive Care Medicine" (LIVES 2016 - ESICM), Milan, Italy, 1. - 5. Oct. 2016.

Eingeladene Vorträge 2016 /
Invited Talks and Lectures 2016

[41] S. Leonhardt, “Methods for contact-free Monitoring of Vital Signs”, Fakultätskolloquium der Technischen Fakultät der CAU Kiel im WS 2015/16, 8. Feb. 2016, 17:15 – 18:45, Institut für Elektrotechnik und Informationstechnik, Geb. D, Raum: „Aquarium“, Kaiserstr. 2, 24143 Kiel

[42] S. Leonhardt, “Technische Assistenz im Alter: Anforderungen und Erfolgsrezepte”, Plenarvortrag, Zukunft Lebensräume 2016 - Ambient Assisted Living (AAL 2016), 21. April 2016, 14:00 - 14:30 Uhr

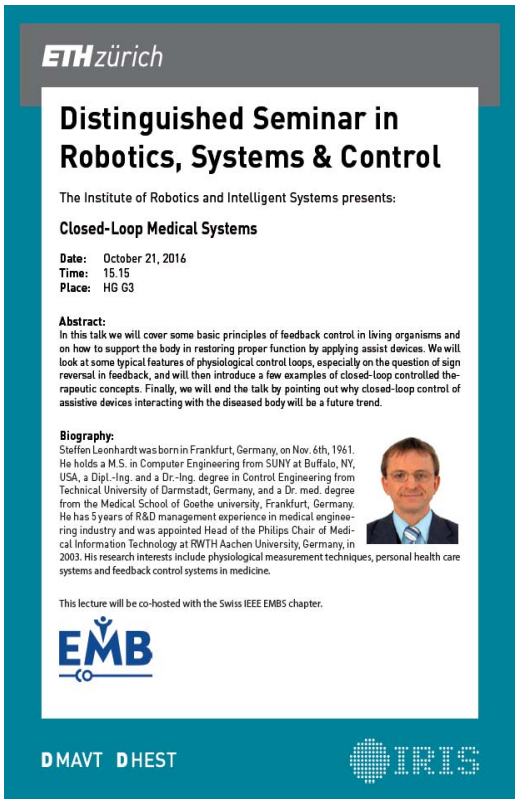


[43] S. Leonhardt, „Implantable Brain Pressure Sensors: state-of-the-art“, keynote lecture, CIMTEC 2016, Perugia, Italy, June 6th - 9th, 2016.

[44] S. Leonhardt, „ Methods for contact-free Monitoring of Vital Signs “,Invited lecture at Amrita U, Coimbatore, India, Aug. 9th, 2016.

[45] S. Leonhardt, „Telemedizin im Automobil – eine Chance für kardiologische Patienten?“, eingeladener Vortrag, Erster gemeinsamer Kongress der Deutschen Gesellschaft für Prävention und Rehabilitation (DGPR) und der Deutschen Gesellschaft für Sportmedizin und Prävention (DGSP), 1. Oktober 2016.

[46] S. Leonhardt, “Closed-Loop Medical Systems”, invited lecture, Distinguished Seminar in Robotics, Systems & Control, The Institute of Robotics and Intelligent Systems, ETH Zurich, Switzerland, October 21st, 2016.



[47] S. Leonhardt, “Closed-Loop Medical Systems – why nature wants us to close the loop!”, Fakultätskolloquium, Fakultät für Elektrotechnik und Informationstechnik, TU Darmstadt, Friday, 2. Dez. 2016.

Medizintechnik Vortrag am 02. Dezember 2016

TECHNISCHE UNIVERSITÄT DARMSTADT

11.11.2016

Am Freitag, den 02. Dezember um 15:00 Uhr im Hörsaal S3/06-052(!)

spricht Herr Prof. Steffen Leonhardt von der RWTH Aachen über sein Forschungsthema

„Closed-Loop Medical Systems"

The talk will be held in englisch language. Prof. Leonhardt will focus on some intrinsic principles behind closed-loop systems in physiology.
Starting at the general concept of homeostasis, we will cover selected closed loop systems at the organ level and introduce some engineering concepts to assist diseased organs.
We will then move down to the cell level and take a look at closed loop systems on that scale.
Here we will discover negative as well as positive feedback loops.

Über den Vortragenden:
Steffen Leonhardt studierte Elektrotechnik mit Vertiefung in RT und EMK an der TU Darmstadt und Computertechnik an der SUNY at Buffalo, NY, USA, sowie Medizin an der Goethe Universität in Frankfurt. Als wiss. Mitarbeiter und später als wiss. Assistent arbeitete er am Institut für Automatisierungstechnik der TU Darmstadt.
Im Jahr 1995 promovierte er bei Prof. Isermann mit einer Arbeit zur Fehlerdiagnose in mechatronischen Systemen. Im Jahr 2002 schloss sich eine medizinische Promotion auf dem Gebiet der pädiatrischen Lungenfunktionsdiagnose an.
Von 1999 - 2003 arbeitete er zunächst als Entwicklungsingenieur im Unternehmensbereich Anästhesie, anschliessend als Projektleiter im Bereich Intensivmedizin bei der Fa. Dräger Medical AG & Co. KGaA in Lübeck. Seit 2003 bekleidet er den Philips Stiftungslehrstuhl für Medizinische Informationstechnik an der RWTH Aachen.

Raum: S3|06 - 052
Beginn: 15:00 Uhr

<- Zurück zu: Institut EMK - Aktuelles

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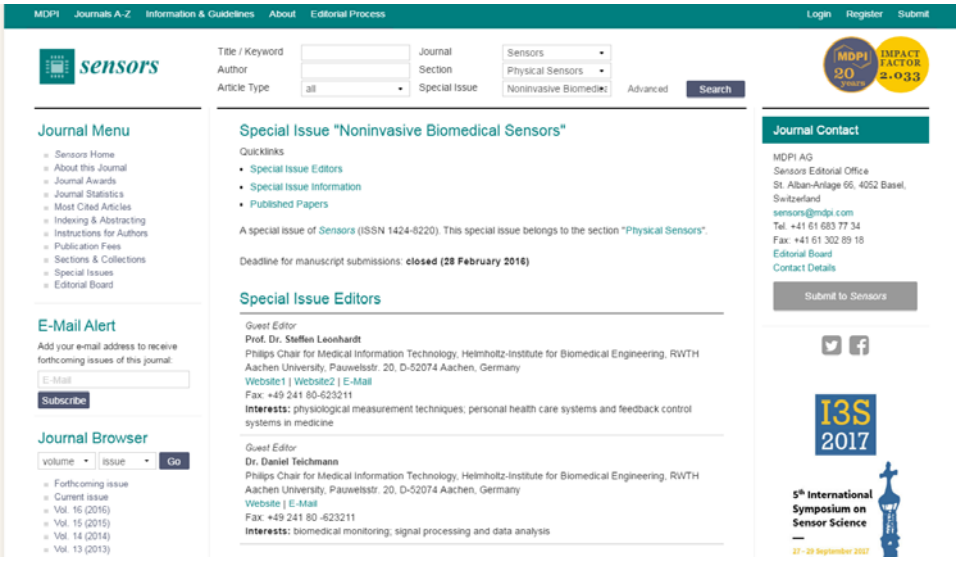
Organisation von eingeladenen Zeitschriften-Ausgaben im Jahr 2016

Organisation of invited special issues in peer-reviewed journals in 2016

[1] S. Leonhardt, D. Teichmann (eds.), Special Issue on „Noninvasive Biomedical Sensors“, 2015. http://www.mdpi.com/journal/sensors/special_issues/noninvasive-biomedical-sensors.



[2] S. Leonhardt, D. Teichmann (eds.), Special Issue on „Wearable Biomedical Sensors“, 2016. http://www.mdpi.com/journal/sensors/special_issues/biomedical_sensors.