Smart optical and ultrasound diagnostics of breast cancer

Resultados

Información del proyecto

SOLUS

Identificador del acuerdo de subvención:
731877

Sitio web del proyecto

DOI
10.3030/731877

Proyecto cerrado

Fecha de la firma de la CE
3 Noviembre 2016

Fecha de inicio
1 Noviembre 2016

Fecha de finalización
31 Octubre 2021

Financiado con arreglo a
INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

Coste total
€ 3 815 260,00

Aportación de la UE
€ 3 815 260,00

Coordinado por
POLITECNICO DI MILANO
Italy

CORDIS proporciona enlaces a los documentos públicos y las publicaciones de los proyectos de los programas marco HORIZONTE.

Los enlaces a los documentos y las publicaciones de los proyectos del Séptimo Programa Marco, así como los enlaces a algunos tipos de resultados específicos, como conjuntos de datos y «software», se obtienen dinámicamente de OpenAIRE.

Resultado final

Documents, reports (13)

Benchmark configuration and data assessing functional working of acquisition and processing hardware and software on the mockup system

Benchmark configuration and data assessing functional working of acquisition and processing hardware and software on the mockup system key performance indicator 4

Report on clinical validation

Final evaluation of the proposed SOLUS system from a clinical viewpoint key performance indicators 8 9 and 13

Performance assessment of the single optode

Performance assessment of the single optode (key performance indicator 3)

Definition of procedures for routine tests

Performance assessment of DOT with US priors

Definition of protocols for system characterization

Design of multi-modal phantoms for DOT-US

Authorization for the clinical use of the multi-modal optical/US prototype

Authorization from the Italian Ministry of Health for the clinical use of the multimodal opticalUS prototype

Approval of clinical protocol by ethical committee

Definition of paradigms representing exemplary breast lesions cases

Performances assessment of optode components

Performances assessment of optode components (key performance indicators 1 and 2)

Final characterization of the SOLUS prototype

Final characterization of the SOLUS prototype key performance indicator 5

Visual identity and online presence

Report summarising the project's visual identity and online presence

Open Research Data Pilot (3)

Final Data Management Plan

Updated Data Management Plan

First release of the Data Management Plan
Initial release of the SOLUS Data Management Plan

Publicaciones

Other (3)

"Rivelatore a singolo fotone ad area larga con funzionalità di time-gating"
Autores: Tosi, A.; Villa, F.; Zappa, F.; Torricelli, A.; Dalla Mora, A.; Contini, D.; Pifferi, G.; Taroni, P.; Di Sieno, L.; Buttafava, M.; Conca, E.; Scrofani, G.; Tisa, S.
Publicado en: 2018
Editor: Politecnico di Milano

Bimodal ultrasonic probe comprising an optical device for diagnosis
Autores: Taroni, Paola; Tosi, Alberto; Pifferi, Antonio Giovanni; Dalla Mora, Alberto
Publicado en: 2019
Editor: Politecnico di Milano

WIDE-AREA SINGLE-PHOTON DETECTOR WITH TIME-GATING CAPABILITY
Autores: Tosi, Alberto; Villa, Federica Alberta; Zappa, Franco; Torricelli, Alessandro; Dalla Mora, Alberto; Contini, Davide; Pifferi, Antonio Giovanni; Taroni, Paola; Di Sieno, Laura; Buttafava, Mauro; Conca, Enrico; Scrofani, Gabriele; Tisa, Simone
Publicado en: 2019
Editor: Politecnico di Milano

Peer reviewed articles (16)

Time-domain diffuse optics with 86 mm2 fast-gated SiPM for extreme light harvesting
Autores: L. Di Sieno, E. Ferocino, E. Conca, V. Sesta, M. Buttafava, F. Villa, F. Zappa, D. Contini, A. Torricelli, P. Taroni, A. Tosi, A. Pifferi, A. Dalla Mora

Publicado en: Optics Letters, Edición 46/2, 2021, Página(s) 424, ISSN 0146-9592
Editor: Optical Society of America
DOI: 10.1364/ol.413577

In vivo test-driven upgrade of a time domain multi-wavelength optical mammograph
Autores: Giulia Maffeis, Edoardo Ferocino, Alberto Dalla Mora, Antonio Pifferi, Rinaldo Cubeddu, Paola Taroni
Publicado en: Biomedical Optics Express, Edición 12/2, 2021, Página(s) 1105, ISSN 2156-7085
Editor: The Optical Society
DOI: 10.1364/boe.412210

The SiPM revolution in time-domain diffuse optics
Autores: Alberto Dalla Mora, Laura Di Sieno, Anurag Behera, Paola Taroni, Davide Contini, Alessandro Torricelli, Antonio Pifferi
Publicado en: Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, Edición 978, 2020, Página(s) 164411, ISSN 0168-9002
Editor: Elsevier BV
DOI: 10.1016/j.nima.2020.164411

Large-Area, Fast-Gated Digital SiPM With Integrated TDC for Portable and Wearable Time-Domain NIRS
Autores: Enrico Conca, Vincenzo Sesta, Mauro Buttafava, Federica Villa, Laura Di Sieno, Alberto Dalla Mora, Davide Contini, Paola Taroni, Alessandro Torricelli, Antonio Pifferi, Franco Zappa, Alberto Tosi
Publicado en: IEEE Journal of Solid-State Circuits, Edición 55/11, 2020, Página(s) 3097-3111, ISSN 0018-9200
Editor: Institute of Electrical and Electronics Engineers
DOI: 10.1109/jssc.2020.3006442

Probe-hosted large area silicon photomultiplier and high-throughput timing electronics for enhanced performance time-domain functional near-infrared spectroscopy
Autores: L. Di Sieno, A. Behera, S. Rohilla, E. Ferocino, D. Contini, A. Torricelli, B. Krämer, F. Koberling, A. Pifferi, A. Dalla Mora
Publicado en: Biomedical Optics Express, Edición 11/11, 2020, Página(s) 6389, ISSN 2156-7085
Editor: The Optical Society
DOI: 10.1364/boe.400868

Chromophore decomposition in multispectral time-resolved diffuse optical tomography
Autores: Judy Zouaoui, Laura Di Sieno, Lionel Hervé, Antonio Pifferi, Andrea Farina, Alberto Dalla Mora, Jacques Derouard, Jean-Marc Dinten

Publicado en: Biomedical Optics Express, Edición 8/10, 2017, Página(s) 4772, ISSN 2156-7085
Editor: The Optical Society
DOI: 10.1364/BOE.8.004772

Time-domain diffuse optical tomography using silicon photomultipliers: feasibility study
Autores: Laura Di Sieno, Judy Zouaoui, Lionel Hervé, Antonio Pifferi, Andrea Farina, Edoardo Martinenghi, Jacques Derouard, Jean-Marc Dinten, Alberto Dalla Mora
Publicado en: Journal of Biomedical Optics, Edición 21/11, 2016, Página(s) 116002, ISSN 1083-3668
Editor: S P I E - International Society for Optical Engineering
DOI: 10.1117/1.JBO.21.11.116002

High throughput detection chain for time domain optical mammography
Autores: Edoardo Ferocino, Edoardo Martinenghi, Alberto Dalla Mora, Antonio Pifferi, Rinaldo Cubeddu, Paola Taroni
Publicado en: Biomedical Optics Express, Edición 9/2, 2018, Página(s) 755, ISSN 2156-7085
Editor: The Optical Society
DOI: 10.1364/boe.9.000755

Non-invasive optical estimate of tissue composition to differentiate malignant from benign breast lesions: A pilot study
Autores: Paola Taroni, Anna Maria Paganoni, Francesca Ieva, Antonio Pifferi, Giovanna Quarto, Francesca Abbate, Enrico Cassano, Rinaldo Cubeddu
Publicado en: Scientific Reports, Edición 7, 2017, Página(s) 40683, ISSN 2045-2322
Editor: Nature Publishing Group
DOI: 10.1038/srep40683

Instrumental, optical and geometrical parameters affecting time-gated diffuse optical measurements: a systematic study
Autores: Anurag Behera, Laura Di Sieno, Antonio Pifferi, Fabrizio Martelli, Alberto Dalla Mora
Publicado en: Biomedical Optics Express, Edición 9/11, 2018, Página(s) 5524, ISSN 2156-7085
Editor: The Optical Society
DOI: 10.1364/boe.9.005524

Systematic study of the effect of ultrasound gel on the performances of time-domain diffuse optics and diffuse correlation spectroscopy
Autores: Laura Di Sieno, Davide Contini, Giuseppe Lo Presti, Lorenzo Cortese, Tony Mateo, Bogdan Rosinski, Elena Venturini, Pietro Panizza, Mireia Mora,

Gloria Aranda, Mattia Squarcia, Andrea Farina, Turgut Durduran, Paola Taroni, Antonio Pifferi, Alberto Dalla Mora
Publicado en: Biomedical Optics Express, Edición 10/8, 2019, Página(s) 3899, ISSN 2156-7085
Editor: The Optical Society
DOI: 10.1364/boe.10.003899

Multi Simulation Platform for Time Domain Diffuse Optical Tomography: An Application to a Compact Hand-Held Reflectance Probe
Autores: Edoardo Ferocino, Antonio Pifferi, Simon Arridge, Fabrizio Martelli, Paola Taroni, Andrea Farina
Publicado en: Applied Sciences, Edición 9/14, 2019, Página(s) 2849, ISSN 2076-3417
Editor: MDPI
DOI: 10.3390/app9142849

Time-Gated Single-Photon Detection in Time-Domain Diffuse Optics: A Review
Autores: Alberto Dalla Mora, Laura Di Sieno, Rebecca Re, Antonio Pifferi, Davide Contini
Publicado en: Applied Sciences, Edición 10/3, 2020, Página(s) 1101, ISSN 2076-3417
Editor: MDPI
DOI: 10.3390/app10031101

Enhanced diffuse optical tomographic reconstruction using concurrent ultrasound information
Autores: G. Di Sciacca, L. Di Sieno, A. Farina, P. Lanka, E. Venturini, P. Panizza, A. Dalla Mora, A. Pifferi, P. Taroni, S. R. Arridge
Publicado en: Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, Edición 379/2240, 2021, Página(s) 20200195, ISSN 1364-503X
Editor: Royal Society of London
DOI: 10.1098/rsta.2020.0195

SPAD-based asynchronous-readout array detectors for image-scanning microscopy
Autores: Mauro Buttafava, Federica Villa, Marco Castello, Giorgio Tortarolo, Enrico Conca, Mirko Sanzaro, Simonluca Piazza, Paolo Bianchini, Alberto Diaspro, Franco Zappa, Giuseppe Vicidomini, Alberto Tosi
Publicado en: Optica, Edición 7:7, 2020, Página(s) 755-765, ISSN 2334-2536
Editor: Optical Society of America
DOI: 10.1364/optica.391726

Broadband Time Domain Diffuse Optical Reflectance Spectroscopy: A Review of Systems, Methods, and Applications

Autores: Sanathana Konugolu Venkata Sekar, Pranav Lanka, Andrea Farina, Alberto Dalla Mora, Stefan Andersson-Engels, Paola Taroni, Antonio Pifferi
Publicado en: Applied Sciences, Edición 9/24, 2019, Página(s) 5465, ISSN 2076-3417
Editor: MDPI
DOI: 10.3390/app9245465

Conference proceedings (21)

Fast-Gated Digital Silicon Photomultiplier Maximizes Light Harvesting and Depth Sensitivity in Time-Domain Diffuse Optics
Autores: Alberto Dalla Mora, Laura Di Sieno, Edoardo Ferocino, Enrico Conca, Vincenzo Sesta, Mauro Buttafava, Federica Villa, Franco Zappa, Davide Contini, Alessandro Torricelli, Paola Taroni, Alberto Tosi, and Antonio Pifferi
Publicado en: European Conferences on Biomedical Optics 2021 (ECBO), 2021, Página(s) ES1B.3, ISBN 978-1-943580-95-8
Editor: Optica Publishing Group

SOLUS Project: Bringing Innovation into Breast Cancer Diagnosis and in the Time-Domain Diffuse Optical Field
Autores: Laura Di Sieno, Alberto Dalla Mora, Edoardo Ferocino, Antonio Pifferi, Alberto Tosi, Enrico Conca, Vincenzo Sesta, Andrea Giudice, Alessandro Ruggeri, Simone Tisa, Alexander Flocke, Bogdan Rosinski, Jean-Marc Dinten, Mathieu Perriollat, David Savery, Hélène Sportouche, Simon Arridge, Andrea Farina, Pietro Panizza, Elena Venturini, Peter Gordebeke, Pamela Zolda, Paola Taroni
Publicado en: Biophotonics Congress: Biomedical Optics 2020 (Translational, Microscopy, OCT, OTS, BRAIN), 2020, Página(s) STu1D.5, ISBN 978-1-943580-74-3
Editor: OSA
DOI: 10.1364/ots.2020.stu1d.5

SOLUS: an innovative multimodal imaging system to improve breast cancer diagnosis through diffuse optics and ultrasounds
Autores: Antonio Pifferi, Alberto Dalla Mora, Laura Di Sieno, Edoardo Ferocino, Alberto Tosi, Enrico Conca, Vincenzo Sesta, Andrea Giudice, Alessandro Ruggeri, Simone Tisa, Alexander Flocke, Bogdan Rosinski, Jean-Marc Dinten, Mathieu Perriollat, Christophe Fraschini, Hélène Sportouche, Simon Arridge, Giuseppe Di Sciacca, Andrea Farina, Pietro Panizza, Elena Venturini, Peter Gordebeke, Pamela Zolda, Paola
Publicado en: Optical Tomography and Spectroscopy of Tissue XIV, Edición 11639, 2021, Página(s) 116390C

Editor: International society for optics and photonics
DOI: 10.1117/12.2576778

Wide-area fast-gated single-photon detector with integrated TDCfor near-infrared spectroscopy applications
Autores: Conca, Enrico; Sesta, Vincenzo; Villa, Federica Alberta; Buttafava, Mauro; Tisa, Simone; Dalla Mora, Alberto; Contini, Davide; Torricelli, Alessandro; Pifferi, Antonio Giovanni; Di Sieno, Laura; Taroni, Paola; Zappa, Franco; Tosi, Alberto
Publicado en: Proceedings of Single Photon Workshop 2019, 2019
Editor: Politecnico di Milano

A multimodal imaging system hosting an innovative photonic module to improve breast cancer diagnosis: the SOLUS project
Autores: Di Sieno, L.; Dalla Mora, A.; Ferocino, E.; Pifferi, A.; Tosi, A.; Conca, E.; Sesta, V.; Giudice, A.; Ruggeri, A.; Tisa, S.; Flocke, A; Rosinski, B.; Dinten, J. - M.; Perriollat, M.; Savery, D.; Sportouche, H.; Arridge, S.; Farina, A.; Panizza, P.; Venturini, E.; Gordebeke, P.; Zolda, P.; Taroni, P.
Publicado en: Proceedings of Single Photon Workshop 2019, Edición 11, 2019, Página(s) 125
Editor: Politecnico di Milano

Attractive new technologies for 7-wavelength time domain optical mammography
Autores: Edoardo Ferocino, Edoardo Martinenghi, Alberto Dalla Mora, Antonio Pifferi, Rinaldo Cubeddu, Paola Taroni
Publicado en: Diffuse Optical Spectroscopy and Imaging VI, 2017, Página(s) 1041202
Editor: SPIE
DOI: 10.1117/12.2286058

Gating techniques for InGaAs/InP and silicon SPADs
Autores: Alberto Tosi, Mirko Sanzaro, Mauro Buttafava, Alessandro Ruggeri, Enrico Conca, Marco Renna, Federica Villa, Franco Zappa
Publicado en: Single Photon Workshop 2017, 2017, Página(s) 177
Editor: National Institute of Standards and Technology (NIST)

Performance evaluation of time-domain multispectral diffuse optical tomography in the reflection geometry
Autores: Lionel Hervé, Judy Zouaoui, David Orive-Miguel, Laura Di Sieno, Antonio Pifferi, Andrea Farina, Alberto Dalla Mora, Jacques Derouard, Jérôme Mars, Laurent Condat, Jean-Marc Dinten
Publicado en: Diffuse Optical Spectroscopy and Imaging VI, 2017, Página(s) 25, ISBN 9781-510612839

Editor: SPIE
DOI: 10.1117/12.2285811

Novel Approaches to Photon Detection and Timing for 7-Wavelength Time Domain Optical Mammography
Autores: E. Ferocino, E. Martinenghi, A. Dalla Mora, A. Pifferi, R. Cubeddu, P. Taroni
Publicado en: 19th Italian National Conference on Photonic Technologies (Fotonica 2017), 2017, Página(s) 29 (4 .)-29 (4 .), ISBN 978-1-78561-757-7
Editor: Institution of Engineering and Technology
DOI: 10.1049/cp.2017.0204

How Should the New Generation of Detectors for Diffuse Optics Be? A Systematic Simulation Study
Autores: Laura Di Sieno, Anurag Behera, Antonio Pifferi, Fabrizio Martelli, Alberto Dalla Mora
Publicado en: Biophotonics Congress: Biomedical Optics Congress 2018 (Microscopy/Translational/Brain/OTS), 2018, Página(s) JW3A.30, ISBN 978-1-943580-41-5
Editor: OSA
DOI: 10.1364/translational.2018.jw3a.30

Novel Technologies for Time-Domain Diffuse Optics: Miniaturized Wearable Devices and Bioresorbable Optical Fibers
Autores: Alberto Dalla Mora, Laura Di Sieno, Sanathana Konugolu Venkata Sekar, Andrea Farina, Davide Contini, Nadia G. Boetti, Daniel Milanese, Jan Nissinen, Antonio Pifferi
Publicado en: Biophotonics Congress: Biomedical Optics Congress 2018 (Microscopy/Translational/Brain/OTS), 2018, Página(s) OF2D.6, ISBN 978-1-943580-41-5
Editor: OSA
DOI: 10.1364/ots.2018.of2d.6

Advances in Single-Photon Detection and Timing for Time Domain Multi-Wavelength Optical Mammography
Autores: Edoardo Ferocino, Edoardo Martinenghi, Alberto Dalla Mora, Antonio Pifferi, Rinaldo Cubeddu, Paola Taroni
Publicado en: Biophotonics Congress: Biomedical Optics Congress 2018 (Microscopy/Translational/Brain/OTS), 2018, Página(s) JW3A.43, ISBN 978-1-943580-41-5
Editor: OSA
DOI: 10.1364/translational.2018.jw3a.43

Multi-wavelength time domain diffuse optical tomography for breast cancer: initial results on silicone phantoms

Autores: Edoardo Ferocino, Giuseppe Di Sciacca, Laura Di Sieno, Alberto Dalla Mora, Antonio Pifferi, Simon R. Arridge, Fabrizio Martelli, Paola Taroni, Andrea Farina
Publicado en: Optical Tomography and Spectroscopy of Tissue XIII, 2019, Página(s) 59, ISBN 9781-510623910
Editor: SPIE
DOI: 10.1117/12.2508657

Study of optimal measurement conditions for time-domain diffuse optics systems

Autores: Anurag Behera, Laura Di Sieno, Antonio Pifferi, Fabrizio Martelli, Alberto Dalla Mora
Publicado en: Biophotonics: Photonic Solutions for Better Health Care VI, 2018, Página(s) 40, ISBN 9781-510618978
Editor: SPIE
DOI: 10.1117/12.2307370

Large area SiPM and high throughput timing electronics: toward new generation time-domain instruments

Autores: Anurag Behera, Laura Di Sieno, Sumeet Rohilla, Antonio Pifferi, Alessandro Torricelli, Davide Contini, Benedikt Kraemer, Felix Koberling, Alberto Dalla Mora
Publicado en: Diffuse Optical Spectroscopy and Imaging VII, 2019, Página(s) 1, ISBN 9781-510628427
Editor: SPIE
DOI: 10.1117/12.2526792

Effects of ultrasound impedance matching fluids on diffuse optical measurements

Autores: Laura Di Sieno, Davide Contini, Giuseppe Lo Presti, Lorenzo Cortese, Tony Mateo, Bogdan Rosinski, Elena Venturini, Pietro Panizza, Mireia Mora, Gloria Aranda, Mattia Squarcia, Andrea Farina, Turgut Durduran, Paola Taroni, Antonio Pifferi, Alberto Dalla Mora
Publicado en: Diffuse Optical Spectroscopy and Imaging VII, 2019, Página(s) 102, ISBN 9781-510628427
Editor: SPIE
DOI: 10.1117/12.2526925

Solid heterogeneous phantoms for multimodal ultrasound and diffuse optical imaging: an outcome of the SOLUS project for standardization

Autores: Laura Di Sieno, Rinaldo Cubeddu, Hélène Sportouche, David Savéry, Sanathana Konugolu Venkata Sekar, Bogdan Rosinski, Andrea Farina, Edoardo Ferocino, Pranav Lanka, Paola Taroni, Antonio Pifferi, Alberto Dalla Mora
Publicado en: Novel Biophotonics Techniques and Applications V, 2019,

Página(s) 39, ISBN 9781-510628441
Editor: SPIE
DOI: 10.1117/12.2526645

Fitting a spectral model for component analysis in diffuse optical tomography
Autores: Giuseppe Di Sciacca, Edoardo Ferocino, Andrea Farina, Antonio Pifferi, Paola Taroni, Simon Arridge
Publicado en: Diffuse Optical Spectroscopy and Imaging VII, 2019, Página(s) 77, ISBN 9781-510628427
Editor: SPIE
DOI: 10.1117/12.2527119

A Tool for Quantitative and Systematic Simulation of Diffuse Optical Tomography with a Limited Number of Fixed Sources and Detectors
Autores: Edoardo Ferocino, Antonio Pifferi, Simon Arridge, Fabrizio Martelli, Paola Taroni, Andrea Farina
Publicado en: Biophotonics Congress: Biomedical Optics Congress 2018 (Microscopy/Translational/Brain/OTS), 2018, Página(s) JTu3A.25, ISBN 978-1-943580-41-5
Editor: OSA
DOI: 10.1364/translational.2018.jtu3a.25

Spectral approach to time domain diffuse optical tomography for breast cancer: validation on meat phantoms
Autores: Edoardo Ferocino, Giuseppe Di Sciacca, Laura Di Sieno, Alberto Dalla Mora, Antonio Pifferi, Simon Arridge, Fabrizio Martelli, Paola Taroni, Andrea Farina
Publicado en: Diffuse Optical Spectroscopy and Imaging VII, 2019, Página(s) 7, ISBN 9781-510628427
Editor: SPIE
DOI: 10.1117/12.2526649

SOLUS: A Novel Multimodal Approach to Diffuse Optics and Ultrasound Imaging of Breast Cancer
Autores: Antonio Pifferi, Alberto Dalla Mora, Laura Di Sieno, Giulia Maffeis, Alberto Tosi, Enrico Conca, Vincenzo Sesta, Andrea Giudice, Alessandro Ruggeri, Simone Tisa, Alexander Flocke, Bogdan Rosinski, Jean-Marc Dinten, Mathieu Perriollat, Hélène Sportouche, Christophe Fraschini, Simon Arridge, Giuseppe Di Sciacca, Andrea Farina, Pietro Panizza, Elena Venturini, Peter Gordebeke, Pamela Zolda, and Pao
Publicado en: European Conferences on Biomedical Optics 2021 (ECBO), 2021, Página(s) ES1B.2, ISBN 978-1-943580-95-8
Editor: Optica Publishing Group

Derechos de propiedad intelectual

Other (23)

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS
Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05
Solicitante(s): COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS
Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05
Solicitante(s): MICRO PHOTON DEVICES SRL

WIDE-AREA SINGLE-PHOTON DETECTOR WITH TIME-GATING CAPABILITY
Número de solicitud/publicación: IT 102018000020536
Fecha: 2018-12-20
Solicitante(s): POLITECNICO DI MILANO

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS
Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05
Solicitante(s): COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

WIDE-AREA SINGLE-PHOTON DETECTOR WITH TIME-GATING CAPABILITY
Número de solicitud/publicación: IT 102018000020536
Fecha: 2018-12-20
Solicitante(s): POLITECNICO DI MILANO

Sonde bimodale à ultrasons comportant un dispositif optique pour un diagnostic
Número de solicitud/publicación: PCT/ FR2020/050423
Fecha: 2020-03-03
Solicitante(s): POLITECNICO DI MILANO

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS
Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05
Solicitante(s): POLITECNICO DI MILANO

Sonde bimodale à ultrasons comportant un dispositif optique pour un diagnostic
Número de solicitud/publicación: E P20729124.6
Fecha: 2021-09-03
Solicitante(s): COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

Sonde bimodale à ultrasons comportant un dispositif optique pour un diagnostic
Número de solicitud/publicación: E P20729124.6
Fecha: 2021-09-03
Solicitante(s): VERMON SA

Bimodal ultrasonic probe comprising an optical device for diagnosis
Número de solicitud/publicación: US 17436387
Fecha: 2020-09-03
Solicitante(s): MICRO PHOTON DEVICES SRL

Bimodal ultrasonic probe comprising an optical device for diagnosis
Número de solicitud/publicación: US 17436387
Fecha: 2020-09-03
Solicitante(s): VERMON SA

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS
Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05
Solicitante(s): POLITECNICO DI MILANO

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS
Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05
Solicitante(s): VERMON SA

Sonde bimodale à ultrasons comportant un dispositif optique pour un diagnostic
Número de solicitud/publicación: E P20729124.6
Fecha: 2021-09-03
Solicitante(s): POLITECNICO DI MILANO

Sonde bimodale à ultrasons comportant un dispositif optique pour un diagnostic
Número de solicitud/publicación: PCT/ FR2020/050423
Fecha: 2020-03-03
Solicitante(s): MICRO PHOTON DEVICES SRL

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS
Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05

Solicitante(s): VERMON SA

WIDE-AREA SINGLE-PHOTON DETECTOR WITH TIME-GATING CAPABILITY

Número de solicitud/publicación: IT 102018000020536
Fecha: 2018-12-20
Solicitante(s): MICRO PHOTON DEVICES SRL

Sonde bimodale à ultrasons comportant un dispositif optique pour un diagnostic

Número de solicitud/publicación: PCT/ FR2020/050423
Fecha: 2020-03-03
Solicitante(s): VERMON SA

Bimodal ultrasonic probe comprising an optical device for diagnosis

Número de solicitud/publicación: US 17436387
Fecha: 2020-09-03
Solicitante(s): COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

Bimodal ultrasonic probe comprising an optical device for diagnosis

Número de solicitud/publicación: US 17436387
Fecha: 2020-09-03
Solicitante(s): POLITECNICO DI MILANO

Sonde bimodale à ultrasons comportant un dispositif optique pour un diagnostic

Número de solicitud/publicación: PCT/ FR2020/050423
Fecha: 2020-03-03
Solicitante(s): COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES

ULTRASONIC PROBE INCLUDING OPTICAL DEVICES FOR BIMODAL DIAGNOSIS

Número de solicitud/publicación: US 62/814038
Fecha: 2019-03-05
Solicitante(s): MICRO PHOTON DEVICES SRL

WIDE-AREA SINGLE-PHOTON DETECTOR WITH TIME-GATING CAPABILITY

Número de solicitud/publicación: IT 102018000020536
Fecha: 2018-12-20
Solicitante(s): MICRO PHOTON DEVICES SRL

Conjuntos de datos

Conjuntos de datos vía OpenAIRE (3)

The SOLUS instrument: Optical characterization of the first hand-held probe for multimodal imaging (ultrasound and multi-wavelength time-resolved diffuse optical tomography)
Autores: Maffeis, Giulia; Di Sieno, Laura; Dalla Mora, Alberto; Pifferi, Antonio; Tosi, Alberto; Conca, Enrico; Giudice, Andrea; Ruggeri, Alessandro; Tisa, Simone; Flocke, Alexander; Rosinski, Bogdan; DINTEN, Jean-Marc; Perriollat, Mathieu; Lavaud, Jonathan; Arridge, Simon; Di Sciacca, Giuseppe; Farina, Andrea; panizza, pietro; Venturini, Elena; Gordebeke, Peter; Taroni, Paola
Publicado en: Zenodo

Large-Area, Fast-Gated Digital SiPM With Integrated TDC for Portable and Wearable Time-Domain NIRS
Autores: Conca, Enrico; Sesta, Vincenzo; Buttafava, Mauro; Villa, Federica; Di Sieno, Laura; Dalla Mora, Alberto; Contini, Davide; Taroni, Paola; Torricelli, Alessandro; Pifferi, Antonio; Zappa, Franco; Tosi, Alberto
Publicado en: Zenodo

Smart Optode for 8-Wavelength Time-Gated Diffuse Optics
Autores: Di Sieno, Laura; Maffeis, Giulia; Dalla Mora, Alberto; Ferocino, Edoardo; Tosi, Alberto; Conca, Enrico; Ruggeri, Alessandro; Tisa, Simone; Flocke, Alexander; Pifferi, Antonio; Taroni, Paola
Publicado en: Zenodo

Otros productos de investigación

Otros productos de investigación a través de OpenAire (6)

Breast lesion classification based on absorption and composition parameters: a look at SOLUS first outcomes
Autores: Maffeis, G; Pifferi, A; Dalla Mora, A; Di Sieno, L; Cubeddu, R; Tosi, A; Conca, E; Giudice, A; Ruggeri, A; Tisa, S; Flocke, A; Rosinski, B; Dinten, JM; Perriollat, M; Fraschini, C; Lavaud, J; Arridge, S; Di Sciacca, G; Farina, A; Panizza, P; Venturini, E; Gordebeke, P; Taroni, Paola

SOLUS: A Smart OpticaL and UltraSound device for the diagnostics of breast cancer
Autores: Maffeis, G; Pifferi, A; Dalla Mora, A; Di Sieno, L; Cubeddu, R; Tosi, A; Conca, E; Giudice, A; Ruggeri, A; Tisa, S; Flocke, A; Rosinski, B; Dinten, J-M;

Perriollat, M; Fraschini, C; Lavaud, J; Arridge, S; Di Sciacca, G; Farina, A; Panizza, P; Venturini, E; Gordebeke, P; Taroni, P

Multi-wavelength time domain diffuse optical tomography for breast cancer: Initial results on silicone phantoms

Autores: Ferocino, E; Di Sciacca, G; Di Sieno, L; Dalla Mora, A; Pifferi, A; Arridge, S; Martelli, F; Taroni, P; Farina, A

Initial examples of the SOLUS multimodal potential

Autores: Maffeis, G; Pifferi, A; Dalla Mora, A; Di Sieno, L; Cubeddu, R; Tosi, A; Conca, E; Giudice, A; Ruggeri, A; Tisa, S; Flocke, A; Rosinski, B; Dinten, JM; Perriollat, M; Fraschini, C; Lavaud, J; Arridge, S; Di Sciacca, G; Farina, A; Panizza, P; Venturini, E; Gordebeke, P; Taroni, P

SOLUS: a novel multimodal approach to ultrasound and diffuse optics imaging of breast cancer

Autores: Pifferi, A; Dalla Mora, A; Di Sieno, L; Maffeis, G; Tosi, A; Conca, E; Sesta, V; Giudice, A; Ruggeri, A; Tisa, S; Flocke, A; Rosinski, B; Dinten, JM; Perriollat, M; Sportouche, H; Fraschini, C; Arridge, S; Di Sciacca, G; Farina, A; Panizza, P; Venturini, E; Gordebeke, P; Zolda, P; Taroni, P

Fitting a spectral model for component analysis in diffuse optical tomography

Autores: Di Sciacca, G; Ferocino, E; Farina, A; Pifferi, A; Taroni, P; Arridge, S

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