Engineer CNRS
Instrumental design

CRMBM UMR 7339 – CNRS – Aix Marseille University
Medical Faculty, 27 bd Jean Moulin 13385 Marseille

Education

Aix Marseille UNIVERSITY - Faculty of Sciences Saint Jérôme, Marseille

2017: Master's research Degree in Instrumentation (with distinction)

2009: Licence (Bachelor's Degree) of Sciences for the engineer, electronics sciences course)

Saint Eloi Technical High school, Aix en Provence

2000: B.T.S (Two-year technical degree) in Industrial Maintenance

Professional Experience

2019 ***National Contest CNRS Engineer in instrumental design***

2019-2020: Carnot STAR SODART Project

INSTRUMENTATION ENGINEERING:
Conducting MRI experiments for tests a new harvest system of energy on antenna

2017until 2020: H2020 MCube Project

INSTRUMENTATION ENGINEERING:
Conducting MRI experiments for tests and development metamaterial antennas

2017-2018: Carnot STAR METATWIN Project

INSTRUMENTATION ENGINEERING:
Conducting MRI experiments for tests and making metamaterial antennas

2011: National Contest : Exceptional Technician grade

2004 until today: ***Aix Marseille University***
Biological and Medical Magnetic Resonance Center (CRMBM in French)

INSTRUMENTATION ENGINEERING:
Realization of experimental devices applied in MRI, maintenance of scientific instrumentation and management of new works.

Skills

Collaborate with research teams to target their needs.
Design a technological study project adapted to experimental research.
Realize the implementation of the design until the use of the instrumental device

Mr. VILMEN Christophe

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DATA PROCESSING

Acquisition-Treatment signals

LabChart
LABView7
WinATS 6.3

Acquisitions MRI/MRS

Paravision BRUKER 3.02
Paravision BRUKER 6.01
IDL – CSIAPO

Simulations - 2D-3D CAD

CATIA V5
CST Microwaves
Skechup 3D
CURA 5

Electronic design

IDE Arduino
Sprint Layout 6.0

Publication

Abstract and traditional poster Meeting

International Society for Magnetic Resonance in Medicine, ISMRM meeting – Paris – june 2018

Vilmen C, Bortoli L, Gallouin E, Guye M, Bernard M, Fouré A, Bendahan D. Optoelectronical-based multiplexed transmission of analog signals in a magnetic environment.

Full papers co-hautor

References (20/41)

[1] Messineo AM, Gineste C, Sztal TE, McNamara EL, **Vilmen C**, Ogier AC, et al. L-tyrosine supplementation does not ameliorate skeletal muscle dysfunction in zebrafish and mouse models of dominant skeletal muscle alpha-actin nemaline myopathy. Sci Rep-Uk. 2018;8.
[2] Macia M, Pecchi E, Desrois M, Lan C, **Vilmen C**, Portha B, et al. Exercise training impacts exercise tolerance and bioenergetics in gastrocnemius muscle of non-obese type-2 diabetic Goto-Kakizaki rat in vivo. Biochimie. 2018;148:36-45.
[3] Foure A, Ogier AC, Le Troter A, **Vilmen C**, Feiweier T, Guye M, et al. Diffusion Properties and 3D Architecture of Human Lower Leg Muscles Assessed with Ultra-High-Field-Strength Diffusion-Tensor MR Imaging and Tractography: Reproducibility and Sensitivity to Sex Difference and Intramuscular Variability. Radiology. 2018;287:592-607.
[4] Chatel B, Messonnier LA, Barge Q, **Vilmen C**, Noirez P, Bernard M, et al. Endurance training reduces exercise-induced acidosis and improves muscle function in a mouse model of sickle cell disease. Molecular Genetics and Metabolism. 2018;123:400-10.
[5] Wegrzyk J, Ranjeva JP, Foure A, Kavounoudias A, **Vilmen C**, Mattei JP, et al. Specific brain activation patterns associated with two neuromuscular electrical stimulation protocols. Sci Rep-Uk. 2017;7.
[6] Foure A, Duhamel G, **Vilmen C**, Bendahan D, Jubeau M, Gondin J. Fast Measurement of the Quadriceps Femoris Muscle Transverse Relaxation Time at High Magnetic Field Using Segmented Echo-Planar Imaging. Journal of Magnetic Resonance Imaging. 2017;45:356-68.
[7] Chatel B, Messonnier LA, Hourde C, **Vilmen C**, Bernard M, Bendahan D. Moderate and intense muscular exercises induce marked intramyocellular metabolic acidosis in sickle cell disease mice. J Appl Physiol. 2017;122:1362-9.
[8] Chatel B, Hourde C, Gondin J, Foure A, Le Fur Y, **Vilmen C**, et al. Impaired muscle force production and higher fatigability in a mouse model of sickle cell disease. Blood Cell Mol Dis. 2017;63:37-44.
[10] Martin A, Grospretre S, **Vilmen C**, Guye M, Mattei JP, Le Fur Y, et al. The Etiology of Muscle Fatigue Differs between Two Electrical Stimulation Protocols. Med Sci Sport Exer. 2016;48:1474-84.
[11] Layec G, Bringard A, Le Fur Y, Micallef JP, **Vilmen C**, Perrey S, et al. Mitochondrial Coupling and Contractile Efficiency in Humans with High and Low <(V)over dot>O-2peaks. Med Sci Sport Exer. 2016;48:811-21.
[12] Gondin J, Grospretre S, **Vilmen C**, Guye M, Mattei JP, Le Fur Y, et al. The Etiology Of Muscle Fatigue Differs Between Two Electrical Stimulation Protocols. Med Sci Sport Exer. 2016;48:893-.
[14] Chatel B, Messonnier L, Le Fur Y, **Vilmen C**, Bernard M, Bendahan D. Endurance Training Improves Muscle Function And Metabolism In A Sickle Cell Disease Mouse Model. Med Sci Sport Exer. 2016;48:605-+.
[15] Bechir N, Pecchi E, **Vilmen C**, Le Fur Y, Amthor H, Bernard M, et al. ActRIIB blockade increases force-generating capacity and preserves energy supply in exercising mdx mouse muscle in vivo. Faseb Journal. 2016;30:3551-62.
[16] Bechir N, Pecchi E, Relizani K, **Vilmen C**, Le Fur Y, Bernard M, et al. Mitochondrial impairment induced by postnatal ActRIIB blockade does not alter function and energy status in exercising mouse glycolytic muscle in vivo. Am J Physiol-Endoc M. 2016;310:E539-E49.
[17] Yashiro K, Tonson A, Pecchi E, **Vilmen C**, Le Fur Y, Bernard M, et al. Capsiate Supplementation Reduces Oxidative Cost of Contraction in Exercising Mouse Skeletal Muscle In Vivo. Plos One. 2015;10.
[18] Wegrzyk J, Foure A, **Vilmen C**, Ghattas B, Maffiuletti NA, Mattei JP, et al. Extra Forces induced by wide-pulse, high-frequency electrical stimulation: Occurrence, magnitude, variability and underlying mechanisms. Clin Neurophysiol. 2015;126:1400-12.
[19] Wegrzyk J, Foure A, Le Fur Y, Maffiuletti NA, **Vilmen C**, Guye M, et al. Responders to Wide-Pulse, High-Frequency Neuromuscular Electrical Stimulation Show Reduced Metabolic Demand: A P-31-MRS Study in Humans. Plos One. 2015;10.
[20] Macia M, Pecchi E, **Vilmen C**, Desrois M, Lan C, Portha B, et al. Insulin Resistance Is Not Associated with an Impaired Mitochondrial Function in Contracting Gastrocnemius Muscle of Goto-Kakizaki Diabetic Rats In Vivo. Plos One. 2015;10.
[21] Layec G, Bringard A, Le Fur Y, Micallef JP, **Vilmen C**, Perrey S, et al. Opposite effects of hyperoxia on mitochondrial and contractile efficiency in human quadriceps muscles. Am J Physiol-Reg I. 2015;308:R724-R33.