

1.1 Abstracts and publications

1.1.1 Peer reviewed articles in international journals

Year	Title	Authors	Access link	Journal/ Conf.	Partners
2017	Motion Estimation and Characterization in Premature Newborns Using Long Duration Video Recordings	Sandie Cabon, Fabienne Porée, Antoine Simon, M Ugolin, O Rosec, et al.	Link	IRBM	Voxygen/UR1/HUGO
2017	Entropy and Compression Capture Different Complexity Features: The Case of Fetal Heart Rate	João Monteiro-Santos, Hernâni Gonçalves, João Bernardes, Luís Antunes, Mohammad Nozari and Cristina Costa-Santos	Link	Entropy	INESC TEC
2018	The Digi-NewB project for preterm infant sepsis risk and maturity analysis	Värri, A., Kallonen, A., Helander, E., Ledesma, A., & Pladys, P.	Link	Finnish Journal of eHealth and eWelfare	TUNI/HUGO
2019	Video and audio processing in paediatrics a review	Sandie Cabon, Fabienne Porée, Antoine Simon, Olivier Rosec, Patrick Pladys, et al.	Link	Physiological Measurement journal	UR1/Voxygen/HUGO
2019	Audio- and Video-based estimation of the sleep stages of newborns in Neonatal Intensive Care Unit	Sandie Cabon, Fabienne Porée, Antoine Simon, Bertille Montillet, Olivier Rosec, Patrick Pladys, Nicolas Nardi, Guy Carrault	Link	Biomedical Signal Processing & Control journal	UR1/Voxygen/HUGO
2019	Robust, real-time generic detector based on a multi-feature probabilistic method	Matthieu Doyen, Di Ge, Alain Beuchée, Guy Carrault, Alfredo I. Hernández	Link	Plos one	UR1/HUGO



2019	<i>Voxyvi, an audio-video system to monitor newborns in neonatal intensive care units</i>	Sandie Cabon, Fabienne Poree *, Guillaume Cuffel, Olivier Rosec, Florence Geslin, Patrick Pladys, Antoine Simon, Guy Carrault	Submitted IRBM	IRBM	UR1/Voxygen/CHU Rennes
2019	Improving methodology in heart rate variability analysis for the premature infants: Impact of the time length	Trang Nguyen Phuc Thu , Alfredo I. Hernández ,Nathalie Costet, Hugues Patural, Vincent Pichot, Guy Carrault , Alain Beuchée	Link	Plos One	UR1/CHU Rennes
2020	Complexity of Cardiotocographic Signals as A Predictor of Labor	Monteiro-Santos, J.; Henriques, T.; Nunes, I.; Amorim-Costa, C.; Bernardes, J.; Costa-Santos, C.	Link	Entropy 2020, 22, 104.	INESC TEC
2020	Nonlinear Methods Most Applied to Heart-Rate Time Series: A Review	Henriques, T., Ribeiro, M., Teixeira, A., Castro, L., Antunes, L., & Costa-Santos, C.	Link	Entropy 2020, 22(3), 309.	
2020	Human Factors Review of Novel Interface Designs for Patient Monitoring Applications in Critical Care Medicine	E. Andrade, LR. Quinlan, R. Harte, D. Byrne, E. Fallon, M. Kelly, P. O'Connor, D. O'Hora, M. Scully, J. Laffey, P. Pladys, A. Beuchée, and G. ÓLaighin	Accepted for publication	JMIR Human Factors, 2020	NUIG/CHU Rennes
2020	Deep transfer learning for preterm newborn presence detection in incubator and open beds	Raphaël Weber, Sandie Cabon, Antoine Simon, Fabienne Porée, and Guy Carrault	Submitted	IEEE-JBHI	UR1/CHU Rennes

2020	Early detection of late onset sepsis in premature infants using machine learning based on visibility graph analysis of heart rate variability	Cristhyne León, Guy Carrault, Patrick Pladys, and Alain Beuchée	Accepted with revision	IEEE-JBHI	UR1/CHU Rennes
2020	Apnea Bradycardia Real Time Optimal Detection on Preterm Infants using Hidden Markov Models	Thomas Janvier, Di Ge, Guy Carrault, Alain Beuchée, Patrick Pladys and Alfredo I. Hernández	To be submitted	IEEE-TBME	UR1/CHU Rennes
2020	Influence of gestational age and post-menstrual age on the temporal organization of quiet sleep periods	Cailleau L, Weber R, Flamant C, Roue JM, Favrais G, Gascoin G, Thollot A, Cabon S, Porée F, Pladys P.	Accepted with revision	Frontiers in Pediatrics	UR1/CHU Rennes
2020	Augmenting Critical Care Patient Monitoring using Wearable Technology: a Review of Usability & Human Factors	E. Andrade, LR. Quinlan, R. Harte, D. Byrne, E. Fallon, M. Kelly, P. O'Connor, D. O'Hora, M. Scully, J. Laffey, P. Pladys, A. Beuchée, and G. ÓLaighin	Submitted	JMIR Human Factors, 2020	NUIG/CHU Rennes
2020	<i>Generating User Requirements for a Novel NICU based Sepsis Risk Prediction System using Ethnography and Codesign</i>	<i>R. Harte, LR. Quinlan, E. Andrade, D. Byrne, E. Fallon, M. Kelly, P. O'Connor, D. O'Hora, M. Scully, J. Laffey, P. Pladys, A. Beuchée, and G. ÓLaighin</i>	<i>To be submitted</i>	<i>Journal to be selected</i>	<i>NUIG/CHU Rennes</i>
2020	<i>Prototyping and User Testing of a Novel NICU based Sepsis Risk Prediction System following a User Centered Design Methodology'</i>	<i>R. Harte, LR. Quinlan, E. Andrade, D. Byrne, E. Fallon, M. Kelly, P. O'Connor, D. O'Hora, M. Scully, J. Laffey, P. Pladys, A. Beuchée, and G. ÓLaighin</i>	<i>To be submitted</i>	<i>Journal to be selected</i>	<i>NUIG/CHU Rennes</i>
2020	<i>Nurses and Doctors' Perceptions of the</i>	<i>E. Andrade, LR. Quinlan, R.</i>	<i>To be</i>	<i>Journal to be</i>	<i>NUIG/CHU Rennes</i>

Usability and Human Factors of Patient Monitors used in Intensive Care Units – An International Perspective' Harte, D. Byrne, E. Fallon, M. submitted selected
Kelly, P. O'Connor, D.
O'Hara, M. Scully, J. Laffey,
P. Pladys, A. Beuchée, and
G. ÓLaighin

1.1.2

Publications in international conferences

Year	Title	Authors	Link	Conf.	Partners
2017	'Caractérisation du mouvement chez les nouveaux-nés prématurés par analyse automatique de videos'	Sandie Cabon, Fabienne Porée, Antoine Simon, Mélissa Ugolin, Olivier Rosec, et al..	Link	RITS	Voxygen/UR1/HUGO
2017	Comparison of linear and non-linear heart rate variability indices between preterm infants at their theoretical term age and full term newborns	Elina Helander, Nadine Khodor, Antti Kallonen, Alpo Värri, Hugues Patural, Guy Carrault, Patrick Pladys	Link	EMBEC	TUNI/UR1/HUGO
2017	Evaluation de la maturation des bébés prématurés par graphe de visibilité	Nadine Khodor, Guy Carrault, Hugues Patural, Alain Beuchée, Patrick Pladys.	Link	GRETSI (poster presentation) and long paper)	UR1/HUGO
2018	State of the Art and Future Trends in the Usability of Patient Monitors	Evismar Andrade, Leo R Quinlan, Richard P Harte, Gearóid ÓLaighin et al.	Link	IHSED conf.	NUIG/HUGO
2018	Sensitivity Analysis of a Cardiorespiratory Model for the Study of Sleep Apnea	Gustavo Guerrero, Virginie Le Rolle, Alfredo Hernandez	Link	CinC 2018	UR1



2018	Prototyping a User Interface for a New Sepsis Risk Decision Support System Using Participatory Design	Richard P Harte, Leo R Quinlan, Evismar Andrade, Gearóid ÓLaighin	Link	IHSED conf.	NUIG/HUGO
2018	Investigation of the Human Factors, Usability and User Experience of Patient Monitors used in a Hospital Setting	Evismar Andrade, Leo R Quinlan, Richard P Harte, Gearóid ÓLaighin et. Al.	Link	IHSED conf.	NUIG/HUGO
2018	Defining User Needs for a New Sepsis Risk Decision Support System in Neonatal ICU Settings Through Ethnography: User Interviews and Participatory Design	Richard P Harte, Leo R Quinlan, Evismar Andrade, Gearóid ÓLaighin	Link	IHSED conf.	NUIG/HUGO
2018	Sensitivity Analysis of a Cardiorespiratory Model for the Study of Responses to Apnea	Gustavo Guerrero, Virginie Le Rolle, Alfredo Hernandez	Link	Computing in cardiology 2018 Maastricht	UR1
2019	Extraction automatique du mouvement chez des nouveau-nés prématurés en unités de soins intensifs néonatales	Sandie Cabon, Raphael Weber, Fabienne Porée, Antoine Simon, Guy Carrault	Link	GDR ISIS, Paris	UR1
2020	<i>Deep Transfer Learning for Video-Based Detection of Newborn Presence in Incubator</i>	Weber R, Simon A, Porée F and Carrault G.	Accepted	IEEE Engineering in Medicine and Biology Society (EMBC). July 20-24, 2020, Montréal, Canada.	UR1
2020	<i>Automatic fundamental frequency characterization of premature newborns' cries in Neonatal Intensive Care Unit.</i>	Met-Montot B, Cabon S, Pladys P, Carrault G and Porée F.	Accepted	ICVPB'20, Grenoble, France	UR1, CHU Rennes



2020	<i>Automatic extraction of spontaneous cries of preterm newborns in Neonatal Intensive Care Units'</i>	<i>Sandie Cabon, Bertille Met-Montot, Fabienne Porée, Olivier Rosec, Antoine Simon, Guy Carrault</i>	<i>Accepted</i>	<i>European Signal Processing conference</i>	<i>UR1/Voxygen</i>
2020	<i>Spectrogram-based fundamental frequency tracking of spontaneous cries in preterm newborns</i>	<i>Bertille Met-Montot, Sandie Cabon, Guy Carrault, Fabienne Porée</i>	<i>Accepted</i>	<i>European Signal Processing conference</i>	<i>UR1</i>

1.1.3 Presentations in scientific conferences

Year	Title	Authors	Link	Conf.	Partners
2017	Targeted Cardio-respiratory Rhythms Monitoring Used as Decision Support System in Neonatology (Clinical Talk)	Patrick Pladys, Guy Carrault, Alfredo Hernandez, Alain Beuchée	Link	Computing in cardiology 2017 Rennes	HUGO/UR1
2017	Apneas, Chronic Intermittent Hypoxia and Heart Rate Rhythm: Physiology and Exploration	Trang Nguyen Phuc Thu, Guy Carrault, Patrick Pladys, Alfredo Hernandez, Alain Beuchée	Link	Computing in cardiology 2017 Rennes	UR1/HUGO
2019	Parents and caregivers perceptions of the use of live video recording in neonatal units, a focus group study	Nadia Mazille, Anne-Laure Lebris, Pauline Simonot, Maude Luherne, Géraldine Gascoin, Richard Harte, Patrick Pladys	Poster presentation	American Paediatrics society	HUGO/NUIG
2019	Extraction automatique du mouvement chez des nouveau-nés prématurés en unités de soins intensifs néonatales	Sandie Cabon, Raphael Weber, Fabienne Porée, Antoine Simon, Guy Carrault	Link	GDR Paris	ISIS, UR1
2019	Involving premature newborns' parents in reviewing a neonatology study consent material	Maude Luherne; Charlotte Bouvard; Guy Carrault ; Patrick Pladys	Accepted	JENS Congress, Maastricht	CHU Rennes

2019	Parents and caregivers' perceptions to the use of live video recording in neonatal units, a focus group study	Nadia Mazille ; Aude Le Bris; Pauline Simonot; Solène Blache ; Maude Luherne; Geraldine Gascoin; Richard Harte; Patrick Pladys	Accepted	JENS Congress, Maastricht	CHU Rennes
2020	Influence of gestational age and post-menstrual age on the temporal organization of quiet sleep periods	Cailleau L, Weber R, Flamant C, Roue JM, Favrais G, Gascoin G, Thollot A, Cabon S, Porée F, Pladys P.	Accepted	Journées Francophones de Recherche en Néonatalogie. Paris, France. Déc 2019	CHU Rennes, UR1
2020	Early detection of late onset sepsis in preterm infants using machine learning and visibility graph for analysis of heart rate variability	P. Pladys, C. Leon Borrego , G. Carrault , C. FLAMANT , G. Gascoin , J.-M. Roué , G. Favrais , A. Thollot , A. Beuchée A. Hernandez	Submitted	European Academy of Paediatric Societies 2020	HUGO/UR1
2020	Early detection of late onset sepsis in preterm infants using machine learning and visibility graph for analysis of heart rate variability	C Leon Borrego, G Carrault, C Flamant, JM Roué, G Gascoin , G Favrais, A Thollot, A Hernandez, A Beuchée, P Pladys and Digi-NewB consortium.	Submitted	European Congress on Perinatal Medicine 2020	HUGO/UR1
2020	In very preterm infants bradycardias associated with late onset sepsis differ from bradycardias associated with immature breathing	T Janvier, R Jaffré, C Flamant, JM Roué, G Gascoin, G Favrais, A Thollot, C Chaillous, F Geslin, G Carrault, P Pladys, and Digi-NewB consortium.	Submitted	European Congress on Perinatal Medicine 2020	HUGO/UR1

