



2021 - Articles in Scientific Journals

N°	Title	Authors	Source	Link	Publication date
1	Functional Dysconnectivity in Ventral Striatocortical Systems in 22q11.2 Deletion Syndrome	Ángeles Tepper, Analía Cuiza, Luz María Alliende, Carlos Mena, Juan Pablo Ramirez-Mahaluf, Barbara Iruretagoyena, Claudia Ornstein, Rosemarie Fritsch, Ruben Nachar, Alfonso González-Valderrama, Juan Undurraga, Juan Pablo Cruz, Cristian Tejos, Alex Fornito, Gabriela Repetto, Nicolas Crossley	Schizophrenia Bulletin	https://doi.org/10.1093/schbul/sbab139	21-12-2021
2	Pressure-driven micro-poro-mechanics: A variational framework for modeling the response of porous materials	Felipe Álvarez-Barrientos, Daniel E Hurtado, Martin Genet	International Journal of Engineering Science	https://doi.org/10.1016/j.ijengsci.2021.103586	01-12-2021
3	Comprehensive Assessment of Left Intraventricular Hemodynamics Using a Finite Element Method: An Application to Dilated Cardiomyopathy Patients	Pamela Franco, Julio Sotelo, Cristian Montalba, Bram Ruijsink, Eric Kerfoot, David Nordsletten, Joaquín Mura, Daniel Hurtado and Sergio Uribe	Applied Sciences	https://doi.org/10.3390/app112311165	25-11-2021
4	An Optimal Algorithm for Strict Circular Seriation	Santiago Armstrong, Cristóbal Guzmán, and Carlos A. Sing-Long	SIAM Journal on Mathematics of Data Science,	https://doi.org/10.1137/21M139356X	11-11-2021
5	Abnormal nodal and global network organization in resting state functional MRI from subjects with the 22q11 deletion syndrome	Teuntje A. D. Pelgrim, Matthijs G. Bosson, Analía Cuiza, Luz María Alliende, Carlos Mena, Angeles Tepper, Juan Pablo Ramirez-Mahaluf, Barbara Iruretagoyena, Claudia Ornstein, Rosemarie Fritsch, Juan Pablo Cruz, Cristian Tejos, Gabriela Repetto & Nicolas Crossley	Scientific Reports	https://doi.org/10.1038/s41598-021-00873-8	03-11-2021
6	A comprehensive comparison between shortest-path HARP refinement, SinMod, and DENSEanalysis processing tools applied to CSPAMM and DENSE images	Hernán Mella, Joaquín Mura, Julio Sotelo, Sergio Uribe	Magnetic Resonance Imaging	https://doi.org/10.1016/j.mri.2021.07.001	01-11-2021

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7	Circulating Vascular Cell Adhesion Molecule-1 (sVCAM-1) Is Associated With Left Atrial Remodeling in Long-Distance Runners	Felipe Contreras-Briceño, Sebastián Herrera, Julian Vega-Adaury, Manuel Salinas, María Paz Ocaranza, Jorge E. Jalil, Jorge Mandiola, Lorena García, Mario Chiong, Pablo F. Castro, Sergio Lavandero and Luigi Gabrielli	Frontiers in Cardiovascular Medicine	https://doi.org/10.3389/fcvm.2021.737285	01-11-2021
8	Online Service Function Chain Deployment for Live-Streaming in Virtualized Content Delivery Networks: A Deep Reinforcement Learning Approach	Jesús Fernando Cevallos Moreno, Rebecca Sattler, Raúl P. Caulier Cisterna, Lorenzo Ricciardi Celsi, Aminael Sánchez Rodríguez, and Massimo Mecella	Future Internet	https://doi.org/10.3390/fi13110278	29-10-2021
9	Lipschitz Stability for Backward Heat Equation with Application to Fluorescence Microscopy	Pablo Arratia, Matias Courdurier, Evelyn Cueva, Axel Osses, Benjamín Palacios	SIAM Journal on Mathematical Analysis	https://doi.org/10.1137/20M1374183	25-10-2021
10	Weighted neurofeedback facilitates greater self-regulation of functional connectivity between the primary motor area and cerebellum	Patricia Vargas, Ranganatha Sitaram, Pradyumna Sepúlveda, Cristian Montalba, Mohit Rana, Rafael Torres, Cristián Tejos, Sergio Ruiz	Journal of Neural Engineering	https://doi.org/10.1088/1741-2552/ac2b7e	14-10-2021
11	Four functional magnetic resonance imaging techniques for skeletal muscle exploration, a systematic review	Sergio Caroca, Diego Villagran, Steren Chabert	European Journal of Radiology	https://doi.org/10.1016/j.ejrad.2021.109995	04-10-2021
12	Evaluation of lung aeration and respiratory system mechanics in obese dogs ventilated with tidal volumes based on ideal versus current body weight	J. Araos, L. Lacitignola, V. De Monte, M. Stabile, I.R. Porter, D. E. Hurtado, A. Perez, A. Crovace, S. Grasso, M. Martin-Flores, F. Staffieri	Frontiers in Veterinary Science	https://doi.org/10.3389/fvets.2021.704863	01-10-2021
13	Left Cardiac Remodelling Assessed by Echocardiography Is Associated with Rho-Kinase Activation in Long-Distance Runners	Felipe Contreras-Briceño, Julián Vega, Jorge Mandiola, María Paz Ocaranza, Sebastián Herrera, Manuel Salinas, Rodrigo Fernández, Jorge E. Jalil, Sergio Lavandero, Mario Chiong, Paz Godoy, Pablo F. Castro, Marta Sitges and Luigi Gabrielli	Journal of Cardiovascular Development and Disease	https://doi.org/10.3390/jcdd8100118	24-09-2021
14	Clinically Correct Report Generation from Chest X-Rays Using Templates	Pino P., Parra D., Besa C., Lagos C.	Machine Learning in Medical Imaging. MLMI 2021. Lecture Notes in Computer Science	https://doi.org/10.1007/978-3-030-87589-3_67	21-09-2021
15	Three-dimensional quantification of circulation using finite-element methods in four-dimensional flow MR data of the thoracic aorta	Julio Sotelo, Malenka M Bissell, Yaxin Jiang, Hernán Mella, Joaquín Mura, Sergio Uribe	Magnetic Resonance in Medicine	https://doi.org/10.1002/mrm.29004	07-09-2021

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16	Adaptive Mesh Refinement in Deformable Image Registration: A Posteriori Error Estimates for Primal and Mixed Formulations Read More: https://epubs.siam.org/doi/abs/10.1137/20M1364333	N. Barnafi, G.N. Gatica, D.E. Hurtado, W. Miranda, R. Ruiz-Baier	SIAM Journal on Imaging Sciences	https://doi.org/10.1137/20M1364333	30-08-2021
17	Exercise training reduces brainstem oxidative stress and restores normal breathing function in heart failure	Esteban Díaz-Jara, Hugo S Díaz, Angélica Rios-Gallardo, Domiziana Ortolani, David C Andrade, Camilo Toledo, Katherin V Pereyra, Karla Schwarz, Gigliola Ramirez, Fernando C Ortiz, Marcelo E Andía, Rodrigo Del Rio	Free Radical Biology and Medicine	https://doi.org/10.1016/j.freeradbiomed.2021.06.032	20-08-2021
18	Sex Differences in Drug-Induced Arrhythmogenesis	Mathias Peirlinck, Francisco Sahli Costabal and Ellen Kuhl	Frontiers in Physiology	https://doi.org/10.3389/fphys.2021.708435	19-08-2021
19	Validation of 4D Flow based relative pressure maps in aortic flows	David Nolte, Jesús Urbina, Julio Sotelo, Leo Sok, Cristian Montalba, Israel Valverde, Axel Osses, Sergio Uribe, Cristóbal Bertoglio	Medical Image Analysis	https://doi.org/10.1016/j.media.2021.102195	15-08-2021
20	Streaking artifact suppression of quantitative susceptibility mapping reconstructions via L1-norm data fidelity optimization (L1-QSM)	Carlos Milovic, Mathias Lambert, Christian Langkammer, Kristian Bredies, Pablo Irarrazaval, Cristian Tejos	Magnetic Resonance in Medicine	https://doi.org/10.1002/mrm.28957	04-08-2021
21	La atrofia cerebral regional se relaciona con el deterioro de la cognición social en esclerosis múltiple	Tomas P Labbé, Cristian Montalba, Mariana Zurita, Ethel Leslie Ciampi, Juan Pablo Cruz, Macarena Vásquez, Sergio Uribe, Nicolás Crossley, Claudia Cárcamo	Archivos de Neuro-Psiquiatría	https://doi.org/10.1590/0004-282X-anp-2020-0162	01-08-2021
22	A spatial off-resonance correction in spirals for Magnetic Resonance Fingerprinting	Ronal Coronado, Gastão Lima Da Cruz, Carlos Castillo-Passi, Cristian Tejos, Sergio Uribe, Claudia Prieto, Pablo Irarrazaval	IEEE Transactions on Medical Imaging	https://doi.org/10.1109/TMI.2021.3100293	26-07-2021
23	Image Quality Assessment to Emulate Experts' Perception in Lumbar MRI Using Machine Learning	Steren Chabert, Juan Sebastian Castro, Leonardo Muñoz, Pablo Cox, et al.	Applied Sciences	https://doi.org/10.3390/app11146616	19-07-2021
24	Neuroplasticity after olfactory training in post-surgical olfactory impaired patients, using functional magnetic resonance imaging. A randomized pilot study	Francisco García-Huidobro, Cristian Montalba, Andres Rosenbaum, David Jofre, Marcelo Andia, Pablo Villanueva, Claudio Callejas, Claudia Gonzalez	Authorea Preprints	https://doi.org/10.22541/au.162664827.75565992/v1	18-07-2021

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25	An off-resonance insensitive orthogonal CSPAMM sequence (ORI-O-CSPAMM) for the acquisition of CSPAMM and MICSr grids in half scan time	Hernán Mella, Hui Wang, Cristian Montalba, Sergio Uribe	Magnetic Resonance in Medicine	https://doi.org/10.1002/mrm.28916	13-07-2021
26	Comprehensive Assessment of Heart Failure with Preserved Ejection Fraction Using Cardiac MRI	Julián Vega-Adaúy, Ozge Ozden Tok, Ahmet Celik, Ahmet Barutcu, Mani A. Vannan	Heart Failure Clinics	https://doi.org/10.1016/j.hfc.2021.03.006	03-07-2021
27	Northern Chile intermediate-depth earthquakes controlled by plate hydration	Leoncio Cabrera, Sergio Ruiz, Piero Poli, Eduardo Contreras-Reyes, Axel Osses, Renzo Mancini	Geophysical Journal International	https://doi.org/10.1093/gji/ggaa565	01-07-2021
28	Association between serum sphingolipids and eudaimonic well-being in white U.S. adults	Loni Berkowitz, Marcela P. Henríquez, Cristian Salazar, Eric Rojas, Guadalupe Echeverría, Gayle D. Love, Attilio Rigotti, Christopher L. Coe & Carol D. Ryff	Scientific Reports	https://doi.org/10.1038/s41598-021-92576-3	23-06-2021
29	Learning Atrial Fiber Orientations and Conductivity Tensors from Intracardiac Maps Using Physics-Informed Neural Networks	Thomas Grandits, Simone Pezzuto, Francisco Sahli Costabal, Paris Perdikaris, Thomas Pock, Gernot Plank, Rolf Krause	In: Ennis D.B., Perotti L.E., Wang V.Y. (eds) Functional Imaging and Modeling of the Heart. FIMH 2021. Lecture Notes in Computer Science. Springer, Cham.	https://doi.org/10.1007/978-3-030-78710-3_62	21-06-2021
30	Lipoprotein receptor SR-B1 deficiency enhances adipose tissue inflammation and reduces susceptibility to hepatic steatosis during diet-induced obesity in mice	Katherine Rivera, Verónica Quiñones, Ludwig Amigo, Nicolás Santander, Francisca Salas-Pérez, Aline Xavier, Marta Fernández-Galilea, Gonzalo Carrasco, Daniel Cabrera, Marco Arrese, Dolores Busso, Marcelo E Andía, Attilio Rigotti	Biochimica et Biophysica Acta (BBA) - Molecular and Cell Biology of Lipids	https://doi.org/10.1016/j.bbalip.2021.158909	01-06-2021
31	Accelerating cardiac and vessel mechanics simulations: An energy-transform variational formulation for soft-tissue hyperelasticity	Patricio Zavala, Daniel E. Hurtado	Computer Methods in Applied Mechanics and Engineering	https://doi.org/10.1016/j.cma.2021.113764	01-06-2021
32	GOFOS, ground optical fog observation system for monitoring the vertical stratocumulus-fog cloud distribution in the coast of the Atacama Desert, Chile	Camilo del Río, Felipe Lobos, Alexander Siegmund, Cristian Tejos, Pablo Osses, Zeidy Huaman, Juan Pablo Meneses, Juan-Luis García	Journal of Hydrology	https://doi.org/10.1016/j.jhydrol.2021.126190	01-06-2021
33	Resonancia magnética cardíaca en arritmias. In book: Experto Universitario en Aplicación Clínica de la Resonancia Magnética Cardíaca	Julián Vega Adaúy, Daniel Lorenzatti, A. Doltra Magarolas	Editorial Panamericana	https://www.researchgate.net/publication/352101342_Resonancia_magnetica_cardiaca_en_arritmias	01-06-2021

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34	False lumen pressure estimation in type B aortic dissection using 4D flow cardiovascular magnetic resonance: comparisons with aortic growth	David Marlevi, Julio A. Sotelo, Ross Grogan-Kaylor, Yunus Ahmed, Sergio Uribe, Himanshu J. Patel, Elazer R. Edelman, David A. Nordsletten & Nicholas S. Burris	Journal of Cardiovascular Magnetic Resonance	https://doi.org/10.1186/s12968-021-00741-4	13-05-2021
35	Automatic determination of the regularization weighting for wavelet-based compressed sensing MRI reconstructions	Gabriel Varela-Mattatall, Corey A. Baron, Ravi S. Menon	Magnetic Resonance in Medicine	https://doi.org/10.1002/mrm.28812	08-05-2021
36	Assessment of hepatic fatty acids during non-alcoholic steatohepatitis progression using magnetic resonance spectroscopy	Aline Xavier, Flavia Zaconi, Fabián Santana-Romo, Thomas R Eykyn, Begoña Lavin, Alkystis Phinikaridou, René Botnar, Sergio Uribe, Juan Esteban Oyarzún, Daniel Cabrera, Marco Arrese, Marcelo E Andia	Annals of Hepatology	https://doi.org/10.1016/j.aohep.2021.100358	04-05-2021
37	New primal and dual-mixed finite element methods for stable image registration with singular regularization	Nicolas Barnafi, Gabriel N Gatica, Daniel E Hurtado, Willian Miranda, Ricardo Ruiz-Baier	Mathematical Models and Methods in Applied Sciences	https://doi.org/10.1142/S021820252150024X	29-04-2021
38	Towards real-time fire data synthesis using numerical simulations	Wolfram Jahn, Frane Sazunic, Carlos Sing-Long	Journal of Fire Sciences	https://doi.org/10.1177/0734904121993449	16-04-2021
39	HARP-I: A Harmonic Phase Interpolation Method for the Estimation of Motion From Tagged MR Images	Hernán Mella, Joaquín Mura, Hui Wang, Michael D Taylor, Radomir Chabiniok, Jaroslav Tintera, Julio Sotelo, Sergio Uribe	IEEE Transactions on Medical Imaging	https://doi.org/10.1109/TMI.2021.3051092	01-04-2021
40	Pediatric multisystem SARS COV2 with versus without cardiac involvement: a multicenter study from Latin America	Pignatelli, R., Antona, C.V., Rivera, I.R. et al.	European Journal of Pediatrics	https://doi.org/10.1007/s00431-021-04052-9	01-04-2021
41	Anomalous coronary artery suspected by cardiac magnetic resonance “RAC” sign	Julián Vega, Javier López-Opitz, Hugo Martínez, Daniel Lorenzatti, Javier Urmeneta, Diego Lowenstein	Revista chilena de cardiología	http://dx.doi.org/10.4067/S0718-85602021000100065	01-04-2021
42	Hepatoprotective species from the Chilean medicinal flora: Junellia spathulata (Verbenaceae)	Raquel Bridi, Gilsane Lino von Poser, Miguel Gómez, Marcelo E Andia, Juan Esteban Oyarzún, Paula Núñez, Ariadsna Jael Vasquez Arias, Christian Espinosa-Bustos	Journal of Ethnopharmacology	https://doi.org/10.1016/j.jep.2020.113543	01-03-2021
43	A Multi-channel Speech Enhancement Method Based on Subband Affine Projection Algorithm in Combination with Proposed Circular Nested Microphone Array	Ali Dehghan Firoozabadi, Pablo Irarrazaval, Pablo Adasme, Hugo Durney, Miguel Sanhueza, David Zabala-Blanco, Cesar A Azurdia-Meza	Advances in Intelligent Systems and Computing, 1261	https://doi.org/10.1007/978-3-030-58669-0_41	01-03-2021

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44	Precision medicine in human heart modeling	M Peirlinck, F Sahli Costabal, J Yao, JM Guccione, S Tripathy, Y Wang, D Ozturk, P Segars, TM Morrison, S Levine, E Kuhl	Biomechanics and Modeling in Mechanobiology	https://doi.org/10.1007/s10237-021-01421-z	12-02-2021
45	Improving the robustness of MOLLI T1 maps with a dedicated motion correction algorithm	G Delso, JT Ortiz-Perez, S Prat, A Doltra, RJ Perea, TM Caralt, D Lorenzatti, J Vega, S Sotes, M Sitges, MA Janich	European Heart Journal - Cardiovascular Imaging	https://doi.org/10.1093/ehjci/jeaa356.316	08-02-2021
46	Validation of a deep learning reconstruction framework for 3D delayed myocardial enhancement imaging	G Delso, K Suryanarayanan, JT Ortiz-Perez, S Prat, A Doltra, RJ Perea, TM Caralt, D Lorenzatti, J Vega, S Sotes, M Sitges, MA Janich	European Heart Journal - Cardiovascular Imaging	https://doi.org/10.1093/ehjci/jeaa356.300	08-02-2021
47	Estimation of changes in cyclic lung strain by electrical impedance tomography: Proof-of-concept study	Rodrigo Cornejo, Pablo Iturrieta, Tayran MM Olegário, Carolina Kajiyama, Daniel Arellano, Dannette Guíñez, María A Cerda, Roberto Brito, Abraham IJ Gajardo, Marioli Lazo, Lorena López, Caio CA Morais, Sédric González, Miguel Zavala, Verónica Rojas, Juan N Medel, Daniel E Hurtado, Alejandro Bruhn, Cristobal Ramos, Nivia Estuardo	Acta Anaesthesiologica Scandinavica	https://doi.org/10.1111/aas.13723	01-02-2021
48	Structural brain abnormalities in schizophrenia in adverse environments: examining the effect of poverty and violence in six Latin American cities	Crossley NA, Zugman A, Reyes-Madrigal F, Czepielewski LS, Castro MN, et al.	British Journal of Psychiatry	https://doi.org/10.1192/bjp.2020.143	01-02-2021
49	Impact of aortic arch curvature in flow haemodynamics in patients with transposition of the great arteries after arterial switch operation	Julio Sotelo, Israel Valverde, Duarte Martins, Damien Bonnet, Nathalie Boddaert, Kuberan Pushparajan, Sergio Uribe, Francesca Raimondi	European Heart Journal - Cardiovascular Imaging	https://doi.org/10.1093/ehjci/jeaa416	31-01-2021
50	Late presentation of ALCAPA syndrome: a rare cause of heart failure	Lorenzatti, D., Cepas Guillén, P., Vega Adaury, J. et al.	International Journal of Cardiovascular Imaging	https://doi.org/10.1007/s10554-021-02158-7	27-01-2021
51	Analysis of the passive biomechanical behavior of a sheep-specific aortic artery in pulsatile flow conditions	Claudio M García-Herrera, Álvaro A Cuevas, Diego J Celentano, Álvaro Navarrete, Pedro Aranda, Emilio Herrera, Sergio Uribe	Computer Methods in Biomechanics and Biomedical Engineering	https://doi.org/10.1080/10255842.2021.1872549	21-01-2021
52	A distributed resistance inverse method for flow obstacle identification from internal velocity measurements	Jorge Aguayo, Cristóbal Bertoglio, Axel Osses	Inverse Problems	https://doi.org/10.1088/1361-6420/abcd8	19-01-2021

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53	Abnormal vortex formation in the right pulmonary artery after the arterial switch operation	Evangeline G Warmerdam, Hans C van Assen, Julio Sotelo, Heynric B Grotenhuis	European Heart Journal - Case Reports	https://doi.org/10.1093/ehjcr/ytaa549	15-01-2021
54	Inelastic Deformable Image Registration (i-DIR): Capturing Sliding Motion through Automatic Detection of Discontinuities	Carlos I Andrade, Daniel E Hurtado	Mathematics	https://doi.org/10.3390/math9010097	05-01-2021
55	Level set segmentation with shape prior knowledge using intrinsic rotation, translation and scaling alignment	Cristobal Arrieta, Carlos A Sing-Long, Joaquin Mura, Pablo Irarrazaval, Marcelo E Andia, Sergio Uribe, Cristian Tejos	Biomedical Signal Processing and Control	https://doi.org/10.1016/j.bspc.2020.102241	01-01-2021
56	Comparison of parameter optimization methods for quantitative susceptibility mapping	Carlos Milovic, Claudia Prieto, Berkin Bilgic, Sergio Uribe, Julio Acosta-Cabronero, Pablo Irarrazaval, Cristian Tejos	Magnetic Resonance in Medicine	https://doi.org/10.1002/mrm.28435	01-01-2021
57	Neurografía por resonancia magnética: Aspectos técnicos y aplicaciones clínicas	Esteban Giannini J., Pamela Franco L., Cristian Montalba Z., Diego López P., Claudia Astudillo A.	Revista Chilena de Radiología	https://scielo.conicyt.cl/pdf/rchradiol/v27n2/0717-9308-rchradiol-27-02-88.pdf	01-01-2021