



INSTITUTE FOR SYSTEMS AND ROBOTICS



Annual Report – 2017

Lisbon Pole

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1. EXECUTIVE SUMMARY

During the year of 2017 there were no research and technological activities taking place in the framework of the Lisbon Pole of ISR, nor were financed through ISR (NIF 502 854 227). All the research activities were carried out in the context of the research unit ISR/IST where all contracts and activities took place at Instituto Superior Técnico.

For informative purposes only, we describe the scientific publications and doctoral theses that were produced by the research group hosted at the Instituto Superior Técnico, in spite of the fact that none of these activities were developed in the context the Lisbon Pole of ISR.

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2. PUBLICATIONS

A. International Journals,

- [1] S. Melo, J. Figueiredo, M. Gonçalves, E. Morais-de-Sá, João Sanches, R. Seruca, Predicting the Functional Impact of CDH1 Missense Mutations in Hereditary Diffuse Gastric Cancer, *International Journal of Molecular Sciences*, 18, 2687, December, 2017
- [2] Ricardo Ribeiro, G. Cruz, J. Matos, Alexandre Bernardino, A Dataset for Airborne Maritime Surveillance Environments, *IEEE Transactions on Circuits and Systems for Video Technology* (accepted for publication), 2017
- [3] Daniel Silvestre, Paulo Rosa, J. P. Hespanha, Carlos Silvestre, Set-based fault detection and isolation for detectable linear parameter-varying systems, *International Journal of Robust and Nonlinear Control*, Vol. 27, Issue 18, pp. 4381–4397, December, 2017
- [4] Mário Saleiro, Kasim Terzić, João Rodrigues, Hans Du Buf, BINK: Biological Binary Keypoint Descriptor, *Biosystems*, Vol. 162, pp. 147-156, December, 2017
- [5] G. Carneiro, Jacinto Nascimento, A. P. Bradley, Automated Analysis of Unregistered Multi-View Mammograms With Deep Learning, *IEEE Transactions on Medical Imaging* (in press), 2017
- [6] Marko Beko, Rui Dinis, João Pedro Gomes, Target tracking with sensor navigation using coupled RSS and AoA measurements, *Sensors*, Vol. 17, No. 11, art. 2690, November, 2017
- [7] Rita Gouveia Nunes, G. Ferrazzi, A. N. Price, J. Hutter, Andreia Gaspar, M. Rutherford, J. V. Hajnal, Inner Volume Echo Volumar Imaging (IVEVI) for Robust Fetal Brain Imaging, *Magnetic Resonance in Medicine* [Epub ahead of print], 2017
- [8] João Carvalho, Manuel Marques, João Paulo Costeira, Understanding People Flow in Transportation Hubs, to appear in *IEEE Transactions on Intelligent Transportation System*, 2017
- [9] Pedro Guerreiro, João Xavier, Distributed learning with time correlated information, *IEEE Signal Processing Letters*, Vol. 24, no. 11, pp. 1636-1640, November, 2017
- [10] P. Ribeiro, M. Khan, A. Alfadhel, J. Kosel, F. Franco, S. Cardoso, Alexandre Bernardino, José Santos-Victor, Lorenzo Jamone, A miniaturized force sensor based on hair-like flexible magnetized cylinders deposited over a giant magnetoresistive sensor, *IEEE Transactions on Magnetics*, volume 53, Issue 11, November, 2017
- [11] Mirko Rakovic, G. Anil, Ž. Mihajlović, S. Savic, S. Naik, B. Borovac, A. Gottscheber, Fuzzy Position-Velocity control of Underactuated Finger of FTN Robot Hand, *Journal of Intelligent and Fuzzy Systems* (accepted for publication), 2017
- [12] Aamir Ahmad, Guilherme Lawless, Pedro Lima, An Online Scalable Approach to Unified Multirobot Cooperative Localization and Object Tracking, *IEEE Transactions on Robotics*, Vol. 33, Issue 5, pp. 1184-1199, October, 2017
- [13] A.Vale, Rodrigo Ventura, P. Lopes, Isabel Ribeiro, Assessment of navigation technologies for automated guided vehicle in nuclear fusion facilities, *Robotics and Autonomous Systems*, Vol. 97, pp. 153-170, November, 2017 - PDF
- [14] Brian Swenson, S. Kar, João Xavier, D. Leslie, Robustness properties in fictitious-play-type algorithms, *SIAM Journal on Control and Optimisation*, Vol. 55, No. 5, pp. 3295-3318, October, 2017
- [15] Jacinto Nascimento, G. Carneiro, Deep Learning on Sparse Manifolds for Faster Object Segmentation, *IEEE Transactions on Image Processing*, Vol. 26, No. 10, pp. 4978-4990, October, 2017
- [16] Cláudia Soares, João Pedro Gomes, Beatriz Ferreira, João Paulo Costeira, LocDyn: Robust distributed localization for mobile underwater networks, *IEEE Journal of Oceanic Engineering*, Vol. 42, No. 4, pp. 1063-1074, October, 2017
- [17] S. Witwicki, J. C. Castillo, João Messias, J. Capitan, Francisco Melo, Pedro Lima, Manuela Veloso, Autonomous Surveillance Robots: A Decision-Making Framework for Networked Multiagent Systems, *IEEE Robotics and Automation Magazine*, 24(3), pp 52-64, September, 2017 - PDF

- [18] L. Correia Guedes, S. Reimao, P. Paulino, Rita Gouveia Nunes, P. Bouça, D. Abreu, N. Gonçalves, A. Di Fonzo, L. Zhang, M. L. Quadri, M. Fabbri, C. Godinho, P. Pita Lobo, D. Neutel, M. Coelho, M. M. Rosa, J. Campos, G. Miltenberger-Miltenyi, T. Outeiro, C. Sampaio, V. Bonifati, J. J. Ferreira, Neuromelanin Magnetic Resonance Imaging of the Substantia Nigra in LRRK2 and GBA-related Parkinson's disease, *Movement Disorders*, Vol. 32, Issue 9, pp. 1331-1333, September, 2017
- [19] A. Goncalves, Alexandre Bernardino, J. Jorge, D. Lopes, A benchmark study on accuracy-controlled distance calculation between superellipsoid and superovoid contact geometries, *Mechanism and Machine Theory*, Vol. 115, pp. 77-96, September, 2017
- [20] Catarina Barata, M. E. Celebi, Jorge S. Marques, Development of Clinically Oriented System for Melanoma Diagnosis, *Pattern Recognition*, Vol. 69, pp. 270-285, September, 2017
- [21] João Almeida, Carlos Silvestre, António Pascoal, Synchronization of multi-agent systems using event-triggered and self-triggered broadcast, *IEEE Transactionas on Automatic Control*, Vol. 26, No. 9, pp. 4741 – 4746, September, 2017
- [22] N. Adubeiro, M. L. Nogueira, Rita Gouveia Nunes, E. Ribeiro, H. A. Ferreira, S. Alves, J. M. F. LA Fuente, Apparent diffusion coefficient in the analysis of prostate cancer: determination of optimal b-value pair to differentiate normal from malignant tissue, *Clinical Imaging* [Epub ahead of print], 2017
- [23] Nuno Fachada, V. V. Lopes, R. C. Martins, Agostinho Rosa, cf4ocl: A C framework for OpenCL, *Science of Computer Programming*, Vol. 143, pp. 9-19, September, 2017
- [24] Lussac Maia, António Silva, Sérgio Jesus, Environmental Model-Based Time-Reversal Underwater Communications, *IEEE Access*, Vol. PP, No. 99, pp. 1, August, 2017
- [25] S. Spasojevic, T. Ilić, I. Stojković, V. Potkonjak, A. Rodić, José Santos-Victor, Quantitative Assessment of the Arm/Hand Movements in Parkinson's Disease Using a Wireless Armband Device, *Frontiers in Neurology*, Vol. 8, August, 2017
- [26] M. Fabbri, S. Reimao, M. Carvalho, Rita Gouveia Nunes, D. Abreu, L. Correia Guedes, P. P. Lobo, C. Godinho, M. Coelho, N. C. Gonçalves, M. M. Rosa, A. Antonini, J. J. Ferreira, Substantia nigra neuromelanin as an imaging biomarker of disease progression in Parkinson's disease, *Journal of Parkinson's Disease*, vol. 7, no. 3, pp. 491-501, 2017
- [27] Daniel Silvestre, Paulo Rosa, J. P. Hespanha, Carlos Silvestre, Fault detection for LPV systems using Set-Valued Observers: A coprime factorization approach, *In Systems & Control Letters*, Vol. 106, pp. 32-39, August, 2017
- [28] Nelson Perdigão, Agostinho Rosa, S. O. Donoghue, The Dark Proteome Database, *BioData Mining*, pp. 10-24. Springer Nature. July, 2017
- [29] Rodolfo Abreu, Sandro Nunes, A. Leal, Patrícia Figueiredo, Physiological noise correction using ECG-derived respiratory signals for enhanced mapping of spontaneous neuronal activity with simultaneous EEG-fMRI, *Neuroimage*, Vol. 154, pp. 115-127, July, 2017
- [30] A. Cho, H. Song, P. Hursky, Sérgio Jesus, Iterative range estimation in a sloping-bottom shallow-water waveguide using the generalized array invariant, *Journal of the Acoustical Society of America*, Vol. 142, No. 1, pp. 55-60, July, 2017
- [31] R Gil-Gouveia, Joana Pinto, Patrícia Figueiredo, P. Vilela, I. Martins, An Arterial Spin Labeling MRI Perfusion Study of Migraine without Aura Attacks, *Frontiers in Neurology*, 8, 280, 2017
- [32] Meysam Basiri, F. Schill, Pedro Lima, D. Floreano, Localization of Emergency Acoustic Sources by Micro Aerial Vehicles, *Journal of Field Robotics*, Vol. 34, Issue 4, June, 2017
- [33] W. Nan, F. Wan, L. Chang, S. H. Pun, M. I Vai, Agostinho Rosa, An exploratory study of intensive neurofeedback training for schizophrenia, *Behavioural Neurology*, vol. 2017, Article ID 6914216, 2017
- [34] H. Silva, E. Silva, Alexandre Bernardino, A voting method for stereo egomotion estimation, *International Journal of Advanced Robotic Systems*, Volume 14, issue 3, 2017
- [35] António Pascoal, Mohammadreza Bayat, Naveena Crasta, A. Ijspeert, A. Crespi, Environmental monitoring using autonomous vehicles: a survey of recent searching techniques, *Current Opinions on Biotechnology*, Volume 45, pp. 76-84, June, 2017

- [36] Bruno Guerreiro, Carlos Silvestre, Rita Cunha, David Cabecinhas, LiDAR-based control of autonomous rotorcraft for the inspection of pier-like structures, *IEEE Transactions in Control Systems Technology* (online), 2017
- [37] Joana Pinto, Sandro Nunes, M. Bianciardi, A. Dias, L. M. Silveira, L. L. Wald, Patrícia Figueiredo, Improved 7 Tesla resting-state fMRI connectivity measurements by cluster-based modeling of respiratory volume and heart rate effects, *NeuroImage*, Vol. 153, pp. 262-272, June, 2017
- [38] Nuno Fachada, V. V. Lopes, R. C. Martins, Agostinho Rosa, Parallelization strategies for spatial agent-based models, *International Journal of Parallel Programming*, vol. 45, issue 3, pp. 449-481, June, 2017
- [39] Brian Swenson, S. Kar, João Xavier, Single sample fictitious play, *IEEE Transactions on Automatic Control*, Vol. 62, No. 11, pp. 6026-6031, May, 2017
- [40] João Almeida, Carlos Silvestre, António Pascoal, Event-Triggered Output Synchronization of Heterogeneous Multi-Agent Systems, *International Journal of Robust and Nonlinear Control*, Vol. 27, Issue 8, pp. 1302-1338, May, 2017
- [41] A. Moldovan, Plinio Moreno, D. Nitti, José Santos-Victor, L. De Raedt, Relational Affordances for Multiple-Object Manipulation, *Autonomous Robot*, pp. 1-16, May, 2017
- [42] M. Ruela, Catarina Barata, Jorge S. Marques, J. Rozeira, A System for the Detection of Melanomas in Dermoscopy Images using Shape and Symmetry Features, *Computer Methods In Biomechanics And Biomedical Engineering: Imaging & Visualization*, Vol. 5, Issue 2, pp. 127-137, May, 2017
- [43] Sabina Zejnilović, João Xavier, João Pedro Gomes, B. Sinopoli, Choosing observers for guessing the source of a network diffusion: A large deviations approach, to appear in *IEEE Transactions on Signal Processing*, 2017
- [44] Cláudia Soares, João Pedro Gomes, Beatriz Ferreira, João Paulo Costeira, LocDyn: Distributed Self-localization of a Network of AUVs, to appear in *IEEE Journal of Oceanic Engineering*, 2017
- [45] L. Oakden-Rayner, G. Carneiro, T. Bessen, Jacinto Nascimento, A. P. Bradley, L. J. Palmer, Precision Radiology: Predicting longevity using feature engineering and deep learning methods in a radiomics framework, *Nature Scientific Reports*, Vol. 7, No 1, p.1648, May, 2017
- [46] S. Brandão, M. Parente, E. Silva, T. da Roza, T. Mascarenhas, J. Leitão, J. Cunha, R. Natal Jorge, Rita Gouveia Nunes, Pubovisceralis muscle fiber architecture determination: comparison between biomechanical modeling and diffusion tensor imaging, *Annals of Biomedical Engineering*, Vol. 45, Issue 5, pp. 1255-1265, May, 2017
- [47] A. Ferro, T. Mestre, P. Carneiro, I. Sahumbaiev, R. Seruca, João Sanches, Blue intensity matters for cell cycle profiling in fluorescence DAPI-stained images, *Laboratory Investigation (Nature)*, 97(5):615-625, May, 2017
- [48] João Sequeira, Duarte Gameiro, A Probabilistic Approach to RFID-Based Localization for Human-Robot Interaction in Social Robotic, *Electronics* 2017, 6(2), 32, April, 2017
- [49] P. Ribeiro, M. Khan, A. Alfadhel, J. Kosel, F. Franco, S. Cardoso, Alexandre Bernardino, A. Schmitz, José Santos-Victor, Lorenzo Jamone, Bio-inspired ciliary force sensor for robotic platforms, *IEEE Robotics and Automation Letters*, Vol. 2, Issue 2, pp. 971-976, April, 2017
- [50] Daniel Silvestre, Paulo Rosa, J. P. Hespanha, Carlos Silvestre, Stochastic and deterministic fault detection for randomized gossip algorithms, In *Automatica*, Vol. 78, pp. 46-60, April, 2017
- [51] Francisco Curado, Joao Quintas, Pramod Maurya, António Pascoal, Robust particle filter formulations with application to terrain-aided navigation, *International Journal of Adaptive Control and Signal Processing*, Vol. 31, Issue 4, pp. 608-651, April, 2017
- [52] C.M.Q. Ramos, D. Martins, F. Serra, Roberto Lam, Pedro Cardoso, M. B. Correia, João Rodrigues, Framework for a Hospitality Big Data Warehouse: the implementation of an efficient Hospitality Business Intelligence System, *International Journal of Information Systems in the Service Sector (IJSSS)*, Vol. 9, No. 2, pp. 27-45, April, 2017
- [53] A. Marques, A. Gomes, V. Clemente, J. M. Santos, I. Duarte, Gina Caetano, M. Castelo-Branco, Unbalanced resting-state networks activity in psychophysiological insomnia, *Sleep and Biological Rhythms*, Vol. 15, Issue 2, pp. 167-177, April, 2017
- [54] Rui Figueiredo, Alexandre Bernardino, José Santos-Victor, H Araujo, On the advantages of foveal mechanisms for active stereo systems in visual search tasks, *Autonomous Robots*, pp 1-18 (online), February, 2017

- [55] Y. Wu, Paulo Felisberto, Sérgio Jesus, A.B. Santos, Bottom parameter estimation using close range ship noise and a short aperture vector sensor array, submitted, *The Journal of the Acoustical Society of America*, 2017
- [56] Teresa Murta, U. J. Chaudhary, T. Tierney, A. Dias, Marco Leite, D. W. Carmichael, Patrícia Figueiredo, L. Lemieux, Phase-amplitude coupling and the BOLD signal: A simultaneous intracranial EEG (icEEG) – fMRI study in humans performing a finger-tapping task, *Neuroimage*, Vol. 146, 438–451, February, 2017
- [57] A. Falotico, L. Vannucci, A. Ambrosano, U. Albanese, S. Ulbrich, J. Tieck, G. Hinkel, J. Kaiser, I. Peric, O. Denninger, Nino Cauli, M. Kirtay, A. Roennau, G. Klinker, A. Arnim, L. Guyot, D. Peppicelli, P. Cañada, E. Ros, P. Maier, S. Weber, M. Huber, D. Plecher, F. Röhrbein, S. Deser, A. Roitberg, P. Smagt, R. Dillman, P. Levi, C. Laschi, A. Knoll, M. Gewaltig, Connecting Artificial Brains to Robots in a Comprehensive Simulation Framework: The Neurorobotics Platform, *Frontiers in Neurorobotics*, Vol. 11, January, 2017
- [58] Nuno Fachada, Vitor Lopes, R. C. Martins, Agostinho Rosa, Model-independent comparison of simulation output, *Simulation Modelling Practice and Theory*, Vol. 72, pp. 131–149, March, 2017
- [59] S. Brandão, M. Parente, E. Silva, T. da Roza, T. Mascarenhas, J. Leitão, J. Cunha, R. N. Jorge, Rita Gouveia Nunes, Pubovisceralis muscle fiber architecture determination: comparison between biomechanical modeling and diffusion tensor imaging, *Annals of Biomedical Engineering*, 45(5):1255-1265, January, 2017
- [60] A. Hinkel, H. Groenda, S. Krach, L. Vannucci, O. Denninger, Nino Cauli, S. Ulbrich, A. Roennau, E. Falotico, M. Gewaltig, A. Knoll, R. Dillman, C. Laschi, R. Reussner, A Framework for Coupled Simulations of Robots and Spiking Neuronal Networks, *Journal of Intelligent & Robotic Systems*, Vol. 85, Issue 1, pp 71–91, 2017
- [61] Pedro Lourenço, Bruno Guerreiro, Pedro Batista, Paulo Oliveira, Carlos Silvestre, Uncertainty Characterization of the Orthogonal Procrustes Problem with Arbitrary Covariance Matrices, *Pattern Recognition*, 61, pp. 210-220, January, 2017
- [62] David Ribeiro, Jacinto Nascimento, Alexandre Bernardino, Gustavo Carneiro, Improving the performance of pedestrian detectors using convolutional learning, *Pattern Recognition*, Vol. 61, pp. 641-649, January, 2017
- [63] Vahid Hassani, A. Sorensen, António Pascoal, Michael Athans, Robust dynamic positioning of offshore vessels using mixed- μ synthesis: modeling, design, and practice, *Journal of Ocean Engineering*, Vol. 129, pp. 389-400, January, 2017

B. International Conferences,

- [1] Francisco Rego, António Pedro Aguiar, António Pascoal, C. N. Jones, A Design Method for Distributed Luenberger Observers, *Proc. of CDC'17 - 56th IEEE Conference on Decision and Control*, Melbourne, Australia, 2017
- [2] A. Batinica, B. Nemeč, José Santos-Victor, A. Gams, Mirko Rakovic, Generalization of Task Model using Compliant Movement Primitives in a Bimanual Setting, *Proc. of ROBOT 2017 - IEEE International Conference on Robotics and Biomimetics*, Macau, 2017
- [3] F. Azevedo, J. Carmona, T. Paulino, Plinio Moreno, Estimating objects' weight in precision grips using skin-like sensors, *Proc. of ROBOT 2017 - 3rd Iberian Robotics Conference*, Seville, Spain, 2017
- [4] A. F. Almeida, Rui Figueiredo, Alexandre Bernardino, José Santos-Victor, Deep Networks for Human Visual Attention: A hybrid model using foveal vision, *Proc. of ROBOT 2017 - 3rd Iberian Robotics Conference*, Seville, Spain, 2017
- [5] Rômulo Rodrigues, Meysam Basiri, Antonio Pedro Aguiar, Pedro Miraldo, Feature Based Potential Field for Low-level Active Visual Navigation, *Proc. of ROBOT 2017 - 3rd Iberian Robotics Conference*. Sevilla, Spain. *Advances in Intelligent Systems and Computing*, vol. 693. Springer, Cham, 2017
- [6] Alexandre Gomes, Bruno Guerreiro, Rita Cunha, Carlos Silvestre, Paulo Oliveira, Sensor-based 3-D pose estimation and control of rotary-wing UAVs using a 2-D LiDAR, *Proc. of Robot 2017 - 3rd Iberian Robotics Conference*, Sevilla, Spain, 2017
- [7] A. Batinica, B. Nemeč, A. Ude, Mirko Rakovic, A. Gams, Compliant Movement Primitives in a Bimanual Setting, *Proc. of Humanoids 2017 - IEEE RAS International Conference on Humanoid Robots*, Birmingham, UK, 2017

- [8] Atabak Dehban, Lorenzo Jamone, A. Kampff, José Santos-Victor, A Deep Probabilistic Framework for Heterogeneous Self-Supervised Learning of Affordances, Proc. of Humanoids 2017 - IEEE-RAS International Conference on Humanoid Robots, Birmingham, UK, 2017
- [9] Sabina Zejnilović, João Pedro Gomes, B. Sinopoli, Sequential source localization on graphs: A case study of cholera outbreak, Proc. of GlobalSIP 2017 - 5th IEEE Global Conference on Signal and Information Processing, Montreal, Canada, 2017
- [10] Alicja Wasik, A. Martinoli, Pedro Lima, A Relative Positioning System for Multi-Robot Formations Using Augmented Information GM-PHD Filter, accepted, MRS 2017 - 1st IEEE International Symposium on Multi-Robot and Multi-Agent Systems, Los Angeles, CA, USA, 2017
- [11] Brian Swenson, S. Kar, João Xavier, Computationally efficient learning in large-scale games: sampled fictitious play revisited, Proc. of ASILOMAR 2016 - 50th Annual Asilomar Conference on Signals, Systems, and Computers, pp. 1212-1215, Pacific Grove, CA, USA, 2017
- [12] Augusto Santos, S. Kar, J. M. F. Moura, João Xavier, Thermodynamic limit of interacting particle systems over dynamical networks, Proc. of ASILOMAR 2016 - 50th Annual Asilomar Conference on Signals, Systems, and Computers, pp. 997-1000, Pacific Grove, CA, USA, 2017
- [13] H. Simão, Alexandre Bernardino, User Centered Design of an Augmented Reality Gaming Platform for Active Aging in Elderly Institutions, Proc. of icSPORTS - International Congress on Sport Sciences Research and Technology Support. Funchal, Portugal, 2017
- [14] R. F. Simões, A. F. Ladeira, M. Veloso, R. J. T. Gonçalves, Patrícia Figueiredo, Rita Gouveia Nunes, J. Graça, QuantemTool – Automated Measurement of Lesion Load and Cerebral Volume from Magnetic Resonance Images in Multiple Sclerosis, MSParis2017 - 7th Joint ECTRIMS-ACTRIMS Meeting, Paris, France, 2017
- [15] ShanghangZhang, G. Wu, João Paulo Costeira, J. M. F. Moura, Fcn-rlstm: Deep spatio-temporal neural networks for vehicle counting in city cameras, Proc. of ICCV 2017 - IEEE International Conference on Computer Vision, Venice, Italy, 2017
- [16] M. Tavares, S. Reimao, I. Chendo, Rita Gouveia Nunes, Brain Connectivity in First Episode Psychosis – influence of psychotropic drugs, ESMRMB 2017 - 34th Annual Meeting of the European Society for Magnetic Resonance in Medicine and Biology, Barcelona, Spain [E-poster], 2017
- [17] Andreia Gaspar, Rita Gouveia Nunes, Performance Comparison of T1-mapping MOLLI Sequence Fitting Algorithms, 34th Annual Meeting of the European Society for Magnetic Resonance in Medicine and Biology, Barcelona, Spain [E-poster e Lightning Talk], 2017
- [18] M. Tavares, S. Reimao, I. Chendo, M. A. Carvalho, P. Levy, Rita Gouveia Nunes, Neuromelanin Imaging of the Substantia Nigra in First Episode Psychosis – influence of psychotropic drugs consumption, ESMRMB 2017 - 34th Annual Meeting of the European Society for Magnetic Resonance in Medicine and Biology, Barcelona, Spain [oral presentation], 2017
- [19] Ana Fouto, Joana Pinto, Rita Gouveia Nunes, L. Alves, S. Calado, C. Gonçalves, P. Vilela, M. Viana-Baptista, Patrícia Figueiredo, Diffusion weighted imaging biomarkers of cerebral small vessel disease: comparison of CADASIL with sporadic SVD, Proc. of ESMRMB 2017 - 34th Annual Scientific Meeting of the European Society for Magnetic Resonance in Medicine and Biology, Barcelona, Spain [Oral and e-poster presentation], 2017
- [20] M. Costa, Beatriz Ferreira, Manuel Marques, A Context Aware and Video-Based Risk Descriptor for Cyclists, ITSC 2017 - IEEE 20th International Conference on Intelligent Transportation Systems, Yokohama, Japan, 2017
- [21] Alexandre Calapez, Rui C. Martins, Agostinho Rosa, Phase field estimation from single DIC microscopy images using the alternating direction method of multipliers, Proc. of CISP-BMEI 2017 - the 10th International Congress on Image and Signal Processing, Biomedical Engineering and Informatics, Shanghai, China, 2017
- [22] José Corujeira, J. L. Silva, Rodrigo Ventura, Effects of haptic feedback in dual-task teleoperation of a mobile robot, Proc. of INTERACT 2017 - 16th International Conference on Human-Computer Interaction, Mumbai, India, 2017 - PDF
- [23] G. Cruz, Alexandre Bernardino, Evaluating Aerial Vessel Detector In Multiple Maritime Surveillance Scenarios, Proc. of Oceans - MTS/IEEE OCEANS 2017, Anchorage, Alaska, USA, 2017
- [24] Cláudia Soares, João Pedro Gomes, P. Ji, António Pascoal, DieSEL: Distributed self-localization of a network of underwater vehicles, Proc. of MTS/IEEE OCEANS 2017, Anchorage, AK, USA, 2017

- [25] S. Marto, Nuno Barroso Monteiro, J. P. Barreto, José Gaspar, Structure from Plenoptic Imaging, Proc. of IEEE ICDL-EPIROB 2017 - 7th Joint IEEE International Conference on Development and Learning and Epigenetic Robotics, Lisbon, Portugal, 2017
- [26] Rui Figueiredo, Atabak Dehban, Alexandre Bernardino, José Santos-Victor, H Araujo, Shape-Based Attention for Identification and Localization of Cylindrical Objects, Proc. of IEEE ICDL-EPIROB 2017 - 7th Joint IEEE International Conference on Development and Learning and Epigenetic Robotics, Lisbon, Portugal, 2017
- [27] Alexandre Antunes, Giovanni Saponaro, A. Morse, Lorenzo Jamone, José Santos-Victor, A. Cangelosi, Learn, Plan, Remember: A Developmental Robot Architecture for Task Solving, Proc. of IEEE ICDL-EPIROB 2017 - 7th Joint IEEE International Conference on Development and Learning and Epigenetic Robotics, Lisbon, Portugal, 2017
- [28] Giovanni Saponaro, Pedro Vicente, Atabak Dehban, Lorenzo Jamone, Alexandre Bernardino, José Santos-Victor, Learning at the Ends: From Hand to Tool Affordances in Humanoid Robots, Proc. of IEEE ICDL-EPIROB 2017 - 7th Joint IEEE International Conference on Development and Learning and Epigenetic Robotics, Lisbon, Portugal, 2017
- [29] Carlos Santiago, Jacinto Nascimento, Jorge S. Marques, Fast and accurate segmentation of the LV in MR volumes using a deformable model with dynamic programming, Proc. of ICIP 2017 - IEEE International Conference on Image Processing, Beijing, China, 2017
- [30] Catarina Barata, Jacinto Nascimento, Jorge S. Marques, A Sparse Approach to Pedestrian Trajectory Modeling using Multiple Motion Fields, Proc. of ICIP 2017 - IEEE International Conference on Image Processing, Beijing, China, 2017
- [31] António Pascoal, Luís Sebastião, Sérgio Jesus, Jorge Ribeiro, G. Indiveri, O. Kebkal, K. Kebkal, Elbert Kelholt, Agni Mantouka, V. Kebkal, Performance Assessment of Underwater Acoustic Modems Operating Simultaneously at Different Frequencies in the Presence of Background Impulsive Noise Emitted by a Sparker, Proc. UACE2017- 4th Underwater Acoustics Conference and Exhibition, Skiathos, Greece, 2017
- [32] António Pascoal, Luís Sebastião, João Pedro Gomes, Jorge Ribeiro, Miguel Ribeiro, Henrique Silva, G. Indiveri, O. Kebkal, K. Kebkal, E. Glushko, V. Kebkal, Underwater Acoustic Modems with Integrated Atomic Clocks for One-Way Travel-Time Underwater Vehicle Positioning, Proc. UACE2017- 4th Underwater Acoustics Conference and Exhibition, Skiathos, Greece, 2017
- [33] Carlos Neves, Rodrigo Ventura, Energy-Efficient MPC for biped robots, Proc. of CLAWAR 2017 - 20th International Conference on Climbing and Walking Robots and Support Technologies for Mobile Machines, Porto, Portugal, 2017 - PDF
- [34] G. Carneiro, Jacinto Nascimento, A. P. Bradley, Unregistered Multiview Mammogram Analysis with Pre-trained Deep Learning Models, Proc. of MICCAI 2017 - International Conference on Medical Image Computing and Computer-Assisted Intervention, pp. 665-673, Springer, Cham, Quebec City, Canada, 2017
- [35] G. Maicas, G. Carneiro, A. P. Bradley, Jacinto Nascimento, I. Reidy, Deep Reinforcement Learning for Active Breast Lesion Detection from DCE-MRI, Proc. of MICCAI 2017 - International Conference on Medical Image Computing and Computer-Assisted Intervention, pp. 665-673, Quebec City, Canada, 2017
- [36] Carlos Fernandes, Abstracting the Abstract: A Swarm Art Project, Proc. of ARTECH 2017 - 8th International Conference on Digital Arts, Macau, China, pp. 171-174, 2017
- [37] Carlos Fernandes, Daria Migotina, Rogério Largo, Agostinho Rosa, Sonification of Sleep EEG, Proc. of ARTECH 2017 - 8th International Conference on Digital Arts, Macau, China, pp. 161-164, 2017
- [38] J. J. Merelo, P. Castillo, A.M. Mora, M. García-Valdez, C. Cotta, Carlos Fernandes, Self-organized criticality in code repositories, Proc. of ECAL 2017 - 14th European Conference on Artificial Life, Lyon, France, pp. 545-552, 2017
- [39] L. Antanas, A. Dries, Plinio Moreno, L. De Raedt, Relational Affordance Learning for Task-Dependent Robot Grasping, Proc. of ILP 2017 - 27th International Conference on Inductive Logic Programming, Orléans, France, 2017
- [40] M. Barao, Jorge S. Marques, Gaussian Random Vector Fields in Trajectory Modelling, Proc. of IMVIP 2017 - Irish Machine Vision and Image Processing Conference, Maynooth, Ireland, 2017

- [41] Jorge S. Marques, J. M. Lemos, A. R. Moreira, Computing the Uncertainty of Motion Fields for Human Activity Analysis, Proc. of IMVIP 2017 - Irish Machine Vision and Image Processing Conference, Maynooth, Ireland, 2017
- [42] V. Nigolian, Mehmet Mutlu, S. Hauser, Alexandre Bernardino, A. Ijspeert, Self-reconfigurable Modular Robot Interface Using Virtual Reality: Arrangement of Furniture Made out of Roombots Modules, Proc. of RO-MAN - IEEE International Symposium on Robot and Human Interactive Communication, Lisbon, Portugal, 2017
- [43] João Garcia, Tiago Veiga, Pedro Lima, Decision-Theoretic Planning Under Uncertainty for Multimodal Human-Robot Interaction, Proc. of IEEE RO-MAN 2017 - International Symposium on Robot and Human Interactive Communication, Lisbon, Portugal, 2017
- [44] Giovanni Saponaro, Lorenzo Jamone, Alexandre Bernardino, Giampiero Salvi, Interactive Robot Learning of Gestures, Language and Affordances, Proc. of GLU 2017 - International Workshop on Grounding Language Understanding, Stockholm, Sweden, 2017
- [45] ShanghangZhang, W. Guanhang, João Paulo Costeira, J. F. Moura, Understanding Traffic Density from Large-Scale Web Camera Data, Proc. of CVPR 2017 - IEEE Conference on Computer Vision and Pattern Recognition, Hawaii, USA, 2017 - PDF
- [46] Jayakorn Vongkulbhisal, F. De la Torre, João Paulo Costeira, Discriminative Optimization: Theory and Applications to Point Cloud Registration, Proc. of CVPR 2017 - IEEE Conference on Computer Vision and Pattern Recognition, Hawaii, USA, 2017
- [47] H. Barros, Margarida Silveira, Atlas Based Sparse Logistic Regression for Alzheimer's disease classification, Proc. of EMBC 2015 - International Conference of the IEEE Engineering in Medicine and Biology Society, Jeju Island, South Korea, 2017
- [48] Pedro Batista, N. Petit, Carlos Silvestre, Paulo Oliveira, Relaxed conditions for uniform complete observability and controllability of LTV systems with bounded realizations, Proc. of the 20th IFAC World Congress, Toulouse, France, pp. 3661-3668, 2017
- [49] Pedro Cardoso, João Rodrigues, J.A.R. Pereira, J.D.P.Sardo, An Object Visit Recommender Supported in Multiple Visitors and Museums, Proc. of 11th International Conference on Universal Access in Human-Computer Interaction, integrated in the 19th International Conference on Human-Computer Interaction, Vancouver, Canada, 2017
- [50] João Rodrigues, Pedro Cardoso, M. Gomes, P. Bica, Adaptive Card Design UI Implementation for an Augmented Reality Museum Application, Proc. of 11th International Conference on Universal Access in Human-Computer Interaction, integrated in the 19th International Conference on Human-Computer Interaction, Vancouver, Canada, 2017
- [51] Vahid Hassani, T. Onstein, António Pascoal, Application of Data Driven Control to Dynamic Positioning, Proc. IFAC 2017 World Congress, Toulouse, France. IFAC-Papers OnLine, Vol. 50, Issue 1, pp. 12392-12397, July, 2017
- [52] Naveena Crasta, D. Moreno-Salinas, António Pascoal, J. Aranda, Range-Based Cooperative Underwater Target Localization, Proc. IFAC 2017 World Congress, Toulouse, France. IFAC-Papers OnLine, Vol. 50, Issue 1, pp. 12366-12373, July, 2017
- [53] Francisco Curado, Joao Quintas, António Pascoal, Robust Methods of Magnetic Navigation of Marine Robotic Vehicles, Proc. IFAC 2017 World Congress, Toulouse, France. IFAC-Papers OnLine, Vol. 50, Issue 1, pp. 3470-3475, July, 2017
- [54] Lara Briñón, A. Seuret, António Pascoal, Target Tracking via a Circular Formation of Unicycles, Proc. IFAC 2017 World Congress, Toulouse, France. IFAC-PapersOnLine, Vol. 50, Issue 1, pp. 5782-5787, July, 2017
- [55] Rogério Calazan, Orlando Rodriguez, N. Nedjah, Parallel Ray Tracing for Underwater Acoustic Predictions, Proc. ICCSA 2017 - 17th International Conference on Computational Science and Its Applications, pp. 43-55, Trieste, Italy, 2017
- [56] Mehmet Mutlu, S. Hauser, Alexandre Bernardino, A. Ijspeert, Effects of joint compliance in quadrupedal locomotion, Proc. of AMAM 2017 - 8th International Symposium on Adaptive Motion of Animals and Machines, Sapporo, Japan, 2017
- [57] Paulo Felisberto, Orlando Rodriguez, J. P. Silva, S. Jesus, H. Ferreira, P. Ferreira, M. Cunha, C. Santos, I. Olivé, R. Santos, Monitoring bubble production in a seagrass meadow using a source of opportunity, Proc. of Acoustics 2017 - 173rd Meeting of the Acoustical Society of America, Vol. 30, No. 1, p. 005002, Boston, USA, 2017

- [58] Orlando Rodriguez, F. Sturm, P. Petrov, M. Porter, Three-dimensional model benchmarking for cross-slope wedge propagation, Proc. of Acoustics 2017 - 173rd Meeting of the Acoustical Society of America, Vol. 30, No. 1, p. 070004, Boston, USA, 2017
- [59] Joana Pinto, Sandro Nunes, M. Bianciardi, A. Dias, L. M. Silveira, L. L. Wald, Patrícia Figueiredo, Impact of physiological noise optimization on functional connectivity measures in rs-fMRI at 7T, Proc. of OHBM 2017 - 23rd Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada [Poster presentation], 2017
- [60] Rodolfo Abreu, A. Leal, Patrícia Figueiredo, Mapping epileptic networks by EEG-based selection of fMRI functional connectivity dynamic components, Proc. of OHBM 2017 - 23rd Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada [Poster presentation], 2017
- [61] Janir Cruz, O. Favrod, A. Shaquiri, M. Roinishvili, E. Chkonia, Patrícia Figueiredo, M. Herzog, Visual backward masking and the schizophrenia spectrum: EEG correlates, Proc. of OHBM 2017 - 23rd Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada [Poster presentation], 2017
- [62] Nuno Fachada, Janir Cruz, Patrícia Figueiredo, M. Herzog, Agostinho Rosa, A method for detecting statistically significant differences in EEG data, Proc. of OHBM 2017 - 23rd Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada [Poster presentation], 2017
- [63] Catarina Barata, M. A. T. Figueiredo, M. E. Celebi, Jorge S. Marques, Local Features Applied to Dermoscopy Images: Bag-of-Features versus Sparse Coding, Proc. of IbPRIA 2017 - 8th Iberian Conference on Pattern Recognition and Image Analysis Faro, Portugal, 2017
- [64] David Ribeiro, Gustavo Carneiro, Jacinto Nascimento, Alexandre Bernardino, Multi-channel Convolutional Neural Network Ensemble for Pedestrian Detection, Proc. of IbPRIA 2017 - 8th Iberian Conference on Pattern Recognition and Image Analysis Faro, Portugal, 2017
- [65] Ana Bela Santos, Paulo Felisberto, Sérgio Jesus, Using shipping noise for sound speed inversion in coastal areas, IEEE OCEANS 2017, pp. 1-5, Aberdeen, UK, 2017
- [66] António Pascoal, Vahid Hassani, Naveena Crasta, Cyber Security Issues in Navigation Systems of Marine Vessels From a Control Perspective, Proc. of the ASME 2017 - 36th International Conference on Ocean, Offshore and Arctic Engineering OMAE 2017, Trondheim, Norway, 2017
- [67] António Pascoal, Paulo Felisberto, Luís Sebastião, Sérgio Jesus, P. Santos, Agni Mantouka, The Application of a Dual Accelerometer Vector Sensor for the Discrimination of Seismic Reflections, Proc. of MTS/IEEE Oceans 2017, Aberdeen, Scotland, 2017
- [68] H. Barros, Margarida Silveira, Exploiting a hierarchy of brain regions for Alzheimer's disease classification, Proc. of SPARS 2017 - Signal Processing with Adaptive Sparse Structured Representations, Lisboa, Portugal, 2017
- [69] Athira Nambiar, Alexandre Bernardino, Jacinto Nascimento, A. Fred, Context-Aware Person Re-identification in the Wild via fusion of Gait and Anthropometric features, Proc. of BWild 2017 - International Workshop on Biometrics in the Wild, Washington DC, USA, 2017
- [70] T. Paulino, P. Ribeiro, M. Neto, S. Cardoso, A. Schmitz, José Santos-Victor, Alexandre Bernardino, Lorenzo Jamone, Low-cost 3-axis soft tactile sensors for the human-friendly robot Vizzy, Proc. of ICRA 2017 - IEEE International Conference on Robotics and Automation, Singapore, 2017
- [71] Pedro Vicente, Lorenzo Jamone, Alexandre Bernardino, Towards markerless visual servoing of grasping tasks for humanoid robots, Proc. of ICRA 2017 - IEEE International Conference on Robotics and Automation, Singapore, 2017
- [72] Daniel Viegas, Pedro Batista, Paulo Oliveira, Carlos Silvestre, Discrete-time distributed Kalman filter design for multi-vehicle systems, Proc. of ACC 2017 - American Control Conference, Seattle, Washington, USA, pp. 5538-5543, 2017
- [73] Aamir Ahmad, Guilherme Lawless, Pedro Lima, An Online Scalable Approach to Unified Multirobot Cooperative Localization and Object Tracking, Proc. of ICRA 2018 - IEEE International Conference on Robotics and Automation, Brisbane, Australia, 2017
- [74] Janir Cruz, J. Thoresen, J. Rodrigues, V. Chicherov, Patrícia Figueiredo, M. Herzog, C. Sandi, Social dominance orientation influences the perception of facial expressions, Proc. of VSS 2017 - 16th Annual Meeting of the Vision Sciences Society, St. Pete Beach, Florida, USA [Poster presentation], 2017

- [75] Nuno Fachada, Agostinho Rosa, Assessing the feasibility of OpenCL CPU implementations for agent-based simulations, Proc. of IWOCCL 2017 - 5th International Workshop on OpenCL, Article No. 4, Toronto, Canada, 2017
- [76] Rogério Calazan, Orlando Rodriguez, TRACEO3D Ray Tracing Model for Underwater Noise Predictions, Proc. of DoCEIS 2017 - 8th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, vol 499, pp. 183-190, Lisboa, Portugal, 2017
- [77] R. Santos, J Pereira, José Gaspar, C. Fernandes, Multiview Layered Depth Image, Proc. WSCG 2017 - 25th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (selected to publish in Journal of WSCG, vol. 25, issue 2, ISSN 1213-6972), Plzen, Czech Republic, 2017
- [78] David Ribeiro, André Mateus, Pedro Miraldo, Jacinto Nascimento, A real-time deep learning pedestrian detector for robot navigation, Proc. of ICARSC 2017 - 17th International Conference on Autonomous Robot Systems and Competitions, Coimbra, Portugal, 2017
- [79] Oscar Lima, Rodrigo Ventura, A case study on automatic parameter optimization of a mobile robot localization algorithm, Proc. of ICARSC 2017 - IEEE 17th International Conference on Autonomous Robot Systems and Competitions, Coimbra, Portugal, 2017 - PDF
- [80] Pedro Vicente, Alexandre Bernardino, Wedding Robotics: A case study, Proc. of ICARSC 2017 - IEEE 17th International Conference on Autonomous Robot Systems and Competitions, Coimbra, Portugal, 2017 - PDF
- [81] Athira Nambiar, Alexandre Bernardino, Jacinto Nascimento, A. Fred, Context-Aware Person Re-Identification via Fusion of Anthropometric and Gait Features, BMVA Technical Meeting on Security and Surveillance, London, UK, 2017
- [82] Carlos Cardoso, Alexandre Bernardino, Adaptive Non Maximal Suppression Filtering for Online Exploration Learning with Cost-Regularized Kernel Regression, Proc. of ICARSC 2017 - IEEE 17th International Conference on Autonomous Robot Systems and Competitions, Coimbra, Portugal, 2017
- [83] Rui Figueiredo, Plinio Moreno, Alexandre Bernardino, Robust cylinder detection and pose estimation using 3D point cloud information, Proc. of ICARSC 2017 - IEEE 17th International Conference on Autonomous Robot Systems and Competitions, Coimbra, Portugal, 2017
- [84] N. S. Santos, R. P. A. G. Teixeira, J. V. Hajnal, Rita Gouveia Nunes, Assessing the Accuracy of T2 and B1+ Maps Estimated from Multi-echo Spin Echo MRI Sequences Using Extended Phase Graph Signal Predictions, Proc. of ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA, 2017
- [85] P. Paulino, S. Reimao, L. C. Guedes, M. A. Carvalho, D. Abreu, J. Campos, J. F. Ferreira, Rita Gouveia Nunes, Neuromelanin and Volumetric Evaluation in Parkinson's Disease Patients Carrying LRRK2 or GBA Mutations, Proc. of ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA, 2017
- [86] M. A. Carvalho, S. Reimao, M. Fabbri, D. Abreu, J. Campos, J. F. Ferreira, Rita Gouveia Nunes, Evaluation of Neuromelanin-MRI parameters and Volumetric changes with Parkinson's Disease Progression, Proc. of ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA, 2017
- [87] Rita Gouveia Nunes, G. Ferrazzi, A. N. Price, J. Hutter, Andreia Gaspar, M. Rutherford, J. V. Hajnal, Motion-Robust Fetal Brain Imaging using Inner Echo Volumar Imaging, Proc. of ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA, 2017
- [88] Ana Santos, Joana Pinto, Sandro Nunes, M. Bianciardi, A. Dias, L. M. Silveira, L. L. Wald, Patrícia Figueiredo, Region-specific modeling of heart rate and respiratory volume signal contributions in whole-brain high-spatial resolution resting-state fMRI at 7 Tesla, Proc. of ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA [E-Poster presentation], 2017
- [89] Rodolfo Abreu, A. Leal, Patrícia Figueiredo, Improved mapping of epileptic networks based on the correlation of BOLD-fMRI dynamic functional connectivity components with simultaneous EEG, Proc. of ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA [Oral presentation], 2017
- [90] J. Jorge, Patrícia Figueiredo, W. van der Zwaag, R. Gruetter, Mapping and characterization of positive and negative BOLD responses to visual stimulation in multiple regions across the brain at 7T, Proc. of ISMRM 2017 -

25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA [Oral presentation], 2017

- [91] N. Saraiva Santos, R. P. A. G. Teixeira, J. V. Hajnal, Rita Gouveia Nunes, Assessing the Accuracy of T2 and B1+ Maps Estimated from Multi-echo Spin Echo MRI Sequences Using Extended Phase Graph Signal Predictions, ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA [Poster], 2017
- [92] P. Paulino, S. Reimao, L. Correia Guedes, M. A. Carvalho, D. Abreu, J. Campos, J. F. Ferreira, Rita Gouveia Nunes, Neuromelanin and Volumetric Evaluation in Parkinson's Disease Patients Carrying LRRK2 or GBA Mutations, ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA [Poster], 2017
- [93] M. A. Carvalho, M. Fabbri, D. Abreu, J. Campos, J. F. Ferreira, Rita Gouveia Nunes, Evaluation of Neuromelanin-MRI parameters and Volumetric changes with Parkinson's Disease Progression, ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA [Poster], 2017
- [94] Rita Gouveia Nunes, G. Ferrazzi, A. N. Price, J. Hutter, Andreia Gaspar, M. Rutherford, J. V. Hajnal, Motion-Robust Fetal Brain Imaging using Inner Echo Volumar Imaging, ISMRM 2017 - 25th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, USA [E-poster], 2017
- [95] G. Carneiro, L. Oakden-Rayner, A. P. Bradley, Jacinto Nascimento, L. J. Palmer, Automated 5-year mortality Prediction using Deep Learning and Radiomics Features from Chest Computed Tomography, Proc. of ISBI 2017 - IEEE International Symposium on Biomedical Imaging, Melbourne, Australia, 2017
- [96] J. Leote, Rita Gouveia Nunes, R. Loução, L. Cerqueira, H. A. Ferreira, MRI tractography of corticospinal tract in patients with primary brain tumors: an exploratory study comparing deterministic tractography methods using diffusion tensor and kurtosis tensor imaging, Proc. of ECR 2017 - European Congress of Radiology, Vienna, Austria, 2017
- [97] Rui Figueiredo, João Avelino, Atabak Dehban, Alexandre Bernardino, Pedro Lima, H Araujo, Efficient Resource Allocation for Sparse Multiple Object Tracking, Proc. of VISAPP 2017 - 12th International Conference on Computer Vision Theory and Applications, Porto, Portugal, 2017
- [98] Rui Figueiredo, Plinio Moreno, Alexandre Bernardino, Automatic object shape completion from 3D point clouds for object manipulation, Proc. of VISAPP 2017 - 12th International Conference on Computer Vision Theory and Applications, Porto, Portugal, 2017
- [99] Athira Nambiar, Alexandre Bernardino, Jacinto Nascimento, A. Fred, Towards view-point invariant Person Re-identification via fusion of Anthropometric and Gait Features from Kinect measurements, Proc. of VISAPP 2017 - 12th International Conference on Computer Vision Theory and Applications, Porto, Portugal, 2017

C. Books,

- [1] M. J. Cardoso, T. Arbel, G. Carneiro, T. Syeda-Mahmood, J. M. R. Tavares, M. Moradi, A. P. Bradley, H. Greenspan, J. P. Papa, A. Madabhushi, Jacinto Nascimento, Deep Learning in Medical Image Analysis and Multimodal Learning for Clinical Decision Support, Third International Workshop, DLMIA 2017, and 7th International Workshop, ML-CDS, held in Conjunction with MICCAI, Springer, 2017
- [2] Pedro Lima, RoCKIn: Benchmarking Through Robot Competitions, (Editor), InTechOpen, 2017
- [3] I. Kaminer, António Pascoal, E. Xargay, N. Hovakimyan, V. Cichella, V. Dobrokhodov, Time-Critical Cooperative Control of Autonomous Air Vehicles, Elsevier-Butterworth-Heinemann, ISBN: 9780128099469., 2017
- [4] Isabel Aldinhas Ferreira, João Sequeira, M. O. Tokhi, E. Kadar, G. S. Virk, A World with Robots – Proceedings of the First International Conference on Robot Ethics: ICRE 2015, (Eds.), ISCA Series. Springer International Publishing AG, 2017

D. Book Chapters,

- [1] N. David, Nuno Fachada, Agostinho Rosa, Verifying and Validating Simulations, *Simulating Social Complexity: A Handbook* (2nd edition), Bruce Edmonds, Ruth Meyer (Eds.), Chap. 9, pp. 173-204, Springer International Publishing, 2017
- [2] Pedro Lourenço, Bruno Guerreiro, Pedro Batista, Paulo Oliveira, Carlos Silvestre, New Design Techniques for Globally Convergent Simultaneous Localization and Mapping: Analysis and Implementation, In *Sensing and Control for Autonomous Vehicles: Applications to Land, Water and Air Vehicles*, T. I. Fossen, K. Y. Pettersen, H. Nijmeijer (Eds.), Springer, pp. 121-141, 2017
- [3] J. Figueiredo, A. S. Ribeiro, J. Paredes, R. Seruca, João Sanches, Capturing quantitative features of protein expression from in situ fluorescence microscopic images of cancer cell populations, *Fluorescence Imaging and Biological Quantification*, in *Fluorescence Imaging and Biological Quantification*, R. Seruca, J. S. Suri, J. Sanches (Eds), by CRC Press, Taylor & Francis Group, 2017
- [4] A. Ferro, P. Carneiro, M. Fernandes, João Sanches, R. Seruca, Illuminating the cycle of life, in *Fluorescence Imaging and Biological Quantification*, R. Seruca, J. S. Suri, J. Sanches (Eds), by CRC Press, Taylor & Francis Group, 2017
- [5] M. Fernandes, A. Ferro, P. Carneiro, R. Seruca, João Sanches, Quantum Dots: Concepts, Imaging and Therapeutic Applications in Cancer, *Fluorescence Imaging and Biological Quantification*, in *Fluorescence Imaging and Biological Quantification*, R. Seruca, J. S. Suri, J. Sanches (Eds), by CRC Press, Taylor & Francis Group, 2017
- [6] M. Matteucci, F. Amigoni, V. Schiaffonati, A. Bonarini, Pedro Lima, RoCKIn Benchmarking and Scoring System, in *RoCKIn: Benchmarking Through Robot Competitions*, InTechOpen, 2017
- [7] L. Iocchi, G. Kraetzschmar, D. Nardi, Pedro Lima, RoCKIn@Home: Domestic Robots Challenge, in *RoCKIn: Benchmarking Through Robot Competitions*, InTechOpen, 2017
- [8] Pedro Lima, The RoCKIn Project, in *RoCKIn: Benchmarking Through Robot Competitions*, InTechOpen, 2017
- [9] António Pedro Aguiar, F. Bayer, J. Hauser, Andreas Häusler, G. Notarstefano, António Pascoal, A. Rucco, Alessandro Saccon, Constrained Optimal Motion Planning for Autonomous Vehicles Using PRONTO, in *Sensing and Control for Autonomous Vehicles*, Lecture Notes in Control and Information Sciences Book Series, Springer-Cham, Vol. 474, Thor Fossen, K. Pettersen, and H. Nijmeijer (Eds.), pp. 207-226, 2017. ISBN:978-3-319-55371-9, 2017
- [10] Rodrigo Ventura, Isabel Aldinhas Ferreira, Nós e Os Robots/Os Robots e Nós: Insights from an Exhibition, *A World with Robots*, Volume 84 of the series *Intelligent Systems, Control and Automation: Science and Engineering*, pp. 227-232, 2017 - **PDF**
- [11] Pedro Lima, D. Nardi, G. Kraetzschmar, R. Bischoff, M. Matteucci, RoCKIn and the European Robotics League: Building on RoboCup Best Practices to Promote Robot Competitions in Europe, *RoboCup 2016: Robot Soccer World Cup XX*, Springer Verlag Lecture Notes in Computer Science, Vol. 9776, Berlin, 2017
- [12] Isabel Aldinhas Ferreira, João Sequeira, Robots in Ageing Societies, in *A World with Robots*, Volume 84 of the series *Intelligent Systems, Control and Automation: Science and Engineering*, pp 217-223, Springer International Publishing AG, 2017
- [13] Gustavo Carneiro, Jacinto Nascimento, A. P. Bradley, Deep Learning Models for Classifying Mammogram Exams Containing Unregistered Multi-view Images and Segmentation Maps of Lesions, in *Deep Learning for Medical Image Analysis*, S. K. Zhou, H. Greenspan and D. Shen (Eds.), pp. 321-339, Elsevier, 2017

E. PhD Theses

- [1] Daniel Silvestre, Fault-tolerant Stochastic Distributed Systems, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, December, 2017
- [2] Athira Nambiar, Towards automatic long term Person Re-identification System in video surveillance, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, September, 2017
- [3] Nuno Moutinho, Humanoid Robot Head Continuous Calibration for Active Stereo Vision, using Non-Linear Filtering Techniques, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, July, 2017
- [4] Carlos Santiago, Segmentation of the Left Ventricle in Cardiac Magnetic Resonance, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, July, 2017
- [5] Daniel Viegas, Distributed state estimation for multiple autonomous vehicles, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, June, 2017
- [6] Alexandre Tuleu, Hardware, software and control design considerations towards low-cost compliant quadruped robots, Ph.D. Thesis, within the IST-EPFL Joint Doctoral Initiative, June, 2017
- [7] Rodolfo Abreu, Study of the spatiotemporal dynamics of epileptic activity using simultaneous EEG-fMRI, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, May, 2017
- [8] Qiwei Han, Essays on Consumer Switching and Search Behavior, Ph.D. Thesis, within the IST-CMU Joint Doctoral Initiative, May, 2017
- [9] Brian Swenson, Myopic Best-Response Learning in Large-Scale Games, Ph.D. Thesis, within the IST-CMU Joint Doctoral Initiative, April, 2017
- [10] Catarina Barata, Automatic Detection of Melanomas Using Dermoscopy Images, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, April, 2017
- [11] Martim Brandão, Visual planning of humanoid robot locomotion considering world geometry and friction, Ph.D. Thesis, Waseda University, Tokyo, Japan, co-supervised at IST/ISR, February, 2017
- [12] Nelson Perdigão, Illuminating the Dark Proteome, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, January, 2017