INSTITUTE FOR SYSTEMS AND ROBOTICS

Annual Report – 2015

Lisbon Pole

Torre Norte,
Piso 7 IST,
Av. Rovisco Pais
1049 – 001 Lisboa
Portugal

1. EXECUTIVE SUMMARY

During the year of 2015 there <u>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)</u>. 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.

Contents

2. PUBLICATIONS

A. International Journals,

[1] Pedro Casau, R. G. Sanfelice, Rita Cunha, Carlos Silvestre, A Globally Asymptotically Stabilizing Trajectory Tracking Controller for Fully Actuated Rigid Bodies using Landmark-based Information, International Journal of Robust and Nonlinear Control, Vol. 25, Issue 18, pp. 3617–3640, December, 2015

[2] Athira Nambiar, Alexandre Bernardino, Jacinto Nascimento, Shape Context for soft biometrics in person re-identification and database retrieval, Pattern Recognition Letters, Vol. 68, Part 2, pp. 297–305, December, 2015

[3] Ravin Souza, S. El-Khoury, José Santos-Victor, A. Billard, Recognizing the grasp intention from human demonstration, Robotics and Autonomous Systems, Vol. 74, Part A, pp. 108–121, December, 2015

[4] Porfírio Silva, Human, machines, and the interpretation of formal systems, AI & Society, October (Online), 2015

[5] João Messias, João Sequeira, Rodrigo Ventura, Pedro Lima, Paulo Alvito, Carlos Marques, P. Carrico, A robotic platform for edutainment activities in a pediatric hospital, Robótica, 100:10–15, 2015

[6] Miguel Vaz, Rodrigo Ventura, Real-Time Ground-Plane Based Mobile Localization Using Depth Camera in Real Scenarios, Journal of Intelligent & Robotic Systems, Vol. 80, Issue 3, pp. 525-536, December 2015. doi: 10.1007/s10846-015-0188-0, 2015

[7] Pedro Miraldo, H Araujo, Pose Estimation for Non-Central Cameras Using Planes, Journal of Intelligent & Robotic Systems, Springer, Vol. 80, Issue 3, pp. 595-608, December. DOI 10.1007/s10846-015-0193-3;, 2015

[8] Nuno Fachada, Vitor Lopes, R. C. Martins, Agostinho Rosa, Towards a standard model for research in agent-based modeling and simulation, PeerJ Computer Science, 1:e36, November. DOI: 10.7717/peerj-cs.36, 2015

[9] Sérgio Jesus, S. I. Siddiqui, António Silva,Path specific Doppler compensation in time-reversal communications, The Journal of the Acoustical Society of America, 137(4), pp. EL300-EL306, April, 2015

[10] Jaime Martins, João Rodrigues, Article Luminance, Colour, Viewpoint and Border Enhanced Disparity Energy Model, PLoS One, 10(6):e0129908, June. doi: 10.1371/journal.pone.0129908., 2015

[11] A. Vieira, Susana Brandão, A. Monteiro, I. Ajuda, G. Stilwell, Development and validation of a visual body condition scoring system for dairy goats with picture-based training, Elsevier - Journal of Dairy Science, Vol. 98, Issue 9, pp. 6597–6608, September, 2015

[12] Nelson Perdigão, J. Heinrich, C. Stolte, K. Sabir, M. Buckley, B. Tabor, B. Signal, B. S. Gloss, C. J. Hammang, B. Rost, A. Schafferhans, S. O Donoghue, Unexpected features of the dark proteome, PNAS - Proceedings of the National Academy of Sciences of the United States of America [EPub ahead of print]. doi: 10.1073/pnas.1508380112, 2015

[13] Ricardo Galego, A. Ortega, Ricardo Ferreira, Alexandre Bernardino, J. Andrade-Cetto, José Gaspar, Uncertainty analysis of the DLT-Lines calibration algorithm for cameras with radial distortion, Computer Vision and Image Understanding, Vol. 140, pp. 115–126, November, 2015

[14] Naveena Crasta, Mohammadreza Bayat, António Pedro Aguiar, António Pascoal, Observability analysis of 3D AUV trimming trajectories in the presence of ocean currents using range and depth measurements, Elsevier, Annual Reviews in Control, Vol. 40, pp. 142–156, 2015

[15] Tiago Gaspar, Paulo Oliveira, Carlos Silvestre, Model-based filters for 3D positioning of marine mammals using AHRS- and GPS-equipped UAVs, IEEE Transactions on Aerospace and Electronic Systems, Vol. 51, Issue 4, pp. 3307 - 3320, 2015

[16] José Acevedo, Begoña C Arrue, Iván Maza, Anibal Ollero, A Distributed Algorithm for Area Partitioning in Grid-Shape and Vector-Shape Configurations with Multiple Aerial Robots, Journal of Intelligent & Robotic Systems, pp. 1-15, October. DOI 10.1007/s10846-015-0272-5, 2015

[17] Joao Jorge, Frederic Grouiller, Rolf Gruetter, W. van der Zwaag, Patrícia Figueiredo, Towards high-quality simultaneous EEG-fMRI at 7 Tesla: detection and reduction of EEG artifacts due to head motion, Neuroimage, 120:143-53. October. doi: 10.1016/j.neuroimage.2015.07.020., 2015

[18] João Soares, Alberto Vale, Rodrigo Ventura, A multi-purpose rescue vehicle and a human-robot interface architecture for remote assistance in ITER, Fusion Engineering and Design, vol. 98–99:1656–1659, October - Proc. of the 28th Symposium On Fusion Technology (SOFT-28), 2015

[19] Wenya Nan, Feng Wan, Mang I Vai, Agostinho Rosa, Nami Jishu yu Jingmi Gongcheng, A Pilot Study on Neurofeedback Training for Enhancement of Balance Ability Measured by Nintendo Wii Balance Board, Nanotechnology and Precision Engineering, 13(5):391-395, 2015

[20] Plinio Moreno, Dario Figueira, Alexandre Bernardino, José Santos-Victor, People and mobile robot classification through spatio-temporal analysis of optical flow, International Journal of Pattern Recognition and Artificial Intelligence, Vol. 29, No. 6, September, 2015

[21] F. Amigoni, E. Bastianelli, J. Berghofer, A. Bonarini, G. Fontana, N. Hochgeschwender, L. Iocchi, G. Kraetzschmar, Pedro Lima, M. Matteucci, Pedro Miraldo, D. Nardi, V. Schiaffonati,Enabling Replicable Experiments and Benchmarking with RoCKIn Competitions, IEEE Robotics and Automation Magazine, 22(3), pp. 53-61. ISSN : 1070-9932, DOI: 10.1109/MRA.2015.2448871, 2015

[22] Jorge Silva, João Sequeira, Cristina Santos, Field Results of a Navigation Architecture withTiming Constraints, Journal of Robotics, Vol. 2015, Article ID 318695. DOI: http://dx.doi.org/10.1155/2015/318695, 2015

[23] Jaime Martins, João Rodrigues, Hans Du Buf, Proto-object categorisation and local gist vision using low-level spatial features, Biosystems, Vol. 135, pp. 35–49, September, 2015

[24] Carlos Santiago, Jacinto Nascimento, Jorge S. Marques, 2D Segmentation Using a Robust Active Shape Model with the EM Algorithm, IEEE Transactions on Image Processing, Vol. 24, No. 8, pp. 2592-2601, August, 2015

[25] Pedro Casau, R. G. Sanfelice, Rita Cunha, David Cabecinhas, Carlos Silvestre, Robust Global Trajectory Tracking for a Class of Underactuated Vehicles, Automatica, Elsevier, Vol. 58, Issue 8, pp. 90-98, August, 2015

[26] Lorenzo Jamone, L. Natale, G. Metta, G. Sandini, Highly sensitive soft tactile sensors for an anthropomorphic robotic hand, IEEE Sensors Journal, Vol. 15, No. 8, pp. 4226 - 4233, August, 2015

[27] Sabina Zejnilović, João Pedro Gomes, On a Generalized Metric Dimension with partially known graph topology, HAL archives ouvertes, April, 2015

[28] Brian Swenson, S. Kar, João Xavier, Empirical Centroid Fictitious Play: An Approach for Distributed Learning in Multi-Agent Games, IEEE Transactions on Signal Processing, Vol. 63, No. 15, August, 2015

[29] Daniel Viegas, Pedro Batista, Paulo Oliveira, Carlos Silvestre, P. Chen, Distributed state estimation for linear multi-agent systems with time-varying measurement topology, Automatica, vol. 54, pp. 72-79, April, 2015

[30] Pedro Lourenço, Pedro Batista, Paulo Oliveira, Carlos Silvestre, P. Chen, Sensor-based globally exponentially stable range-only simultaneous localization and mapping, Robotics and Autonomous Systems, vol. 68, pp. 72-85, June, 2015

[31] Pedro Batista, Docking of Autonomous Underwater Vehicles, International Journal of Robust and Nonlinear Control, vol. 25, no. 10, pp. 1528-1547, Jul. 2015, 2015

[32] J. Barbosa, C. Cardeira, Paulo Oliveira, Pedro Batista, Carlos Silvestre, Design and Validation of an RGB-D Based Localization System – Integration in a Docking System, Journal of Intelligent & Robotic Systems, Volume 80, Issue 3, pp. 423-440, December, 2015

[33] Pedro Batista, Carlos Silvestre, Paulo Oliveira, Navigation Systems based on Multiple Bearing Measurements, IEEE Transactions on Aerospace and Electronic Systems, vol. 51, no.4, pp. 2887-2899, October 2015

[34] João Xavier, Identification of switched ARX models via convex optimization and expectation maximization,Elsevier, Journal of Process Control, vol. 28, pp. 9-16, 2015

[35] João Xavier, Marco Stošić, On minimizing a quadratic function on Stiefel manifold, Elsevier, Linear Algebra and its Applications, Volume 475, 15 June 2015, Pages 251–264, 2015

[36] João Mota, João Xavier, Pedro Aguiar, Distributed Optimization With Local Domains: Applications in MPC and Network Flows, IEEE Transactions on Automatic Control, 2015

[37] Augusto Santos, João Xavier, Bi-Virus SIS Epidemics over Networks: Qualitative Analysis, IEEE Transactions on Network Science and Engineering, 2015

[38] João Xavier, Dusan Jakovetic, Linear Convergence Rate of Class of Distributed Augmented Lagrangian Algorithms, IEEE Transactions on Automatic Control, vol. 60, no. 4, pp. 922-936, 2015 -

[39] Cláudia Soares, João Xavier, João Pedro Gomes, Simple and Fast Convex Relaxation Method for Cooperative Localization in Sensor Networks Using Range Measurements, IEEE Transactions on Signal Processing, Vol. 63, No. 17, pp. 4532 - 4543, September, 2015

[40] S. Carvalho, João Sanches, Preventing E-cadherin aberrant N-glycosylation at Asn-554 improves its critical function in gastric cancer, Oncogene (2015), July, P.1–13. doi: 10.1038/onc.2015.225. [Epub ahead of print], 2015

[41] João Almeida, Carlos Silvestre, António Pascoal, Self-triggered state-feedback control of linear plants under bounded disturbances, J International Journal of Robust and Nonlinear Control, vol. 25, No. 8, pp. 1230-1246, May, 2015

[42] Pedro Batista, Carlos Silvestre, Paulo Oliveira, A Two-step Control Approach for Docking of Autonomous Underwater Vehicles, International Journal of Robust and Nonlinear Control, vol. 25, no. 10, pp. 1528-1547, July, 2015

[43] Pedro Casau, Paulo Rosa, S. Tabatabaeipour, Carlos Silvestre, J. Stoustrup, A Set-Valued Approach to FDI and FTC of Wind Turbines, IEEE Transactions on Control Systems Technology, Vol. 23, N0. 1, pp. 245-263, 2015

[44] David Cabecinhas, Rita Cunha, Carlos Silvestre, A Globally Stabilizing Path Following Controller for Rotorcraft With Wind Disturbance Rejection, IEEE Transactions on Control Systems Technology, Vol. 23, N0. 2, pp. 708-714, 2015

[45] Pedro Serra, Rita Cunha, T. Hamel, Carlos Silvestre, F. Le Bras, Nonlinear Image-Based Visual Servo Controller for the Flare Manoeuvre of Fixed-Wing Aircraft using Optical Flow, IEEE Transactions on Control Systems Technology, Vol. 23, N0. 2, pp. 570-583, 2015

[46] Sérgio Brás, Paulo Rosa, Carlos Silvestre, Paulo Oliveira, Fault Detection and Isolation in Inertial Measurement Units Based on Bounding Sets, IEEE Transactions on Automatic Control, 60, No. 7, pp. 1933-1938, 2015

[47] Pedro Batista, Long Baseline Navigation with Clock Offset Estimation and Discrete-Time Measurements, Control Engineering Practice, Vol. 35, February, pp. 43–53, 2015

[48] Pedro Batista, ES Long Baseline Navigation with Unknown Sound Velocity and Discrete-time Range Measurements, IEEE Transactions on Control Systems Technology, Vol. 23, Issue 1, pp. 219-230, 2015

[49] Jorge S. Marques, P. Pina, Crater Delineation by Dynamic Programming, IEEE Geoscience and Remote Sensing Letters, Vol. 12, No. 7, pp. 1581-1585, July, 2015

[50] David Afonso, José Seabra, L. M. Pedro, João Sanches, An Ultrasonographic Risk Score For Detecting Symptomatic Carotid Atherosclerotic Plaques, IEEE Journal of Biomedical and Health Informatics, Vol.19, No.4, pp. 1505 - 1513, July, 2015

[51] Manya Afonso, João Sanches, Blind Inpainting using L0 and Total Variation Regularization, IEEE Transactions on Image Processing, Vol. 24, No. 7, July 2015, doi: 10.1109/TIP.2015.2417505, 2015

[52] Jaime Martins, João Rodrigues, Hans Du Buf, Luminance, Colour, Viewpoint and Border Enhanced Disparity Energy Model, PLoS ONE 10(6): e0129908, 2015

[53] Luka Lukić, A. Billard, José Santos-Victor, Motor-primed Visual Attention for Humanoid Robots, IEEE Transactions on Autonomous Mental Development, Vol. 7, Issue 2, pp. 76-91, June, 2015

[54] Paulo Rosa, Patrícia Figueiredo, Carlos Silvestre, On the Distinguishability of HRF Models in fMRI, Frontiers in Computational Neuroscience, Vol. 9, Issue 54, pp. 1-13, May, 2015

[55] P. Osorio, Paulo Rosa, Carlos Silvestre, Patrícia Figueiredo, Stochastic Dynamic Causal Modelling of fMRI Data with Multiple-Model Kalman Filters, Methods of Information in Medicine, Vol. 54, Issue 3, pp. 232-239, May, 2015

[56] Catarina Barata, M. Celebi, Jorge S. Marques, Improving Dermoscopy Image Classification Using Color Constancy, IEEE Journal of Biomedical and Health Informatics, Vol. 19, Issue 3, pp. 1146 - 1152, May, 2015

[57] Porfírio Silva, José N. Pereira, Pedro Lima, Institutional Robotics – Institutions for Social Robots, International Journal of Social Robotics, Vol. 7, Issue 5, pp. 825-840, November, doi: 10.1007/s12369-015-0300-4, 2015

[58] Manya Afonso, João Sanches, A total variation recursive space-variant filter for image denoising, Digital Signal Processing, Volume 40, May 2015, Pages 101-116, ISSN 1051-2004, ELSEVIER, doi:10.1016/j.dsp.2015.02.002, 2015

[59] Pedro Osorio, Paulo Rosa, Carlos Silvestre, Patrícia Figueiredo, Stochastic Dynamic Causal Modelling of fMRI data with Multiple-Model Kalman Filters, Methods of Information in Medicine, 54: 232 - 239, April; DOI: 10.3414/ME13-02-0052, 2015

[60] Paulo Felisberto, Sérgio Jesus, Friedrich Zabel, R. Santos, J. Silva, S. Gobert, S. Beer, M. Bjork, S. Mazzuca, G. Procaccini, A. V. Borges, J. W. Runcie, W. Champenois, Acoustic monitoring of O2 production of a seagrass meadow, Journal of Experimental Marine Biology and Ecology, Vol. 464, pp. 75–87, March, 2015

[61] Rothlübbers S, Vânia Relvas, Leal A, Teresa Murta, L. Lemieux, Patrícia Figueiredo, Characterization and reduction of the EEG artefact caused by the Helium cooling pump in the MR environment, Brain Topography, Springer, March 2015, Volume 28, Issue 2, pp 208-220, (published online 26 oct 2014), 2015

[62] M. Serrao, S. Shahrabadi, M. Moreno, J. Jose, J. Rodrigues, João Rodrigues, Hans Du Buf, Computer vision and GIS for the navigation of blind persons in buildings, International Journal on Universal Access in the Information Society, Vol. 14, Issue 1, pp. 67-80, March, 2015

[63] T. Soldatos, Nelson Perdigão, N. Brown, K. Sabir, S. ODonoghue, How to learn about gene function: text-mining or ontologies?, Methods, Elsevier, Vol. 74, March 2015, pp. 315, doi:10.1016/j.ymeth.2014.07.004, Epub 2014 Aug 1, 2015

[64] Cabral, P. Morgado, D. C. Costa, Margarida Silveira, Computers in Biology and Medicine, Predicting conversion from MCI to AD with FDG-PET brain images at different prodromal stages, Vol. 58, March, pp. 101109, 2015

[65] M. da Graca Almeida, Fernando Melicio, In-Plane Displacement and Strain Image Analysis, Computer-Aided Civil and Infrastructure Engineering, 00 (2015) 1–13. Publisher Blackwell Publishing, ISSN 1093-9687; DOI: 10.1111/mice.12127, 2015

[66] Manya Afonso, João Sanches, Image reconstruction under multiplicative speckle noise using total variation, Neurocomputing, Volume 150, Part A, 20 February 2015, Pages 200-213, ISSN 0925-2312, ELSEVIER, doi:10.1016/j.neucom.2014.08.073, 2015

[67] Matteo Taiana, Jacinto Nascimento, Alexandre Bernardino, On the purity of training and testing data for learning: The case of pedestrian detection, Neurocomputing, Vol. 150, Part A, pp. 214–226, 2015

[68] Rui Figueiredo, Plinio Moreno, Alexandre Bernardino, Efficient pose estimation of rotationally symmetric objects, Neurocomputing, Vol. 150, Part A, pp. 126 - 135, February, 2015

[69] Hugo Silva, Alexandre Bernardino, E. Silva, Probabilistic Egomotion for Stereo Visual Odometry, Journal of Intelligent & Robotic Systems, Vol. 77, Issue 2, pp. 265-280, February, 2015

[70] Jacinto Nascimento, M. Barao, Jorge S. Marques, J. M. Lemos, An information geometric framework for the optimization on a discrete probability spaces: Application to human trajectory classification, J Neurocomputing, Vol. 150, Part A, pp. 155–162, February, 2015

[71] Danesh Tarapore, Pedro Lima, J. Carneiro, A. Christensen, To err is robotic, to tolerate immunological: fault detection in multirobot systems, Bioinspiration & Biomimetics, Vol. 10, No. 1, February, DOI: 10.1088/1748-3190/10/1/016014, 2015

[72] Sean O Donoghue, K. Sabir, M. Kalemanov, C. Stolte, B. Wellmann, V. Ho, M. Roos, Nelson Perdigão, F. Buske, J. Heinrich, B. Rost, A. Schafferhans,Aquaria: simplifying discovery and insight from protein structures, Nature Methods, Vol. 12, pp. 98-99, Nature, doi:10.1038/nmeth.3258, 2015

[73] Ricardo Cabral, F. De la Torre, João Paulo Costeira, Alexandre Bernardino, Completion for Weakly-supervised Multi-label Image Classification, IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 37, Issue 1, pp. 121-135, January, 2015

[74] Carlos Santiago, Jacinto Nascimento, Jorge S. Marques, Automatic 3-D Segmentation of Endocardial Border of the Left Ventricle From Ultrasound Images, IEEE Journal of Biomedical and Health Informatics, Vol. 19, No. 1, pp. 339 - 348, January, 2015

[75] Joao Jorge, Frederic Grouiller, Özlem Ipek, Robert Stoermer, Christoph M. Michel, Patrícia Figueiredo, W. van der Zwaag, Rolf Gruetter, Simultaneous EEG-fMRI at ultra-high field: artifact prevention and safety assessment, Neuroimage, 105:132-44. January. doi: 10.1016/j.neuroimage.2014.10.055., 2015

[76] Carlos Fernandes, Pherographs and Other Hidden Landscapes, International Journal of Arts and Technology, vol.8, n.2, pp. 132-166, 2015, Print ISSN: 1754-8853 Online ISSN: 1754-8861, DOI: 10.1504/IJART.2015.069553, 2015

[77] Teresa Murta, Marco Leite, D. Carmichael, Patrícia Figueiredo, L. Lemieux, Electrophysiological correlates of the BOLD signal for EEG- informed fMRI, Human Brain Mapping, vol 36, Issue 1, pp. 391-414, January 2015; published online (3 oct 2014) ; doi:10.1002/hbm.22623, 2015

[78] Pedro Lima, Aamir Ahmad, A. Dias, A. Conceicao, A. Moreira, E. Silva, L. Almeida, L. Oliveira, T. Nascimento, Formation Control Driven by Cooperative Object Tracking, Elsevier Journal of Robotics and Autonomous Systems, Vol. 63, Part 1, pp. 68–79, January, 2015

[79] P. Morgado, Margarida Silveira, Minimal Neighborhood Redundancy Maximal Relevance: Application to the diagnosis of Alzheimers disease, Neurocomputing, January, 2015

[80] V. Cichella, I. Kaminer, V. Dobrokhodov, E. Xargay, R. Choe N. Hovakimyan, A. Aguiar, A. Pascoal, "Cooperative Path-Following of Multiple Multirotors over Time-Varying Networks," IEEE Transactions on Automation Science and Engineering, Vol. 12, Issue 13, pp. 945-957, July 2015

[81] M. Bayat, N. Crasta, A. Pedro Aguiar, A. Pascoal, "Range-Based Underwater Vehicle Localization in the Presence of Unknown Ocean Currents: Theory and Experiments," in IEEE Transactions on Control Systems Technology, Vol. 24, No.1, pp. 122-139, Date of publication: 28 April 2015

[82] J. Häusler, Alessandro Saccon, A. Pedro Aguiar, John Hauser, António M. Pascoal, "Energy-Optimal Motion Planning for Multiple Robotic Vehicles with Collision Avoidance," IEEE Transactions on Control Systems Technology, Vol. 24, Issue 3, pp. 1-17, Date of publication: 27 October 2015.

[83] N.Crasta, Romeo Ortega, and Harish K. Pillai, On the matching equations of energy shaping controllers for mechanical systems," International Journal of Control, Vol. 88, Issue 8, pp. 1757-1765, February 2015.

B. International Conferences,

[1] José Acevedo, Begoña C Arrue, Iván Maza, A. Ollero, Dynamic zone assignment under priorities for perimeter surveillance missions with aerial robots, Proc. of ICUAS 2015 - International Conference on Unmanned Aircraft Systems, Denver, Colorado, USA, 2015

[2] A. Wasik, Rodrigo Ventura, José N. Pereira, Pedro Lima, A. Martinoli, Lidar-Based Relative Position Estimation and Tracking for Multi-robot Systems, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbo, Portugal. Springer Advances in Intelligent Systems and Computing, Vol. 417, pp. 3-16, 2015

[3] André Mateus, Pedro Miraldo, Pedro Lima, João Sequeira, -Aware Navigation using External Omnidirectional Cameras, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal. Springer Advances in Intelligent Systems and Computing Vol. 417, pp. 283-295, 2015

[4] Duarte Gameiro, João Sequeira, RFID-Based People Detection for Human-Robot Interaction, Proc. of Robot 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal. Advances in Intelligent Systems and Computing, Vol. 418, pp. 395-406. DOI 10.1007/978-3-319-27149-1_31, 2015

[5] Carlos Neves, Rodrigo Ventura, Energy efficient MPC for biped semi-passive locomotion, Proc. of Robot 2015 - 2nd Iberian Robotics Conference, Vol. 418 of the series Advances in Intelligent Systems and Computing, pp. 145-156, November. DOI 10.1007/978-3-319-27149-1_12, 2015

[6] Qiwei Han, P. Ferreira, João Paulo Costeira, Asymmetric Peer Influence in Smartphone Adoption in A Large Mobile Network, Proc. of ICMB 2015 - 14th International Conference on Mobile Business (co-located with ICIS), Fort Worth, USA, 2015

[7] Beatriz Ferreira, João Pedro Gomes, João Paulo Costeira, A Unified Approach for Hybrid Source Localization Based on Ranges and Video, Proc. of ICASSP 2015 - IEEE International Conference of Acoustics, Speech and Signal Processing, Brisbane, Australia; doi: 10.1109/ICASSP.2015.7178497, 2015

[8] P. Dias, J. Parracho, J. Cardoso, Beatriz Ferreira, C. Ferreira, B. Santos, Developing and evaluating two gestural-based virtual environment navigation methods for large displays, Proc. of HCI International 2015 - 17th International Conference on Human-Computer Interaction, Los Angeles, CA, USA. LNCS, Vol. 9189, pp 141-151; doi: 10.1007/978-3-319-20804-6_13, 2015

[9] A. Santos, Beatriz Ferreira, P. Dias, Heuristic evaluation in Information Visualization using three sets of heuristics: an exploratory study, Proc. of HCI International 2015 - 17th International Conference on Human-Computer Interaction, Los Angeles, CA, USA. LNCS, Vol 9169, pp. 259-270, 2015

[10] Beatriz Ferreira, R. siSva, João Paulo Costeira, Francisco Melo, M. Veloso, Personalized Assistance for Dressing Users, S. D. Klee, Proc. of ICSR 2015 - International Conference on Social Robotics, Paris, France. LNCS, Vol. 9388, pp. 359-369; doi: 10.1007/978-3-319-25554-5_36, 2015

[11] Susana Brandão, A. Vieira, João Paulo Costeira, M. Veloso, The Heat Based Rump Descriptor for Identification of Very Thin Goats in Dairy Farms, Proc. of IROS 2015, Workshop on Agri-Food Robotics, Hamburg, Germany, 2015

[12] Fernando Ribeiro, Susana Brandão, João Paulo Costeira, M. Veloso, Global Localization by Soft Object Recognition from 3D Partial Views, Proc. of IROS 2015 - IEEE/RSJ International Conference on Intelligent Robots and Systems, Hamburg, Germany, 2015

[13] Francisco Curado, Joao Quintas, António Pascoal, AUV Terrain-Aided Navigation using a Doppler Velocity Logger, Proc. of NGCUV 2015 - IFAC Workshop on Navigation Guidance and Control of Underwater Vehicles, Girona, Spain, 2015

[14] Bruno J. N. Guerreiro, Carlos Silvestre, Rita Cunha, LiDAR-based Control of Autonomous Rotorcraft for Inspection of Pole-Shaped Structures, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal, 2015

[15] Tiago Marques, Luka Lukić, José Gaspar, Observation Functions in an Information Theoretic Approach for Scheduling Pan-Tilt-Zoom Cameras in Multi-target Tracking Applications, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal, 2015

[16] N. Monteiro, J. P. Barreto, José Gaspar, Influence of Positive Instances on Multiple Instance Support Vector Machines, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal, 2015

[17] Ricardo Nunes, Ricardo Beira, Plinio Moreno, Luis Vargas, José Santos-Victor, Alexandre Bernardino, Miguel Aragão, Duarte Aragão, Rui Figueiredo, Vizzy: A humanoid on wheels for assistive robotics, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal, 2015

[18] P. Ramon, Begoña C Arrue, José Acevedo, A. Ollero, Visual surveillance system with multi-UAVs under communication constrains, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal. Springer Advances in Intelligent Systems and Computing Vol. 417, pp. 705-713, 2015

[19] A. Sanz, Aamir Ahmad, Pedro Lima, Onboard robust person detection and tracking for domestic service robots, Proc. of ROBOT 2015 - 2nd Iberian Robotics Conference, Lisbon, Portugal. Springer Advances in Intelligent Systems and Computing Vol. 417, pp. 547-559, 2015

[20] Nelson Perdigão, T. Soldatos, K. Sabir, S. O Donoghue, Visual Analytics of Gene Sets Comparison, Proc. of BDVA 2015 - IEEE International Symposium on Big Data Visual Analytics, Hobart, Tasmania, Australia, 2015

[21] T. P. Tomo, S. Somlor, A. Schmitz, S. Hashimoto, S. Sugano, Lorenzo Jamone, Development of a Hall-Effect Based Skin Sensor, Proc. of IEEE SENSORS 2015, Busan, South Korea, 2015

[22] João Sequeira, Isabel Aldinhas Ferreira, Assessing Children-Robot Interaction in a Pediatrics Hospital Ward: The MonarCH Case, Proc. of ICSR 2015 - 7th International Conference on Social Robotics, Workshop on Evaluating Child Robot Interaction, Paris, France, 2015

[23] M. Mutlu, K. Melo, M. Vespignani, Alexandre Bernardino, A. J. Ijspeert, Where to Place Cameras on a Snake Robot: Focus on Camera Trajectory and Motion Blur, Proc. of SSRR 2015 - IEEE International Symposium on Safety, Security, and Rescue Robotics, West Lafayette, Indiana, USA, 2015

[24] João Sequeira, Isabel Aldinhas Ferreira, The role of Assistive Robots in Active Ageing, IROS 2015 Workshop on Bridging the User Needs to Deployed Applications of Service Robots, Hamburg, Germany, 2015

[25] Tiago Dias, Pedro Miraldo, Nuno Goncalves, Pedro Lima, Augmented Reality on Robot Navigation using Non-Central Catadioptric Cameras, Proc. of IROS 2015 - IEEE/RSJ International Conference on Intelligent Robots and Systems, Hamburg, Germany, 2015

[26] Angelo Cardoso, Ricardo Ferreira, Ricardo Santos, Alexandre Bernardino, Low-rank forward models: a path to the self-organization of visuo-motor systems, Proc. of IROS 2015 - IEEE/RSJ International Conference on Intelligent Robots and Systems, Hamburg, Germany, 2015

[27] Lorenzo Jamone, Giovanni Saponaro, Alexandre Antunes, Rodrigo Ventura, Alexandre Bernardino, José Santos-Victor, Learning object affordances for tool use and problem solving in cognitive robots, AIRO 2015 - 2nd Italian Workshop on Artificial Intelligence and Robotics, Ferrara, Italy, 2015

[28] João Sequeira, Isabel Aldinhas Ferreira, Assessing Human-Robot Interaction: The Role of Long-Run Experiments, Proc. of CLAWAR 2015 - 18th International Conference on Climbing and Walking Robots, Hangzhou, China (Best paper award), 2015

[29] João Messias, José Acevedo, Jesús Capitán, L. Merino, Rodrigo Ventura, Pedro Lima, A Particle-filter Approach for Active Perception in Networked Robot Systems, Proc. of ICRS 2015 - 7th International Conference on Social Robotics, Paris, France. LNCS, Vol. 9388, pp. 451–460, Springer. DOI: 10.1007/978-3-319-25554-5_45, 2015

[30] Catarina Barata, M. E. Celebi, Jorge S. Marques, A Clinically Oriented System for Melanoma Diagnosis Using a Color Representation, Proc. of EMBC 2015 - 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milano, Italy, 2015

[31] Catarina Barata, M. Celebi, Jorge S. Marques, Melanoma detection algorithm based on feature fusion, Proc. of EMBC 2015 - 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milano, Italy, 2015

[32] Carlos Santiago, Jacinto Nascimento, Jorge S. Marques, Segmentation of the left ventricle in cardiac MRI using a probabilistic data association active shape model, Proc. of EMBC 2015 - 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milano, Italy, 2015

[33] oao Jorge, Frederic Grouiller, Robert Stoermer, Christoph M. Michel, Patrícia Figueiredo, W. van der Zwaag, Rolf Gruetter, An optimized setup for simultaneous EEG-fMRI at ultra-high field in a head-only 7T scanner, J Proc. 22nd Annual Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM 2014), May 2014, Milan, Italy. [Poster presentation], 2015

[34] Rodolfo Abreu, Sandro Nunes, A. Leal, Patrícia Figueiredo, ECG-derived Respiratory signal estimation as a tool for physiological noise correction in fMRI, Proc. of OHBM 2015 Annual Meeting, Honolulu, Hawaii, 2015

[35] Diogo Amorim, Rodrigo Ventura, A physics-based optimization approach for path planning on rough terrains, Proc. of ICINCO 2015 - 12th International Conference on Informatics in Control, Automation and Robotics,Colmar, Alsace, France, p. 259-266. ISBN: 978-989-758-123-6, 2015

[36] L. Antanas, Plinio Moreno, L. De Raedt, Relational Kernel-based grasping with numerical features, Proc. of ILP 2015 - 25th International Conference on Inductive Logic Programming, Kyoto, Japan, 2015

[37] Sabina Zejnilović, João Xavier, João Pedro Gomes, B. Sinopoli, Selecting Observers for Source Localization via Error Exponents, Proc. of ISIT 2015 - IEEE International Symposium on Information Theory, Hong Kong, 2015

[38] M. Saleiro, Miguel Farrajota, Kasim Terzić, S. Krishna, João Rodrigues, Hans Du Buf, Biologically inspired vision for human-robot interaction, Proc. of HCI International 2015 - 17th International Conference on Human-Computer Interaction, Los Angeles, USA, August, 2015

[39] Pedro Cardoso, João Rodrigues, M. Saleiro, A Freehand System for the Management of Orders Picking and Loading of Vehicles, HCI International 2015 - 17th International Conference on Human-Computer Interaction, Los Angeles, USA, August, 2015

[40] Jacinto Nascimento, Gustavo Carneiro, Towards Reduction of the Training and Search Running Time Complexities for Non-Rigid Object Segmentation., ICIP 2015 - The International Conference on Image Processing, sponsored by the IEEE Signal Processing Society, Canadá, September, 2015

[41] Kasim Terzić, Hans Du Buf, Shape Detection with Nearest Neighbour Contour Fragments, BMVC 2015, AC, UK, September, 2015

[42] Paulo Oliveira, Pedro Batista, Carlos Silvestre, A Globally Exponentially Stable filter for Bearing-Only Simultaneous Localization and Mapping in 3-D, Pedro Lourenço, Proc. of ECC 2015 - 14th Annual European Control Conference, Linz, Austria, 2015

[43] Pedro Lourenço, Pedro Batista, Carlos Silvestre, Paulo Oliveira, Simultaneous Localization and Mapping in Sensor Networks: a GES sensor-based filter with moving object tracking, Proc. of ECC 2015 - 14th Annual European Control Conference, Linz, Austria, 2015

[44] Sofija Spasojevic, José Santos-Victor, T. Ilić, S. Milanović, V. Potkonjak, A. Rodić, A Vision-Based System for Movement Analysis in Medical Applications: The Example of Parkinson Disease, Proc. of ICVS 2015 - International Conference on Computer Vision Systems, Copenhagen, Denmark, 〈匤%諁

[45] G. Cruz, Alexandre Bernardino, Image Saliency Applied to Infrared Images for Unmanned Maritime Monitoring, Proc. of ICVS 2015 - 10th International Conference on Computer Vision Systems, Copenhagen, Denmark, 2015

[46] João Xavier, Massive MIMO Full-Duplex Relaying with Optimal Power Allocation for Independent Multipairs, Proc. of SPAWC 2015 - 16th IEEE International Workshop on Signal Processing Advances in Wireless Communications, Stockholm, Sweden, 2015

[47] Sérgio Jesus, Bottom inversion with an ensemble of moving receivers: a sensitivity study, Proc. of UACE 2015 - Underwater Acoustics Conference and Exhibit, Cania, Greece (invited), 2015

[48] Ricardo Alves, A. Negrier, L. Sousa, João Rodrigues, Paulo Felisberto, M. Gomes, P. Bica, Interactive 180◦ Rear Projection Public Relations, Proc. of ICCS 2015 - International Conference On Computational Science, Reykjavík, Iceland. Procedia Computer Science, Vol. 51, pp. 592–601, 2015

[49] Jorge S. Marques, Jacinto Nascimento, Carlos Santiago, Robust 3D Active Shape Model for the Segmentation of the Left Ventricle in MRI, (best paper award), Proc. of IbPRIA 2015 - 7th Iberian Conference on Pattern Recognition and Image Analysis, Santiago de Compostela, Spain, June, 2015

[50] Sandro Nunes, M. Biancardi, A. Dias, L. M. Silveira, L. L. Wald, Patrícia Figueiredo, Characterization of physiological noise across brain regions in restingstate fMRI at 7T, Proc. of OHBM 2015 - 21st Annual Meeting of the Organization for Human Brain Mapping, Honolulu, Hawaii [Poster presentation], 2015

[51] Joana Pinto, João Periquito, P. Vilela, Patrícia Figueiredo, Characterization of the BOLD response across the brain to different breath-holding tasks, Proc. of OHBM 2015 - 21st Annual Meeting of the Organization for Human Brain Mapping, Honolulu, Hawaii [Poster presentation], 2015

[52] João Periquito, Joana Pinto, P. Vilela, Patrícia Figueiredo, Comparing different models of the BOLD response to breath holding tasks, Proc. of OHBM 2015 - 21st Annual Meeting of the Organization for Human Brain Mapping, Honolulu, Hawaii [Poster presentation], 2015

[53] Juliana Rodrigues, Sandro Nunes, M. Biancardi, A. Dias, L. M. Silveira, L. L. Wald, Patrícia Figueiredo, Mapping the BOLD signal correlates of heart rate variability in resting-state fMRI, Proc. of OHBM 2015 - 21st Annual Meeting of the Organization for Human Brain Mapping, Honolulu, Hawaii [Poster presentation], 2015

[54] Wenya Nan, Feng Wan, P. I. Mak, P.U. Mak, M. I Vai, Agostinho Rosa, Beta/Theta Neurofeedback Training Effects in Physical Balance of Healthy People, World Congress on Medical Physics and Biomedical Engineering,

June 7-12, 2015, Toronto, Canada IFMBE Proceedings, Springer, Volume 51, 2015, pp 1213-1216; Print ISBN 978-3-319-19386-1; Online ISBN 978-3-319-19387-8; DOI: 10.1007/978-3-319-19387-8_294, 2015

[55] Alexandre Domingues, João Sanches, PPG Beat Reconstruction Based on Shape Models and Probabilistic Templates for Signals Acquired with Conventional Smartphones, 7th Iberian Conference on Pattern Recognition and Image Analysis (IbPRIA 2015), Santiago de Compostela, Spain, June 17-19; Pattern Recognition and Image Analysis Lecture Notes in Computer Science, SPRINGER, Volume 9117, 2015, pp 595-602, ISBN: 978-3-319-19389-2 (Print) 978-3-319-19390-8 (Online), 2015

[56] Manya Afonso, João Sanches, Noise Decomposition Using Polynomial Approximation, 7th Iberian Conference on Pattern Recognition and Image Analysis (IbPRIA 2015), Santiago de Compostela, Spain, June 17-19 ; Pattern Recognition and Image Analysis Lecture Notes in Computer Science Volume 9117, 2015, pp 157-164, SPRINGER; ISBN: 978-3-319-19389-2 (Print) 978-3-319-19390-8 (Online), 2015

[57] A. Barata, M. Celebi, Jorge S. Marques, Color Detection in Dermoscopy Images Based on Scarce Annotations, Proc. of IbPRIA 2015 - 7th Iberian Conference on Pattern Recognition and Image Analysis, Santiago de Compostela, Spain, June, 2015

[58] Anabela Serrao, Luís Custódio, Carlos Pinto-Ferreira, Equity in Mediterranean Countries Education Systems, Proc. of the International Conference The Future of Education - 5th Edition, Florence, Italy, 2015

[59] A. Dias, M. Biancardi, Sandro Nunes, Rodolfo Abreu, Juliana Rodrigues, L. M. Silveira, L. L. Wald, Patrícia Figueiredo, Hierarchical parcellation using discrete Morse theory of whole-brain high-resolution resting-state 7T fMRI data, Proc. of ISMRM 2015 - 23rd Annual Meeting of the International Society for Magnetic Resonance in Medicine, Toronto, Canada [E-poster presentation], 2015

[60] Sandro Nunes, M. Biancardi, A. Dias, Rodolfo Abreu, Juliana Rodrigues, L. M. Silveira, Patrícia Figueiredo, L. L. Wald, Subject-specific modeling of physiological noise in resting-state fMRI at 7T, Proc. of ISMRM 2015 - 23rd Annual Meeting of the International Society for Magnetic Resonance in Medicine, Toronto, Canada [Oral presentation], 2015

[61] Rodolfo Abreu, Marco Leite, A. Leal, Patrícia Figueiredo, Ballistocardiogram artefact correction taking into account background physiological signal preservation in simultaneous EEG-fMRI, Proc. of ISMRM 2015 - 23rd Annual Meeting of the International Society for Magnetic Resonance in Medicine, Toronto, Canada [E-poster presentation], 2015

[62] A. Dias, Jesús Capitán, L. Merino, J. Almeida, Pedro Lima, E. Silva, Decentralized Target Tracking based on Multi-Robot Cooperative Triangulation, Proc. of ICRA 2015 - IEEE International Conference on Robotics and Automation, Seattle, USA, pp. 3449 - 3455. DOI: 10.1109/ICRA.2015.7139676, 2015

[63] Luis Oliveira, Luis Almeida, Pedro Lima, Multi-hop routing within TDMA slots for teams of cooperating robots, Proc. of WFCS 2015 - 11th IEEE World Conference on Factory Communication Systems, Palma de Mallorca, Spain, pp. 1-8. DOI: 10.1109/WFCS.2015.7160566, 2015

[64] N. P. Santos, V. Lobo, Alexandre Bernardino, A Ground-Based Vision System for UAV Tracking, Proc. of OCEANS'15 MTS/IEEE Genova, Italy, 2015

[65] M. Marques, P. Dias, N. P. Santos, V. Lobo, R. Batista, D. Salgueiro, António Pedro Aguiar, M. Costa, J. E. Silva, A. Ferreira, J. Sousa, M. Nunes, E. Pereira, J. Morgado, Ricardo Ribeiro, Jorge S. Marques, Alexandre Bernardino, M. Griné, Matteo Taiana, Unmanned Aircraft Systems in maritime operations: Challenges addressed in the scope of the SEAGULL project, Proc. of OCEANS'15 MTS/IEEE Genova, Italy, 2015

[66] Tiago Veiga, Matthijs Spaan, Pedro Lima, Improving Value Function Approximation in Factored POMDPs by Exploiting Model Structure (Extended Abstract), Proc. of AAMAS 2015 - 14th International Conference on Autonomous Agents and Multiagent Systems, Istanbul, Turkey, pp. 1827-1828, 2015

[67] Luís Custódio, Artificial Intelligence, Robotics and Emotions, Proc. of the International Conference on Mind and Responsibility - Philosophy, Sciences and Criminal Law, Lisbon, Portugal, 2015

[68] Tiago Dias, Pedro Miraldo, Nuno Goncalves, A Framework for Augmented Reality using Non-Central Catadioptric Cameras, Proc. of ICARSC 2015 - IEEE International Conference on Autonomous Robot Systems and Competitions, pp.213-220. Vila Real, Portugal. doi: 10.1109/ICARSC.2015.31, 2015

[69] H. Al-Khatib, G. Antonelli, A. Caffaz, A. Caiti, G. Casalino, I. B. Jong, H. Duarte, G. Indiveri, Sérgio Jesus, K. Kebkal, António Pascoal, D. Polani, Navigation, Guidance and Control of Underwater Vehicles within the Widely scalable Mobile Underwater Sonar Technology (WiMUST) project: an overview, Proc. of NGCUV 2015 - IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles, Girona, Spain, 2015

[70] A. Dias, M. Biancardi, Sandro Nunes, Rodolfo Abreu, Juliana Rodrigues, L. M. Silveira, L. L. Wald, Patrícia Figueiredo, A New Hierarchical Brain Parcellation Method Based on Discrete Morse Theory for Functional MRI Data, Proc. of ISBI 2015 - IEEE International Symposium on Biomedical Imaging, Brooklyn, NY, USA, 2015

[71] Rodolfo Abreu, Marco Leite, A. Leal, Patrícia Figueiredo, STTICS: A Template-Based Algorithm for the Objective Selection of Epilepsy-Related EEG ICA Components, Proc. of ISBI 2015 - IEEE International Symposium on Biomedical Imaging, Brooklyn, NY, USA, 2015

[72] Pedro Vicente, Ricardo Ferreira, Lorenzo Jamone, Alexandre Bernardino, GPU-Enabled particle based optimization for robotic-hand pose estimation and self-calibration, Proc. of ICARSC 2015 - IEEE International Conference on Autonomous Robot Systems and Competitions, Vila Real, Portugal, 2015

[73] A. Leitao, A. P. Francisco, Rodolfo Abreu, Sandro Nunes, Juliana Rodrigues, Patrícia Figueiredo, L. L. Wald, M. Biancardi, L. M. Silveira, Techniques for Brain Functional Connectivity Analysis from High Resolution Imaging, Proc. of CompleNet 2015 - 6th Workshop on Complex Networks, NY, USA. Complex Networks VI, Vol. 597 of the series Studies in Computational Intelligence, pp 131-138, 2015

[74] A. Brito, R. Leitão, João Rodrigues, A. Marcos, Vídeo-instalação para a Interpretação de Tradições Regionais, Proc. of ARTECH 2015 - 7th International Conference on Digital Arts, Óbidos, Portugal, 2015

[75] H. Al-Khatib, G. Antonelli, A. Caffaz, A. Caiti, G. Casalino, I. B. Jong, H. Duarte, G. Indiveri, Sérgio Jesus, K. Kebkal, António Pascoal, D. Polani, The Widely Scalable Mobile Underwater Sonar Technology (WiMUST) Project: an Overview, Proc. of MTS/IEEE Oceans 2015, Genoa, Italy (invited), 2015

C. Books,

[1] M. Celebi, T. Mendonca, Jorge S. Marques, Dermoscopy Image Analysis, Editors, CRC Press, 2015

[2] K. Madani, A. D. Correia, Agostinho Rosa, J. Filipe (Eds.), Computational Intelligence (Eds.), Springer Series: Studies in Computational Intelligence, Vol. 465, 1st Edition, Hardcover ISBN: 978-3-642--35637-7 (Print), 978-3-642-35638-4 (Online), 2015

[3] K. Madani, A. D. Correia, Agostinho Rosa, J. Filipe (Eds.), Computational Intelligence, Springer, Series: Studies In Computational Intelligence, Volume 399, 2015

[4] Carlos Fernandes, Paisagens Ocultas – Notas sobre Arte, Ciência e Criatividade Distribuída, Colecção REFLEX | Reflexões sobre fotografia. Edições TPP, 2015

[5] Agostinho Rosa, Kurosh Madani, António Dourado Correia, Joaquim Filipe, Computational Intelligence, Revised And Selected Papers of The International Joint Conference, IJCCI 2012, Barcelona, Spain. Studies In Computational Intelligence, Volume 577 ISBN: 978-3-319-11270-1 , 2015

D. Book Chapters,

[1] T. Mendonca, P. M. Ferreira, A. R. Marcal, Catarina Barata, Jorge S. Marques, J. Rocha, J. Rozeira, PH2 – A Public Database for the Analysis of Dermocopic Images, in Dermoscopy Image Analysis, M. Celebi, T. Mendonca & Jorge S. Marques (Eds.), CRC Press, 2015

[2] Catarina Barata, M. Celebi, Jorge S. Marques, Towards a Robust Analysis of Dermoscopy Images Acquired under Different Conditions, in Dermoscopy Image Analysis, M. Celebi, T. Mendonca & Jorge S. Marques (Eds.), CRC Press, 2015

[3] Carlos Fernandes, Agostinho Rosa, Juan L. J. Laredo, Carlos Cotta, J. J. Merelo, Performance and Scalability of Particle Swarms with Dynamic and Partially Connected Grid Topologies, LCNS Transaction of Computational Collective Intelligence Journal, Springer., 2015

[4] Nuno Leite, R. Neves, N. Horta, Fernando Melicio, Agostinho Rosa, Madani, K., Correia, A.D., Rosa, A., Filipe, J. (eds.) Solving a capacitated exam timetabling problem instance using a bi-objective NSGA-II, Computational Intelligence, Studies in Computational Intelligence, vol. 577, pp. 115–129. Springer International Publishing, Print ISBN 978-3-319-11270-1, 2015

[5] Alberto Vale, Isabel Ribeiro, Motion planning of large scale vehicles for remote material transportation, in Motion and Operation Planning of Robotics System, Mechanisms and Machine Science, G. Carbone and F.Gomez-Bravo (eds), Vol. 29, pp. 249-292, 2015, DOI 10.1007/978-3-319-14705-5_9, 2015 - PDF

[6] Carlos Fernandes, J. J. Merelo, Agostinho Rosa, A Time-Varying Inertia Weight Strategy for Particles Swarms Based on Self-Organized Criticality, Studies in Computational Intelligence, Vol. 577, pp. 49-62 , 2015

[7] Carlos Fernandes, J. J. Merelo, A.M. Mora, Agostinho Rosa, Photorealistic rendering with an Ant Algorithm, Studies in Computational Intelligence, Volume 577, pp. 63-77 , 2015

[8] N. Leite, Fernando Melicio, Agostinho Rosa, Solving the Examination Timetabling Problem with the Shuffled Frog-leaping Algorithm, accepted October 2013, Studies in Computational Intelligence, (IJCCI 2013 revised selected papers), Springer-Verlag, 2015

E.   PhD Theses

[1] Matteo Taiana, A methodology for training and evaluating Pedestrian Detectors: towards practical applications, PhD Thesis, Instituto Superior Técnico, Universidade de Lisboa, December, 2015

[2] Tiago Veiga, Information Gain and Value Function Approximation in Task Planning Using POMDPs, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, December 2015

[3] Sérgio Brás, Deterministic Position and Attitude Estimation Methods, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, November, 2015

[4] Rui Guerreiro, Low level methods for complex image analysis – edge and line segment detection and texture discrimination, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, November, 2015

[5] Tiago Gaspar, Monocular 3D Positioning and Tracking Systems, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, July, 2015

[6] Luka Lukić, Visuomotor Coordination in Reach-to-Grasp Tasks: From Humans to Humanoids and Vice Versa, Ph.D. Thesis, Instituto Superior Tecnico and École Polytechnique Féderale de Lausanne, (IST/EPFL Joint Doctoral Initiative), June 2015

[7] Susana Brandão, Heat Based Descriptors For Multiple 3D View Object Recognition, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, July, 2015

[8] João Almeida, Control over networks and the event based paradigm: application to multi-agent systems, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, May, 2015

[9] Andre Dias, Multi-Robot 3D Target Estimation Under Uncertainty, Ph.D. Thesis, Instituto Superior Técnico, Universidade de Lisboa, February, 2015

[10] Meysam Basiri, Audio-based Swarming Micro Aerial Vehicles, Ph.D. Thesis, École Polytechnique Féderale de Lausanne, January, (IST/EPFL Joint Doctoral Initiative), 2015

[11] Ricardo Cabral, Unifying Low-rank Models for Visual Learning, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, February, 2015

[12] Andreas Häusler, Mission Planning for Multiple Cooperative Robotic Vehicles, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, March, 2015

[13] Mohammadreza Bayat, Nonlinear Robust Adaptive State Estimation, Ph.D. Thesis, Instituto Superior Tecnico, Universidade de Lisboa, April, 2015