Curriculum Vitae

João Tasso de Figueiredo Borges de Sousa

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Research Interests

Coordination and control of interacting dynamic systems, control and optimization, dynamic optimization, hybrid systems, systems engineering, control architectures, unmanned and autonomous/semi-autonomous air and ocean-going vehicles.

Current Academic Employment

Assistant Professor and Director of Underwater Systems and Technologies Laboratory, Departamento de Engenharia Electrotécnica e de Computadores da Faculdade de Engenharia da Universidade do Porto (FEUP), Porto, Portugal.

Visiting Positions

Visiting Scholar, University of California at Berkeley (UCB), 1996, 1997, 1998, 1999, 2000, 2001, 2002, and 2003. Funding: Fundação Luso-Americana para o Desenvolvimento and Fundação Calouste Gulbenkian.

Visiting Researcher at the Center for Intelligent Robotics for Space Exploration (established by NASA), at the Rensselaer's Polytechnic Institute, Troy, New York, US, 1992. Worked under the supervision of Prof. George Saridis. Funding: Fundação Luso-Americana para o Desenvolvimento and Fundação Calouste Gulbenkian.

Education

PhD in Electrical and Computer Engineering, Universidade do Porto, Portugal.

M. Sc. in Electrical and Computer Engineering, Universidade do Porto, Portugal.

Engineering Degree in Electrical Engineering (5 years program), Faculdade de Engenharia da Universidade do Porto, 1987.

Awards

2018 - IEEE RAS Most Active Technical Committee Award, 2018, Technical Committee on Multi-Robot Systems (member).

2014 – Best demo award at ACM WUWNET 2014 com a apresentação “SUNRISE project: The Internet of Underwater Things” por Daniele Spaccini; Roberto Petroccia; Chiara Petrioli; Ricardo Martins; João Borges de Sousa; Renato Caldas; Tommaso Arzilli; Davide Lamanna; Alessandro Galizia; Enrico Renzi.

2008 – Outstanding teaching award, Porto University.

2006 BES Innovation National Award – Awarded by the Espírito Santo Bank for the design of the Light Autonomous Underwater Vehicle.

2003-2004 Luso-American Foundation Scholarship - Portuguese Studies Program from the University of California at Berkeley.

2002-2003 Luso-American Foundation Scholarship - Portuguese Studies Program from the University of California at Berkeley.

2003 - Arca Prize – Prize for the best technological realizations Respectful to Environment – Actions for raising critical awareness. Second prize with the work entitled “Networks of Vehicles and Sensors for Environmental Applications”.

2003 - Best paper in 3º Festival Nacional de Robótica ROBÓTICA 2003. Lisboa, Portugal, 2003 - S. Loureiro Fraga, J. Borges Sousa, F. Lobo Pereira, “Geração de Trajectórias para Sistemas Diferencialmente Planos”.

Selected Projects

EU Marine Robots. Marine robotics research infrastructure network (2018-2020). H2020 project (Coordinator). The partners are: University of Porto (PO); University of Bremen (DE); Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento (PO); University of Genoa (IT); Faculty of Electrical Engineering and Computing; University of Zagreb (CR); University of Girona (SP); University of Limerick (IRL); Oceanic Platform of the Canary Islands (SP); Centre for Maritime Research and Experimentation (NATO); Heriot-Watt University (UK); Norwegian University of Science and Technology (NOR); Marine Institute (IRL); Distretto Ligure delle Tecnologie Marine (IT); Natural Environment Research Council (UK); and, Institut Français de Recherche pour l'exploitation de la Mer (FR). UMR addresses the call topic INFRAIA-02-2017: Integrating Activities for Starting Communities by mobilizing a comprehensive consortium of most of the key marine robotics research infrastructures which, in turn, will mobilize stakeholders from Member States, Associated Countries and other third countries to achieve the following main objective: to open up key national and regional marine robotics research infrastructures (RIs) to all European researchers, from both academia and industry, ensuring their optimal use and joint development to establish a world-class marine robotics integrated infrastructure.

FireRS - wildFIRE Remote Sensing (2016-2018). Interreg Sudoe project co-financed by the European Regional Development Fund (ERDF). The partners are: University of Vigo in Spain (leader); Laboratoire d'analyse et département des systèmes (LAAS) in France; and, LSTS in Portugal. The project aims to provide emergency agencies and / or coordination centers with an innovative tool for detecting and managing fire using new technologies. The new platform created in FireRS will provide almost real-time information, GPS positioning, fire perimeter, infrared images, propagation prediction, performance protocols, etc. The set consists of ground sensors, a dedicated picosatellite, a local and remote ground station as well as a mission control center.

ENDURANCE - Long endurance AUV (2017-2019). This is a project funded by the Portuguese Innovation Agency to extend the endurance of the LAUV to several days through the co-design of the mechanical systems and the software controllers. The project is led by Oceanscan Marine

Systems and Technologies a spin-off from the LSTS. The new vehicle will advance the state of the art with innovations in active power management, intelligent onboard and offboard planning and execution control, adaptive sampling, and launch and recovery systems.

Networked Ocean – Networked ocean and air vehicles for communications and data collection in remote oceanic areas EEA project*.* Project led by LSTS with partners from Portugal - Instituto Português do Mar e da Atmosfera and Marinha Portuguesa and Norway - Centre for Autonomous Marine Operations and Systems – Norwegian University of Science and Technology and Norwegian Defence Research Establishment - Division for Air and Space Systems. The project concerns the development and demonstration at sea of a networked vehicle system for persistent communications and data collection in remote oceanic areas. The system is composed of a long endurance autonomous surface vehicle (ASV), long endurance autonomous underwater vehicles (AUV), long range unmanned air vehicles (UAV), helikites, and control stations. The ASV is both a communications hotspot and a docking base (for AUVs), operating 24/7 in remote ocean areas. The ASV supports smart routing protocols for direct communications, via persistent UAV relays, or delayed data transfer to control stations. The control stations provide advanced planning and execution control capabilities, as well as dissemination of data. The system supports inter-operability protocols to allow expansion to vehicles from third parties.

MarineUAS – Marie Curie Initial Training Network (2015-2018). Project led by Norwegian University of Science and Technology with partners from Portugal (LSTS and IST), Spain (Catec and University of Seville), Norway (Norut and Maritime Robotics) Czech Republic (Honeywell). Marine UAS is an EU-funded doctoral program to strategically strengthen research training on autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring. It is a comprehensive researcher training program across a range of partners in several countries designed to have high impact on the training of individual researchers and their knowledge, skills and their future careers. MarineUAS has established a unique cooperative environment. It takes benefit of the partners' extensive and complementary knowledge, field operational experience, and experimental facilities.

Bringing Together Research and Industry for the Development of Glider Environmental Services Bridges – H2020 Project (2015-2019). Project led by Armines from France with 19 partners from Europe. The main objective of BRIDGES (Bringing together Research and Industry for the Development of Glider Environmental Services) in accordance with expected increase ocean industrialization, is to perform research on cost-effective, robust, re-locatable and easily-deployed autonomous platform with multiple sensing, surveying and monitoring capabilities to support long-term in-situ exploration and protection services of the coastal and deep ocean.

SUNRISE – FP7 project (2013-2017). Project led by University of Rome “La Sapienza” (Italy) with partners from Portugal (LSTS), Italy (NATO Centre for Maritime Research and Experimentation), Germany (EvoLogics), Netherlands (University of Twente), Turkey (SUASIS), United States (University of Buffalo), and Italy (NexSe). The SUNRISE objectives are to develop: 5 federated underwater (UW) communication networks (CommsNet), based on pilot infrastructures already designed, built & deployed by consortium partners; a software-defined open-architecture modem & protocol stack that will empower open collaborative developments; standard platforms for simulation, emulation & replay testing to estimate CommsNet performance at a fraction of current at-sea experiments, validated by tests conducted on the SUNRISE infrastructure over a variety of applications & environments; and, a user-friendly interface for diverse users to interact with SUNRISE systems to conduct trials & benefit from databases of CommsNet performance data gathered over long periods from the SUNRISE infrastructure. Principal investigator from LSTS.

Netmar (http://project-netmar.eu) – Interreg project (2012-2015). Project led by LSTS with partners from Portugal (Porto harbor, Portuguese Navy and Portugal harbors association), Spain (Tecnalia, Puertos de Galicia and University of Coruña), Ireland (University of Limerick, Shannon-Foynes Port Company and National Maritime College of Ireland), France (ENSTA) and the United Kindgom (University of Southampton, UK Maritime Coastguard Agency and UK Oilspill Association). The project addresses the demonstration, evaluation and dissemination of new

robotic systems, sensors and networking technologies in maritime incidents endangering human life, the environment and economic activities. Project coordinator.

Noptilus (www.noptilus-fp7.eu) – FP7 project (2011-2015). Project led by Centre for Research and Technology (GR) with partners from Portugal (LSTS , Porto harbor and Oceanscan Marine Systems and Technology), Greece (Telecommunication Systems Institute), Netherlands (Delft University of Technology), Switzerland (Eidgenössische Technische Hochschule Zürich) and the United Kingdom (Imperial College). The project concerns the automatic detection and recognition of both static and dynamic underwater features and patterns, and arbitrarily-close-to-the-optimal, real-time, scalable, cooperative, and distributed, fully-autonomous multi-AUV Planning, Assignment and Navigation. Principal investigator from LSTS.

SafePort – NATO funded project (2011-2014). Project undertaken by a Portuguese Consortium (including LSTS) in cooperation with the Portuguese Navy to develop a decision support system for harbor protection. Principal investigator from LSTS.

Necsave – European Defense Agency project (2013-2017). Project led by LSTS with partners from Portugal (Porto Harbor, Oceanscan Marine Systems and Technology, Portuguese Navy and Air Force), Italy (Calzoni S.R.L.), Spain (University Complutense de Madrid), Belgium (Royal Military Academy) and the Netherlands (TNO). The project addresses testing and evaluation of unmanned vehicle systems for littoral warfare. Project coordinator.

SeaconII – unmanned underwater vehicles program (2013-2015). Research program undertaken by the Portuguese Navy and LSTS with funding provided by the Portuguese Ministry of Defense. Principal investigator.

Control for Coordination C4C – FP7 project (2008-2011). Project led by CWI (Netherlands) with partners from Portugal (LSTS, Porto harbor and Oceanscan Marine Systems and Technology), Greece (Center for R & D Hellas), Netherlands (Delft University of Technology, Technische Universiteit Eindhoven, Océ, Rijkswaterstaat RWS, and Trinité Automatisering B.V. TRI), Cyprus (University of Cyprus), Italy (University of Verona) and Belgium (University of Gent and PSA Hesse Noord Natie HNN). The aim of the project was to design and to evaluate controllers for the five case studies (Underwater vehicles, Aerial vehicles, Control of road traffic at the network level, Automated off-road guided vehicles and Control of distributed complex machines) and to formulate control theory for the coordination of distributed systems. Principal investigator from LSTS.

PITVANT, Portuguese Air Force Unmanned Vehicles Program. Principal Investigator. The team is tasked with developing advanced UAV systems for the Portuguese Air Force. Partners: Portuguese Air Force Academy. Funding: Ministry of Defense. 2008-20015.

Seacon, Unmanned submarines for training and technology development. Principal Investigator from Porto University. The team is tasked with delivering three autonomous underwater vehicles for training and advanced mine warfare capability building by the Portuguese Navy. Partners: Portuguese Navy. Funding: Ministry of Defense. 2008-2010.

Operations

Led the operational deployments at sea (Atlantic and Pacific) with multiple autonomous underwater, surface and air vehicles since 2005.

Publications (last 10 years)

Book chapters

1. A. Rucco, A. Pedro Aguiar, F.A.C.C. Fontes, F. Lobo Pereira, J. Borges de Sousa, "A Model Predictive Control-Based Architecture for Cooperative Path-Following of Multiple

Unmanned Aerial Vehicles", in "Developments in Model-Based Optimization and Control", (Eds.: S. Olaru, A. Grancharova, F. L. Pereira), Lecture Notes in Control and Information Sciences, Springer, 2016.

2. I. Prodan, S. Olaru, F.A.C.C. Fontes, F. Lobo Pereira, J. Borges Sousa, C. Stoica Maniu and S.-I. Niculescu "Predictive Control for Path Following. From Trajectory Generation to the Parametrization of the Discrete Tracking Sequences", in "Developments in Model-Based Optimization and Control", (Eds.: S. Olaru, A. Grancharova, F. L. Pereira), Lecture Notes in Control and Information Sciences, Springer, 2016.
3. F. Lobo Pereira, F.A.C.C. Fontes, A. Pedro Aguiar and J. Borges de Sousa, "An Optimization-Based Framework for Impulsive Control Systems", in "Developments in Model-Based Optimization and Control", (Eds.: S. Olaru, A. Grancharova, F. L. Pereira), Lecture Notes in Control and Information Sciences, Springer, 2016.
4. J. Borges de Sousa, "Networked Vehicle Systems: A glimpse at future capabilities for safer seas", NETwork of experts on the legal aspects of MARitime SAFEty and security (MASAFENET), IS 1105 COST ACTION, Proceedings of Open Conference Maritime Safety and Environmental Protection in Europe: Multiple layers in regulation and compliance, Porto, 23 May 2014.
5. J. Borges de Sousa and F. Lobo Pereira, "On the future of ocean observation", O mar no futuro de Portugal: Ciência e visão estratégica, Edição do Centro de Estudos do Atlântico, Coordenação: Pedro Borges Graça e Tiago Martins, 2014.
6. J. Borges de Sousa, P. McGillivary, J. Vicente, M. Nunes Bento, J. Passos Morgado, M. Madruga Matos, R. Bencatel, and P. Mónica de Oliveira, "Umanned Aircraft Systems for maritime operations", Handbook of Unmanned Aerial Vehicles (Eds. Valavanis, K.P., & Vachtsevanos, G.J.). Springer Verlag, New York, 2014.
7. M. Madruga Matos, J. Caetano, J. Passos Morgado, and J. Borges de Sousa, "UAS Training - the Pitvant experience", Handbook of Unmanned Aerial Vehicles (Eds. Valavanis, K.P., & Vachtsevanos, G.J.). Springer Verlag, New York, 2014.
8. J. George, P. B. Sujit, D. Ghose, and J. Borges de Sousa, "Decentralized coalition formation algorithms", Handbook of Unmanned Aerial Vehicles (Eds. Valavanis, K.P., & Vachtsevanos, G.J.). Springer Verlag, New York, 2014.
9. J. Borges de Sousa and F. Lobo Pereira, "Coordination challenges in networked vehicle systems: are we missing something?", Coordination Control of Distributed Systems, Springer Verlag, 2014.
10. F. Lobo Pereira, J. Borges de Sousa, R. Gomes, and P. Calado, "A model predictive control approach to AUV's motion coordination", Coordination Control of Distributed Systems, Springer Verlag, 2014.
11. J. Estrela da Silva, F. Lobo Pereira, and J. Borges de Sousa, "Dynamic optimization techniques for the motion coordination of autonomous vehicles", Coordination Control of Distributed Systems, Springer Verlag, 2014.
12. J. Borges de Sousa and J. Estrela da Silva, "Cooperative path planning in the presence of adversarial Behavior", in From physics to control through an emergent view, Editad by Luigi Fortuna, Alexander Fradkov, Mattia Frasca, World scientific series on nonlinear science, series B, Vol. 15, ISBN-13 978-981-4313-14-8, 2010.
13. J. Estrela da Silva and J. Borges de Sousa, "Models for simulation and control of underwater vehicles", New Approaches in Automation and Robotics, Editor: Harald Aschemann, Publisher: I-Tech Education and Publishing, Vienna, Austria, May 2008, ISBN: 978-3-902613-26-4, pp. 197-207, 2008.

Journal papers

1. A. Rucco, P. Aguiar. P. B. Sujit and J. Borges de Sousa, "Optimal Rendezvous Trajectory for Unmanned Aerial-Ground Vehicles", IEEE Transactions on Aerospace and Electronic Systems, 2017.
2. Mason Thammawichai, Sujit P. Baliyarasimhuni, Eric C. Kerrigan, and J. Borges de Sousa, "Optimizing Communication and Computation for Multi-UAV Information Gathering Applications", IEEE Transactions on Aerospace and Electronic Systems. 2017.
3. Breno C. Pinheiro, Ubirajara F. Moreno, J. Borges de Sousa, and Orlando C. Rodriguez, "Kernel-Function-Based Models for Acoustic Localization of Underwater Vehicles", IEEE JOURNAL OF OCEANIC ENGINEERING, October 2016.
4. Gerard Dooly, Edin Omerdica, Joseph Coleman, Liam Miller, Admir Kaknjo, James Hayes, Jóse Braga, Filipe Ferreira, Hugh Conlon, Hugh Barry, Jesús Marcos-Olaya, Thomas Tuohy, J. Borges de Sousa, Dan Toal, "Unmanned vehicles for maritime spill response case study: Exercise Cathach", Marine Pollution Bulletin, Volume 110, Issue 1, 15 September 2016, Pages 528-538.
5. Lara L. Sousa, Francisco López-Castejón, Javier Gilabert, Paulo Relvas, Ana Couto, Nuno Queiroz, Renato Caldas, Paulo Sousa Dias, Hugo Dias, Margarida Faria, Filipe Ferreira, António Sérgio Ferreira, João Fortuna, Ricardo Joel Gomes, Bruno Loureiro, Ricardo Martins, Luis Madureira, Jorge Neiva, Marina Oliveira, João Pereira, José Pinto, Frederic Py, Hugo Queirós, Daniel Silva, P.B. Sujit, Artur Zolich, Tor Arne Johansen, João Borges de Sousa, Kanna Rajan, "Integrated monitoring of Mola mola behaviour in space and time", PLOS-1, August 5, 2016
6. A. Kapoutsis, S. Chatzichristofis, L. Doitsidis; J. Borges de Sousa, J. Pinto, J. Braga, and E. Kosmatopoulos, "Multi-robot exploration under severe constraints: application to underwater map construction", Autonomous Robots, August 2016, Volume 40, Issue 6, pp 987-1015.
7. Tu Dac Ho, P. B. Sujit, T. Johansson and J. Borges de Sousa, “Optimization of Wireless Sensor Network and UAV Data Acquisition”, Journal of Intelligent & Robotic Systems 78, no. 1 (2015): 159-179.
8. S. Kaarthik, P. B. Sujit, S. Rathinam, D. Lucani, and J. Borges de Sousa, "Algorithms for Collecting Data from Cooperating Sensor Motes using Unmanned Vehicles", International Journal of Systems Science, 2014.
9. R. Bencatel, J. Borges de Sousa, and A. R. Girard, "Atmospheric flow field models applicable for aircraft endurance", Progress in Aerospace Sciences, Elsevier, 2013, vol. 61, N. 0, pages 1-25.
10. I. Prodan. S. Olaru. R. Bencatel, J. Borges de Sousa, Cristina Stoica, and Silviu-Iulian Niculescu, "Receding horizon flight control for trajectory tracking of autonomous aerial vehicles", Control Engineering Practice journal, Elsevier, 2013.
11. C. Fuchs, S. Ferreira, J. Borges de Sousa, and G. M. Gonçales, "Adaptive consoles for supervisory control of multiple unmanned aerial vehicles", Human-Computer Interaction. Interaction Modalities and Techniques, Lecture Notes in Computer Science Volume 8007, 2013, pp 678-687.
12. P. B. Sujit, S. Saripalli, and J. Borges de Sousa, "UAV path following: a survey and analysis of algorithms for fixed wing UAVs", IEEE control systems, January 2014; 34(1), pp.:42-59.
13. P. McGuillivary, J. Borges de Sousa, and R. Martins, "Connecting the dots. Networking maritime fleets of autonomous systems for science and surveillance", Marine Technology Reporter, October 2012.

14. P. Sujit, D. Lucani, and J. Borges de Sousa, "Bridging cooperative sensing and route planning of autonomous vehicles", IEEE Journal on Selected Areas of Communications Special Issue Communications Challenges and Dynamics for Unmanned Autonomous Vehicles, Volume: 30, Issue: 5, Page(s): 912-922, 2012.
15. J. Estrela da Silva and J. Borges de Sousa, "A dynamic programming based path-following controller for autonomous vehicles", Journal of Control and Intelligent Systems, Vol. 39, No. 4, 2011.
16. R. Martins, J. Borges de Sousa, and C. Carvalho Afonso, "The REP-AUV10 experiment shallow water surveys with a fleet of heterogeneous autonomous vehicles", Sea Technology, November issue, 2011.
17. J. George, P. B. Sujit, and J. Borges de Sousa, "Search strategies for multiple UAV search and destroy missions", Journal of Intelligent Robotic Systems, Vol. 61, No. 1-4, pp. 355-367, 2011.
18. J. Borges de Sousa, and G. M. Gonçalves, "Unmanned vehicles for environmental data collection", Clean Technologies and Environmental Policy: Volume 13, Issue 2 (2011), Page 369-380. http://www.springerlink.com/content/J750973438124287
19. J. Borges de Sousa, B. Maciel, and F. Lobo Pereira, "Sensor systems on networked vehicles", in Networks and Heterogeneous Media, American Institute of Mathematical Sciences, Vol. 4, N. 2, pp. 223-247, 2009.

Conference proceedings

1. P. Dias e J. Borges de Sousa, "Improved Situation Awareness on the Operation of Unmanned Systems through Simulation", 2017 NMSG Symposium - Lisbon, Portugal, Outubro 2017.
2. J. Braga, F. Balampanis, A. Pedro Aguiar, J. Borges de Sousa, I. Maza and A. Ollero, "Coordinated Efficient Buoys Data Collection in Large Complex Coastal Environments using UAVs", Proceedings of the OCEANS 2017 MTS/IEEE Anchorage, 2017.
3. Lukas Chrpa, J. Pinto, T. Marques, M. Ribeiro, J. Borges de Sousa, "Mixed-Initiative Planning, Replanning and Execution: From Concept to Field Testing using AUV Fleets", Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2017), Vancouver, 2017.
4. Sai Krishna Kanth Hari, Kaarthik Sundar, José Braga, J. Teixeira, Swaroop Darbha and J. Sousa , "Adaptive Position Estimation for Vehicles using Range Measurements", Proceedings of the IFAC 2017 World Congress, Toulouse, France, 2017.
5. J. Estrela da Silva, J. Borges de Sousa e F. Lobo Pereira, "Synthesis of Safe Controllers for Nonlinear Systems Using Dynamic Programming Techniques, Proceedings of PHYSCON 2015, Istanbul, Turkey, 19-22 August, 2017.
6. Henrique Vieira da Silva, Miguel Cavique e J. João Borges de Sousa, "Development of an AUV Launch and Recovery System for the Portuguese manned submarines via torpedo tubes", Proceedings of the Warship 2017: Naval Submarines & UUVs, 14-15 June 2017, Bath, UK.
7. J. Pinto, P. Dias e J. Borges de Sousa, "Networked Vehicle Systems: From Vision to Reality", Proceedings of the OCEANS 2017 MTS/IEEE Aberdeen, 2017.
8. J. Pereira, Sérgio Ferreira, P. Dias, J. Pinto, J. Borges de Sousa e P. Lourenço, "Rapid Environmental Picture Atlantic exercise 2016: a field report", Proceedings of the OCEANS 2017 MTS/IEEE Aberdeen, 2017.

9. J. Pereira, Sérgio Ferreira, J. Borges de Sousa, P. Dias, Tor Johansen, Vegard Hovstein e P. Lourenço, "Managing communication challenges in vehicle networks for remote maritime operations", Proceedings of the OCEANS 2017 MTS/IEEE Aberdeen, 2017.

10. J. Pinto, M. Ribeiro e J. Borges de Sousa, "Network Enabled Cooperation of Autonomous Vehicles: A Communications Perspective", Proceedings of the OCEANS 2017 MTS/IEEE Aberdeen, 2017.

11. A. Rucco, P.B. Sujit, A. Pedro Aguiar, J. Borges de Sousa, Optimal UAV Rendezvous on a UGV, AIAA Guidance, Navigation and Control Conference, San Diego, Jan 2016.

12. A. Rucco, A. Pedro Aguiar, F. Lobo Pereira, J. Borges de Sousa, A Moving Path Following Approach for Trajectory Optimization of UAVs: An application for target tracking of marine vehicles, Proceedings of the ECC, July 2016.

13. A. Rucco, A. Pedro Aguiar, F. Lobo Pereira, J. Borges de Sousa, A Predictive Path-Following approach for fixed-wing Unmanned Aerial Vehicles in presence of wind disturbances, ROBOT'2015 Second Iberian Robotics Conference, Lisbon, Portugal, 2015.

14. Pedro Dias, Nuno Pessanha Santos, Victor Lobo, Ricardo Batista, Diogo Salgueiro, António Aguiar, Maria Costa, António Ferreira, Jorge Silva, J. Borges de Sousa, Maria Nunes, Ricardo Ribeiro, Jorge Marques. José Morgado, Elói Pereira. Miguel Griné, Matteo Taiana, J. Estrela da Silva and Alexandre Bernardino, “Unmanned Aircraft Systems in Maritime Operations: Challenges addressed in the scope of the SEAGULL project oceans Unmanned Aircraft Systems in Maritime Operations: Challenges addressed in the scope of the SEAGULL project, Proceedings of the OCEANS’15 MTS/IEEE Conference, Genova, Italy, May 2015.

15. J. Borges de Sousa, J. Pereira, J. Alves, Madaleno Galocha, Baptista Pereira and Claro Lourenço, “Experiments in multi-vehicle operations: the Rapid Environmental Picture Atlantic exercise 2014”, Proceedings of the OCEANS’15 MTS/IEEE Conference, Genova, Italy, May 2015.

16. E. R.B. Marques, Manuel Ribeiro, J. Pinto, J. Borges de Sousa and F. Martins, “NVL: a coordination language for unmanned vehicle networks”, Intelligent Robotics and Multi-Agent Systems (IRMAS), Coimbra, April 2015.

17. J. Pinto, Paulo Dias, João Pereira, Renato Caldas, Tiago Rodrigues, J. Borges de Sousa, Frederic Py and Kanna Rajan, “Mixed-Initiative Interaction for Tracking of Ocean Sunfish”, Proceedings the IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles, NGCUV2015, Girona, Spain, April 2015.

18. Gerard Dooly, Edin Omerdic, Joseph Coleman, José Braga, Filipe Ferreira, James Hayes, Hugh Conlon, J. Borges de Sousa and Daniel Toal, "UUV’s in Maritime Spill Response Exercise Cathach", Proceedings the IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles, NGCUV2015, Girona, Spain, April 2015.

19. José Braga, Pedro Calado and J. Borges de Sousa, “An Inside Perspective on LAUV Control and Localization Layers”, Proceedings the IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles, NGCUV2015, Girona, Spain, April 2015.

20. Eduardo R.B. Marques, Manuel Ribeiro, José Pinto, João Borges de Sousa and Francisco Martins, "Towards Programmable Coordination of Unmanned Vehicle Networks", Proceedings IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles, NGCUV2015, Girona, Spain, April 2015.

21. A. Ch. Kapoutsis, G. V. Salavasidis, S. A. Chatzichristos, J. Braga, J. Pinto, J. Borges de Sousa, Elias B. Kosmatopoulos "The NOPTILUS Project Overview: A Fully-Autonomous Navigation System of Teams of AUVs for Static/dynamic Underwater Map Construction",

Proceedings IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles, NGCUV2015, Girona, Spain, April 2015.

22. K. Sundar, Kaarthik, Sivakumar Rathinam, Daniel Enrique Lucani Roetter, and João Sousa. "Algorithms for Collecting Data from Cooperating Sensor Motes using Unmanned Vehicles." Indian Control Conference, Chennai, India, Jan 2015.
23. “Algorithms for Collecting Data from Cooperating Sensor Motes using Unmanned Vehicles”, Indian Control Conference, Chennai, India, January 5-7, 2015.
24. J. Estrela Silva, J. Borges de Sousa, and F. Lobo Pereira, “Reachability analysis of dynamic programming based controlled systems: an extended algorithm”, 2014 IEEE Multi-conference on Systems and Control, Antibes, France, October 8-10, 2014.
25. M. Ribeiro, J. Pinto, E. R. B. Marques, F. Martins, and J. Borges de Sousa, “A language for distributed control of multiple autonomous vehicles”, Proceedings of the OCEANS’2014 MTS/IEEE Conference, St. John's, Canada, September 14-19, 2014.
26. J. Borges de Sousa, “Dynamic optimization challenges in networked vehicle systems: Are we missing something?”, New Horizons on Optimal Control, Cascais, Portugal, September 8-10, 2014.
27. R. Martins, J. Borges de Sousa and R. Caldas, “SUNRISE Project: Porto University Test Bed”, Proceedings of Underwater Communications Networking, La Spezia, Italy, September 3-5, 2014.
28. M. Faria, J. Pinto, F. Py, J. Fortuna, H. Dias, R. Martins, F. Leira, T. Arne Johansen, J. Borges de Sousa, and K. Rajan, “Coordinating UAVs and AUVs for oceanographic field experiments:challenges and lessons learned”, Proceedings of the 2014 IEEE International Conference on Robotics and Automation (ICRA), Hong-Kong, May 31 – June 7, 2014.
29. S. Ferreira, G. Carvalho, F. Ferreira, and J. Borges de Sousa, “Assessing the capacity of man-portable UAVs for network access point localization, using RSSI link data”, Proceedings of the 2014 International Conference on Unmanned Aircraft Systems (ICUAS), Orlando, United States of America, May 27-30, 2014.
30. J. Borges de Sousa, “Networked Vehicle Systems: A glimpse at future capabilities for safer seas”, NETwork of experts on the legal aspects of MARitime SAFEty and security (MASAFENET), IS 1105 COST ACTION, Proceedings of Open Conference Maritime Safety and Environmental Protection in Europe: Multiple layers in regulation and compliance, Porto, 23 May 2014.
31. J. Borges de Sousa, R. Robalo, A. Sousa, L. Raa, P. L’Hoir, E. Dias, J. Serra,and F. Martini, “Network enabled cooperation system of Autonomous Vehicles – NECSAVE project”, UMS 20014 3rd workshop on European unmanned maritime systems, Porto, Portugal, 29-30 de Maio de 2014 (abstract).
32. J. Borges de Sousa, “O futuro da observação da Terra: redes de veículos não tripulados”, 7º Congresso Luso-Moçambicano de Engenharia, Inhambane, Moçambique, 14-18 Abril, 2014 (Abstract).
33. P. McGillivary, K. Rajan, and J. Borges de Sousa, “Networking Multiple Autonomous Air and Ocean Vehicles for Oceanographic Research and Monitoring”, AGU Fall conference, San Francisco, December 2013 (Abstract).
34. J. Estrela da Silva, J. Borges de Sousa, and F. Lobo Pereira, “Reachability analysis of dynamic programming based controlled systems”, IEEE Conference on Decision and Control, Firenze, Italy, December 10-13, 2013.

35. D. T. Ho, E. I. Grøtli, P. B. Sujit, T. A. Johansen, and J. Borges Sousa, “Performance evaluation of cooperative relay and particle swarm optimization path planning for UAV and wireless sensor network”, Globecom Workshop - Wireless Networking and Control for Unmanned Autonomous Vehicles, Atlanta, 2013. 9-13 December, 2013, pp. 1403 – 1408.

36. J. Fortuna, F. Ferreira, R. Gomes, S. Ferreira, and J. Borges de Sousa, “Using low cost open source UAVs for marine wild life monitoring - Field Report”, 2nd Workshop on Research, Education and Development of Unmanned Aerial Systems (RED-UAS 2013), Compiegne, France, November 20-22, 2013.

37. J. Pinto, M. Faria, J. Fortuna, R. Martins, J. Borges de Sousa, N. Queiroz, F. Py, and K. Rajan “Chasing fish: Tracking and control in a autonomous multi-vehicle real-world experiment”, Proceedings of the OCEANS’2013 Conference, San Diego, United States of America, September 2013.

38. R. Martins and J. Borges de Sousa, “An extensible networking architecture for autonomous underwater vehicles”, Proceedings of the OCEANS’2013 Conference, San Diego, United States of America, September 2013.

39. P. B. Sujit, S. Saripalli, and J. Borges de Sousa. “An evaluation of UAV path-following algorithms”, Proceedings of the European Control Conference, Zurich, Switzerland, July 2013.

40. P. B. Sujit, Y. Zhang, A. J. Healey, and J. Borges de Sousa, “Multi-AUV fault tolerant adaptive sampling”, Workshop on Robotics for Environmental Monitoring at the RSS (Robotics: Science and Systems) 2013 Conference, Berlin, Germany, June 2013.

41. R. Robalo Rodrigues, C. Carvalho Afonso, J. Borges de Sousa, and R. Martins, “New trends in MCM with robotic vehicles”, Proceedings of the MAST Conference (Abstract), Gdansk, Poland, June 2013.

42. R. Robalo Rodrigues, C. Carvalho Afonso, J. Borges de Sousa, R. Caldas, R. Martins, and J. Passos Morgado, “Experiments in multi-vehicle operations: the REP12 exercise”, Proceedings of the MAST Conference (Abstract), Gdansk, Poland, June 2013.

43. D. T. Ho, E. I. Grøtli, P. B. Sujit, T. A. Johansen, and J. Borges de Sousa, “Cluster-based communication topology selection and UAV path planning in wireless sensor networks”, Proceedings of the International Conference on Unmanned Aircraft Systems, Atlanta, June 2013.

44. J. Pinto, P. Sousa Dias, R. Martins, J. Fortuna, E. R. B. Marques, and J. Borges de Sousa, “The LSTS tool chain for networked vehicle systems”, Proceedings of the IEEE/MTS OCEANS’13, Bergen, June, 2013.

45. B. C. Pinheiro, U. F. Moreno, J. Borges de Sousa, and O. C. Rodrigues, “Improvements in the estimated time of flight of accoustic signals for AUV localization”, Proceedings of the IEEE/MTS OCEANS’13, Bergen, June, 2013.

46. L. Madureira, A. Sousa, J. Braga, P. Calado, P. Sousa Dias, R. Martins, J. Pinto, J. Borges de Sousa, “The Light Autonomous Underwater Vehicle: Evolutions and Networking”, Proceedings of the IEEE/MTS OCEANS’13, Bergen, June, 2013.

47. D. E. Lucani, P. B. Sujit, and J. Borges de Sousa, “Spare the mule, help your neighbors: Robot route planning for data retrieval on large scale sensor networks”, Proceedings of the IEEE Conference on Robotics and Automation, Karlsruhe, Germany, May 2013, pp.2534-2541.

48. P. B. Sujit, D. E. Lucani, and J. Borges de Sousa, “Joint route planning for UAV and sensor network for data retrieval”, Proceedings of the IEEE International Systems Conference, Orlando, FL, United States of America, April 2013, pp.688,692.

49. J. F. Araujo, P. B. Sujit, and J. Borges de Sousa, “Multiple UAV area decomposition and coverage”, Proceedings of the IEEE Symposium on Computational Intelligence for Security and Defense Applications, Singapore, April 2013, pp.30-37.
50. E. Pereira, C. M. Kirsch, R. Sengupta, and J. Borges de Sousa, “Bigactors - A Model for Structure-aware Computation”, Proceedings of the ACM/IEEE 4th International Conference on Cyber-Physical Systems, Philadelphia, United States of America, April 8-11, 2013.
51. P. McGillivary, J. Borges de Sousa, R. Martins, and K. Rajan, “Integrating multiple autonomous underwater vessels, surface vessels and aircraft into oceanographic research vessel operations”, AGU Fall conference, San Francisco, December 2012 (Abstract).
52. J. Borges de Sousa, “Coordination challenges in networked vehicle systems: are we missing something?” Workshop on the Control of Cyber-Physical Systems organized by Panos Antsaklis, University of Notre Dame London Centre, October 20-21, 2012 (invitation only).
53. P. McGillivary, K Rajan, J. Borges de Sousa, F Leroy, and R Martins, “Integrating autonomous underwater vessels, surface vessels and aircraft as persistent surveillance components of ocean observing studies”, IEEE/OES Autonomous Underwater Vehicles (AUV) Workshop 2012, Southampton, September 24-27, 2012 (Poster).
54. J. Borges de Sousa, and R. Martins, “Coordinated control of ocean going vehicles”, Proceedings of the IEEE/OES Autonomous Underwater Vehicles (AUV) Workshop 2012, Southampton, September 24-27, 2012.
55. J. Pinto, J. Borges de Sousa, F. Py, and K. Rajan, “Experiments with deliberative planning on autonomous underwater vehicles”, Proceedings of the IROS 2012 Workshop on Robotics for Environmental Monitoring, Vilamoura, Portugal, October 7-12, 2012.
56. J. Estrela da Silva, J. Borges de Sousa, and F. Lobo Pereira, “Dynamic programming based feedback control for systems with switching costs”, 2012 IEEE Multi-Conference on Systems and Control, Dubrovnik, Croatia, October 3-5, 2012.
57. J. Borges de Sousa and R. Martins, “Control architecture and software tool set for networked operations of ocean vehicles”, Proceedings of the 9th IFAC Conference on Manoeuvring and Control of Marine Craft, Arenzano, Italy, September 2012.
58. I. Prodan, R. Bencatel, S. Olaru, J. Borges de Sousa, C. Stoica, and S. I. Niculescu, “Predictive control for autonomous aerial vehicles trajectory tracking”, Proceedings of the IFAC Nonlinear Model Predictive Control Conference, Noordwijkerhout, Holand, August, 2012.
59. J. Estrela da Silva, J. Borges de Sousa, and F. Lobo Pereira, “Trajectory constraints for robust vehicle formation control”, Proceedings of the 10th Portuguese Conference on Automatic Control (CONTROLO’12), Funchal, Portugal, July 2012.
60. P .B. Sujit, and J. Borges de Sousa, “Multi-UAV task allocation with communication faults”, Proceedings of the American Control Conference, Montreal, Canada, June 2012.
61. Speranzon, J. Silva, J. Borges de Sousa, and K. H. Johansson, “On collaborative optimization and communication for a team of autonomous underwater vehicles”, Proceedings of Reglermöte, Gotemburgo, Sweden, May 2012.
62. J. Braga, A. J. Healey, and J. Borges de Sousa “Navigation scheme for the LSTS SEACON vehicles: theory and application”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

63. A. J. Sousa, L. Madureira, J. Coelho, J. Pinto, J. Pereira, J. Borges Sousa, and P. Sousa Dias, “LAUV: the man-portable Autonomous Underwater Vehicle”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April, 2012.

64. J. Braga, P. Calado, P.B. Sujit, and J. Borges de Sousa, “Fault tolerant area coverage using underwater vehicles”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

65. J. Pinto, P. Calado, J. Braga, P. Sousa Dias, R. Martins, and E. R. B. Marques, “Implementation of a control architecture for networked vehicle systems”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

66. J. Estrela da Silva, Daniel E. Lucani, P. B. Sujit , and J. Borges de Sousa, “Trajectory optimization for data retrieval applications: it is all about where/who loads the mule”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

67. M. Kothari, J. Pinto, V. S. Prabhu, P. Calado, J. Borges de Sousa , and P. B. Sujit, “Robust Mission Planning for Underwater Applications: Issues and Challenges”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

68. S. Chatzichristofis, A. Kapoutsis, E. Kosmatopoulos, L. Doitsidis, D. Rovas , and J. Borges de Sousa, “The NOPTILUS project: autonomous multi-AUV navigation for exploration of unknown environments”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

69. J. Estrela da Silva, J. Borges de Sousa , and F. Lobo Pereira, “Experimental results with value function based control of an AUV”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

70. J. González, I. Masmitjà, S. Gomáriz, E. Molino, J. Del Río, A. Mànuel, J. Busquets, A. Guerrero, F.López, M. Carreras, D. Ribas, A. Carrera, C. Candela, P. Ridao, J. Borges de Sousa, P. Calado, J. Pinto, A. Sousa, R. Martins, D. Borrajo, A. Olaya, B. Garau, I. González,S. Torres, K. Rajan, M. McCann , and J. Gilabert, “AUV based multi-vehicle collaboration: Salinity studies in Mar Menor Coastal lagoon”, Proceedings of the IFAC Workshop - Navigation, Guidance and Control of Underwater Vehicles (NGCUV 2012), Porto, April 2012.

71. P. McGillivary, J. Borges de Sousa, S. Wackowski, and G. Walker, “Advances in small remotely piloted aircraft communications and remote sensing in maritime environments including the Arctic”, AGU Fall conference, San Francisco, December 2011. (Abstract).

72. R. Bencatel, J. Borges de Sousa, M. Faiedz, and A. R. Girard, “Formation control with collision avoidance”, IEEE Conference on Decision and Control, December 2011.

73. P. Sousa Dias, E. R. B. Marques, R. Martins, R. Bencatel, and J. Borges de Sousa, “Tools for UAV operations”, Proceedings of the First Workshop on Research, Development and Education on Unmanned Aerial Systems (RED-UAS 2011), Seville, Spain, December 2011.

74. J. Borges de Sousa, “Mixed initiative control of networked vehicles for ISR appplications”, Proceedings of NATO SET-176 workhop, Cardiff, Whales, November 2011.

75. J. Gilabert, S. Gomariz, E. Molino, J. del Río, A. Manuel, M. Carreras, P. Ridao, J. Borges de Sousa, R. Martins, D. Borrajo, A. Olaya, B. Garau, I. González, J. Busquets, A. Guerrero, F. García-Córdova and K. Kajan,”AUV-2011-Underwater Robotics

experiment in the Mar Menor Coastal Lagoon", MARTECH workshop, Cadiz. Spain, September 22-23, 2010.

76. P. B. Sujit, A. J. Healey, and J. Borges de Sousa, "AUV docking on a moving submarine using a K-R navigation function", Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, San Francisco, United States of America, September 2011.
77. R. Martins, P. Sousa Dias, J. Pinto, P.B. Sujit , and J. Borges de Sousa, "Technologies for ASV and AUV cooperation", IROS 2011 Workshop on Robotics for Environmental Monitoring, San Francisco, United States of America, September 2011.
78. R. Bencatel, J. Borges de Sousa, Mariam Faiedz, and Anouck Girard, "Shear Wind Estimation", AIAA Guidance and Control Conference, 2011.
79. J. Estrela da Silva and J. Borges de Sousa, "On the numerical synthesis of optimal controllers", Proceedings of the PHYSCON 2011 conference, Leon, Spain, 2011.
80. J. Estrela da Silva and J. Borges de Sousa, "Dynamic programming techniques for feedback control", Proceedings of the IFAC World Congress, Rome, 2011.
81. P. Calado, R. Gomes, M. B. Nogueira, J. Cardoso, P. Teixeira, P. B. Sujit, and J. Borges de Sousa: "Obstacle avoidance using echo sounder sonar", Proceedings of the IEEE OCEANS'2011 Conference, Santander, 2011.
82. R. Martins, J. Borges de Sousa, C. Carvalho Afonso, and M. Incze, "REP10 AUV: Shallow water survey with a fleet of heterogeneous autonomous vehicles", Proceedings of the IEEE OCEANS'2011 Conference, Santander, 2011.
83. P. Calado and J. Borges de Sousa, "Leader-follower control of underwater vehicles over acoustic communications", Proceedings of the IEEE OCEANS'2011 Conference, Santander, 2011.
84. R. Gonçalves, J. Borges de Sousa, S. Ferreira, J. Pinto, and G. M. Gonçalves, "Authority sharing in mixed initiative control of multiple uninhabited aerial vehicles", HCI International 2011, Hilton Orlando Bonnet Creek, Orlando, Florida, United States of America, 9-14 July, 2011.
85. Y. Geng, R. Deurloo, L. Bastos, and J. Borges de Sousa, "A Low-Cost MEMS IMU/DVL/Pressure Sensor Integrated Navigation System for Autonomous Underwater Vehicle", Proceedings of the 2011 International Technical Meeting of The Institute of Navigation, San Diego, CA, January 2011, pp. 703-708.
86. C. Carvalho Afonso and J. Borges de Sousa, "Networked vehicle systems for maritime applications", 9th Underwater Battlespace Conference, Rome, Italy, January 24-26, 2011 (Abstract).
87. J. Estrela da Silva and J. Borges de Sousa, "A dynamic programming approach for the control of autonomous vehicles", Proceedings of the CDC 2010 Conference, Atlanta, United States of America, December 2010.
88. R. Gomes, F. Lobo Pereira, and J. Borges de Sousa, "A model predictive control framework for AUV formation control", Proceedings of the 9th Portuguese Conference on Automatic Control - CONTROLO'2010, Coimbra, September 2010.
89. J. Borges de Sousa and Ricardo Martins, "Concepts and tools for coordination and control of networked ocean-going vehicles", Proceedings of 2010 Autonomous Underwater Vehicles Workshop, Monterey, United States of America, September 2010.
90. J. George, P.B. Sujit, and J. Borges de Sousa, "Coalition formation with communication delays and maneuvering targets", Proceedings of the AIAA Guidance, Navigation and

Control Conference and Exhibit", Toronto, Ontario, Canada, AIAA-2010-8422, August 2010.

91. R. Castro, J. Borges de Sousa, R. Araújo, F. Lobo Pereira, and D. Freitas, "Hybrid modeling, control and estimation in ABS Applications based on in-wheel electric motors", Proceedings of the 2010 MTNS Conference, Budapest, July, 2010.
92. P. B. Sujit, J. Borges de Sousa, and B. Maciel, "Intelligent multiple AUV path planning", Proceedings of the 2010 MTNS Conference, Budapest, July, 2010.
93. J. George, P. B. Sujit, and J. Borges de Sousa, "Multiple UAV coalition formation with communication ranges and moving targets", American Control Conference, Baltimore, United States of America, June 2010.
94. J. George, P.B. Sujit, and J. Borges de Sousa, "Effect of search strategies on multiple UAV coalition formation", Proceedings of the International Conference on Unmanned Aerial Vehicles, Dubai, June 2010.
95. Y. Geng and J. Borges de Sousa, "Simulation of an integrated navigation system for autonomous underwater vehicle", Proceedings of the 8th IEEE International Conference on Control & Automation, Xiamen, China, June 9-11, 2010.
96. P. V. Teixeira, D. V. Dimarogonasy, K. H. Johansson, and J. Borges de Sousa, "Multi-agent coordination with event-based communication", Proceedings of the American Control Conference, Baltimore, United States of America, June 2010.
97. E. Pereira and J. Borges de Sousa, "Reallocations in teams of UAVs using dynamic programming and mixed initiative interactions", Proceedings of the International Conference on Autonomous and Intelligent Systems, AIS 2010, Póvoa de Varzim, Portugal, June 21-23, 2010.
98. Y. Geng and J. Borges de Sousa, "Hybrid derivative-free extended Kalman filter for USBL/INS tightly-coupled integration in underwater vehicles", Proceedings of the International Conference on Autonomous and Intelligent Systems, AIS 2010, Póvoa de Varzim, Portugal, June 21-23, 2010.
99. J. Estrela da Silva and J. Borges de Sousa, "A dynamic programming approach for the control of autonomous vehicles on planar motion", Proceedings of the International Conference on Autonomous and Intelligent Systems, AIS 2010, Póvoa de Varzim, Portugal, June 21-23, 2010.
100. P. Sousa Dias, J. Pinto, R. Gonçalves, and J. Borges de Sousa, "Enabling a Dialog - A C2I infrastructure for unmanned vehicles and sensors", Proceedings of the International Conference on Autonomous and Intelligent Systems, AIS 2010, Póvoa de Varzim, Portugal, June 21-23, 2010.
101. Y. Geng, R. Martins, J. Borges de Sousa, "Accuracy analysis of DVL/IMU/magnetometer integrated navigation system using different IMUs in AUV", Proceedings of the 8th IEEE International Conference on Control and Automation (ICCA), Xiamen, China, June 9-11, 2010, pp. 516-521.
102. J. George, J. Pinto, P. B. Sujit, and J .Borges de Sousa, "Multiple UAV coalition formation strategies", Autonomous Agents and Multi-Agent Systems, Toronto, Canada, May 2010.
103. P. V. Teixeira, D. V. Dimarogonasy, K. H. Johansson, and J. Borges de Sousa, "Event-based motion coordination of multiple underwater vehicles under disturbances", Proceedings of the OEANS 2010, Sydney, May 2010.

104. M. Borges Nogueira, J. Borges Sousa, and F. Lobo Pereira, “Cooperative autonomous underwater vehicle localization”, Proceedings of the IEEE OCEANS’2010 Conference, Sydney, May 2010.

105. G. Gonçalves and J. Borges de Sousa, “Quality assurance and validation issues in the development of networked vehicle systems”, Proceedings of the Internacional Conference on Automation, Quality and Testing, Robotics, AQTR 2010, Cluj-Napoca, Romania, May 28-30, 2010.

106. J. Pinto, R. Martins, and J. Borges de Sousa, “Towards a REST-style architecture for networked vehicles and sensors”, Proceedings of the First International Workshop on the Web of Things (WoT 2010), Mannheim (Germany), March 29 – April 2010.

107. P. B. Sujit, J. Borges de Sousa, and F. Lobo Pereira, “Search strategies on multiple UAV search and destroy missions”, Proceedings of the Third International Symposium on Unmanned Aerial Vehicles, 2010.

108. R. Gonçalves, P. Sousa Dias, J. Pinto, G. M. Gonçalves, and J. Borges Sousa, “A STANAG 4586 Compliant Command and Control Operational Interface for Multiple UAVs” , HUMOUS'10 conference Humans Operating Unmanned Systems ISAE - ONERA, Toulouse, France, April 26-27, 2010.

109. P. B. Sujit, J. Borges de Sousa, and F. Lobo Pereira, “Coordination strategies between UAV and AUVs for ocean exploration”, Proceedings of the 2009 European Control Conference, Budapest, 2009.

110. J. Borges de Sousa, J. Estrela da Silva, and F. Lobo Pereira, “New problems of optimal path coordination for multi-vehicle systems”, Proceedings of the 2009 European Control Conference, Budapest, 2009.

111. A. Tinka, S. Diemer, L. Madureira, E. R. B. Marques, J. Borges de Sousa, R. Martins, J. Pinto, J. Estrela da Silva, P. Saint-Pierre, and A. Bayen, “Viability-based computation of spatially constrained minimum time trajectories for an autonomous underwater vehicle: implementation and experiments”, Proceedings of the American Control Conference, 2009.

112. P. B. Sujit, J. Borges de Sousa, and F. Lobo Pereira, “UAVs and AUVs coordination for ocean exploration”, Proceedings of the IEEE OCEANS’2009 Conference, Bremen, Germany.

113. D. Hlavac and J. Borges de Sousa, “Portable control console for autonomous ocean-going vehicles”, Proceedings of the IEEE OCEANS’2009 Conference, Bremen, Germany.

114. J. Pinto, P. Sousa Dias, J. Borges Sousa, and F. Lobo Pereira, “Large scale data collection using networks of heterogeneous vehicles and sensors”, Proceedings of the IEEE OCEANS’2009 Conference, Bremen, Germany.

115. Bernardo Maciel and J. Borges Sousa, “Sensor-based problems and techniques for autonomous underwater vehicles”, Proceedings of the IEEE OCEANS’2009 Conference, Bremen, Germany.

116. R. Martins, P. Sousa Dias, E. R. B. Marques, J. Pinto. J. Borges de Sousa, and F. Lobo Pereira, “IMC: a communication protocol for networked vehicles and sensors”, Proceedings of the IEEE OCEANS’2009 Conference, Bremen, Germany.

117. J. Borges de Sousa and J. Estrela da Silva, “Cooperative path planning in the presence of adversarial behavior”, Proceedings of 4th International Conference on Physics and Control, Catania, 2009.

118. P. B. Sujit, J. Borges de Sousa, and C. M. Kirsch, “ASV and Quad-Rotors Coordination”, Proceedings of the Maritime Systems and Technology Conference, Stockholm, Sweden, October 2009.

119. C. Carvalho Afonso and J. Borges de Sousa, “The SeaCon AUV system: technology evaluation, training and development of concepts of operation for the Portuguese Navy”, Proceedings of the Maritime Systems and Technology Conference, Stockholm, Sweden, October 2009.

120. J. Borges de Sousa, G. M. Gonçalves, and J. Passos Morgado, “Teamed unmanned vehicles for cooperative missions in a network environment”, Proceedings of the Maritime Systems and Technology Conference, Stockholm, Sweden, October 2009.

121. L. Madureira, A. Sousa, G. M. Gonçalves, and J. Borges de Sousa, “Xtreme: an AUV system for network centric operations”, Proceedings of the Maritime Systems and Technology Conference, Stockholm, Sweden, October 2009.

122. A. Ferreira and J. Borges de Sousa, “Modeling an autonomous surface vehicle for networked co-operative Missions”, Proceedings of the Maritime Systems and Technology Conference, Stockholm, Sweden, October 2009.

123. J. Borges de Sousa and J. Estrela da Silva, “Cooperative path planning in the presence of adversarial Behavior”, Proceedings of the 4th International Conf. Physics and Control - 2009, PhysCon2009, Italy, Catania, 1-4 September, 2009, pp. 1-6. IPACS Electronic Library http://lib.physcon.ru/?item=1974

124. R. Martins, P. Sousa Dias, J. Pinto, P. B. Sujit, and J. Borges de Sousa, “Multiple underwater vehicle coordination for ocean exploration”, IJCAI Robotics Exhibition and Workshop, Pasadena, CA, United States of America, July 2009.

125. P. B. Sujit, J. Borges de Sousa, and F. Lobo Pereira, “Multiple UAV teams for multiple tasks”, Proceedings of the IEEE Symposium on Computational Intelligence for Security and Defence Applications, Ottawa, Canada, July 2009.

126. P. B. Sujit, J. Borges de Sousa and F. Lobo Pereira, “Multiple UAV coalition formation for multiple tasks”, Proceedings of the Centenary International Conference and Exhibition on Aerospace Engineering, Bangalore, India, May 2009.

127. J. Correia; R. Bencatel; A.R.S. Marçal; A. T. Puga; J. Borges de Sousa; and G. M. Gonçalves, “Video based motion tracking and river detection with an unmanned aerial vehicle”, Proceedings of the 33rd International Symposium on Remote Sensing of Environment, May 4-9, 2009, pp.:1281-1284.

128. E. Pereira and J. Borges de Sousa, “Dynamic reallocation in teams of unmanned air vehicles”, Proceedings of the AIAA Conference Unmanned…Unlimited, Seattle, United States of America, April 2009.

129. E. Pereira, R. Bencatel, J. Correia, L. Félix, G. M. Gonçalves, J. Morgado, and J. Borges de Sousa, “Unmanned Air Vehicles for coastal and environmental research”, Proceedings of the 10th International Coastal Symposium (ICS 2009), Lisbon, April, 2009 (also in Jornal of Coastal Research, Special issue 2009).

130. L. Madureira, A. Sousa, J. Borges de Sousa, and G. M. Gonçalves, “Low cost autonomous underwater vehicles for new concepts of coastal field studies”, Proceedings of the 10th International Coastal Symposium (ICS 2009), Lisbon, April, 2009 (also in Jornal of Coastal Research, Special issue 2009).

131. J. Borges de Sousa and J. Estrela da Silva, “Optimal path coordination problems”, Proceedings of the IEEE Conference on Decision and Control, Cancun, December 2008.

132. P. Sousa Dias, J. Borges de Sousa, and G. M. Gonçalves, “Low cost Autonomous Underwater Vehicles for oceanographic and harbour surveillance missions”, Proceedings of the Maritime Systems and Technology Conference 2008, Cadiz, Spain, November 2008.

133. J. Borges de Sousa, G. M. Gonçalves, and F. Lobo Pereira “Operations with autonomous vehicles in the response to maritime incidents”, Proceedings of the Maritime Systems and Technology Conference 2008, Cadiz, Spain, November 2008.

134. P. Sousa Dias, J. Borges de Sousa, and G. M. Gonçalves, “Networked Operations (with Neptus)”, Proceedings of the Maritime Systems and Technology Conference 2008, Cadiz, Spain, Novembro 2008.

135. R. Bencatel, J. Correia, J. Borges de Sousa, G. M. Gonçalves, and E. Pereira, “Video tracking control algorithms for UAV”, Proceedings of the 1st Annual Dynamic Systems and Control Conference, Ann Harbour, United States of America, 2008.

136. Z. Zheng, J. Estrela Silva, J. Borges de Sousa, and A. R. Girard, “Underwater vehicle autopilots with adaptive dynamic surface control”, Proceedings of the 1st ASME Annual Dynamic Systems and Control Conference, Ann Harbour, USA, 2008.

137. G. M. Gonçalves, J. Borges Sousa, and F. Lobo Pereira, “Cooperative control of unmanned aerial vehicles”, Proceedings of the 48th Israel Annual Conference on Aerospace Sciences, February 27 and 28, 2008 Tel-Aviv & Haifa, Israel.

138. J. Borges de Sousa “Dynamic optimization for path coordination problems”, Proceedings of the IFAC world congress, Seul, July 2008.

139. J. Borges de Sousa, G. M. Gonçalves, and F. Lobo Pereira “Autonomous vehicles in the response to maritime incidents”, Proceedings of the NGCUV08, – Navigation, Guidance & Control of Underwater Vehicles 2008 Conference, Limerick, Ireland, April 2008.

140. P. Almeida, R. Bencatel, G. M. Gonçalves, J. Borges Sousa, and Christoph Ruetz, “Experimental results on command and control of unmanned air vehicle systems”, Proceedings of the 6th IFAC Symposium Intelligent Autonomous Vehicles, Toulouse, France, September 2007.

141. J. Estrela da Silva, B. Terra, R. Martins, and J. Borges de Sousa, “Modeling and Simulation of the LAUV autonomous underwater vehicle”, Proceedings of the 13th IEEE IFAC International Conference on Methods and Models in Automation and Robotics, Szczecin, Poland, August 2007.

142. R. Gonçalves, M.d.R. de Pinho, and J. Borges Sousa, “An Applet for Optimal Control Problems”, Proceedings of the 4th WSEAS / IASME International Conference on Engineering Education, July 24-26, 2007.

143. P. Almeida, R. Bencatel, G. M. Gonçalves, J. Borges de Sousa, E. Pereira, J. Passos Morgado, and D. Coutinho, “Apollo framework for Unmanned Air Vehicle systems: experimental results”, Proceeding of UAV 2007 Conference, Paris, June 2007.

144. R. Gonçalves, A. Sousa, G. M. Gonçalves, J. Borges de Sousa, and P. Sousa Dias, “Real-time projection of video images in virtual scenarios”, Fraunhofer IFF. The 10th IFF Science Days, Innovative Development Trends in VR/AR Technology, Magdeburg, Germany, June 27-28, 2007, pp 201-208

145. E. R. B. Marques, J. Pinto,S. Kragelund, P. Sousa Dias, L. Madureira, A. Sousa, M. Correia, H. Ferreira, R. Gonçalves, D. Horner, A. Healey, G. M. Gonçalves, and J. Borges de Sousa, “AUV control and communication using underwater acoustic networks”, Proceedings of the IEEE OCEANS’2007 Conference, Aberdeen, Scotland, 2007.

146. A. R. Girard, J. Borges de Sousa, and J. Estrela da Silva, “Autopilots for underwater vehicles: dynamics, configurations, and control”, Proceedings of the IEEE OCEANS’2007 Conference, Aberdeen, Scotland, 2007.

147. A. Ferreira, R. Martins, E. R. B. Marques, J. Pinto, A. Martins, J. Almeida, J. Borges de Sousa and E. Pereira da Silva, “Swordsfish: an autonomous surface vehicle for network centric operations”, Proceedings of the IEEE OCEANS’2007 Conference, Aberdeen, Scotland, 2007.

148. J. Borges de Sousa and G. M. Gonçalves, “Mixed initiative control of unmanned air and ocean going vehicles: models, tools and experimentation”, RTO AVT-146 Symposium Platform Innovations and System Integration for Unmanned Air, Land and Sea Vehicles, Florence, Italy, May 2007.

149. R. Girard and J. Borges de Sousa, “Modeling team adversarial actions in SEAD operations”, RTO AVT-146 Symposium Platform Innovations and System Integration for Unmanned Air, Land and Sea Vehicles, Florence, Italy, May 2007.

Talks

“Mobile connectivity and mobile locality in networked systems: are we missing something”, Plenary Lecture at Control 2018 - 12th UKACC International Conference on Control, Sheffield, UK, September 2018.

Unmanned air vehicle: From vehicles to systems”, plenary session ACNAAV 2015, Workshop on Advanced Control and Navigation for Autonomous Aerospace Vehicles, Seville, Spain, June 2015.

Large scale multi-vehicle operations in remote areas: coupling controls, computations, communications, and power management, ICode Thematic Day, Optimization and decision making in large scale systems - Applications to Transportation Systems, CentraleSupélec – Gif Campus, France, May, 26, 2015.

Networked Autonomous Systems for Persistent Ocean Observations, NTNU OCEAN, Knowledge for a sustainable ocean, Tyholt, Trondheim, Norway, May 4–7, 2015.

Experiments in autonomy and multi-vehicle systems: reports from the field, University of Agder, Norway, March 2013.

Sistemas de veículos não tripulados: I&D e desenvolvimento de capacidades, Instituto de Altos Estudos Militares, Lisbon, October 2014.

O projecto NETMAR:experiência e lições aprendidas, Universidade da Corunha. Coruña, Spain, October 2014.

Design and operation of networked maritime vehicle systems”, Urals University, Ekaterinbug, Russia, September 2014.

Networked vehicle systems for oceanographic field studies”, Universidade do Algarve, Portugal, May 2014.

Networked vehicle systems for new observation and intervention capabilities, ABB Research, Oslo, Norway, March 2014.

Networked vehicle systems for maritime operations: design and implementation, Royal Institute Of Technology, Stockholm, Sweden, March 2014.

Networked vehicle systems for maritime operations: design and implementation, NASA-Ames, California, US, January 2014.

Networked vehicle systems for maritime operations: design and implementation, National Technical University of Science and Technology, Trondheim, January 2014.

Networked vehicle systems for science and surveillance, DOER Marina, Alameda, Califórnia, US, January 2014.

Towards a sustained presence in the oceans, Lisbon Atlantic Conference, Lisbon, December 2013.

O futuro da observação dos oceanos, Centro de Estudos Estratégicos do Atlântico, Instituto Superior de Ciências Sociais e Políticas, Universidade de Lisboa, November 11th, 2013.

Developing a National Ocean Policy for Moçambique: Balancing Protection of Africa's Largest Marine Protected Areas with Pirates, Shipping and Oil & Gas Development, Center for Ocean Solutions, University of Stanford, October 2013.

Control and computation challenges in networked vehicle systems, Department of Computer Science, University of Southern California, October 2013.

Looking to the future of autonomous oceanographic field measurements: capabilities=f(vehicles, networks, interactions), MBARI, October, 2013.

An overview of the NECSAVE project, *An overview of the Noptilus projec*t and *An overview of the C4C project*, EDA/FP7 meeting on Unmanned Maritime Systems, Brussels, 2013.

Networking ocean and air vehicles: challenges and opportunities, ICAUV 2012 International Conference on Autonomous Unmanned Vehicles, February 24-25, 2012, Bangalore, India.

An overview of the NECSAVE project, *An overview of the Noptilus projec*t and *An overview of the C4C project*, EDA/FP7 meeting on Unmanned Maritime Systems, Brussels, 2012.

Coordination challenges in networked vehicle systems: are we missing something? Workshop on the Control of Cyber-Physical Systems, October 20-21, 2012 University of Notre Dame London Centre.

Networking operations with autonomous underwater and air vehicles, Workshop Vehiculos autónomos submarinos: Nuevos avances tecnológicos. Ejercicio "AUV 2011", Centro de Alto Rendimiento Infanta Cristina, Murcia, Spain, November 2011.

Networking vehicles systems at Porto University, MBARI, February 3rd, 2011.

Networking vehicles and systems for a persistent presence in the ocean, Marine & Environmental Sensing Technology Workshop: Gaps & Opportunities National Centre for Sensor Research, Dublin City University, March 29th, 2011.

An update on research and development at the Underwater Systems and Technologies Laboratory at Porto University, Mechanical Engineering Department, University of California at Berkeley, 2010.

Networking vehicles and systems, Civil and Environmental Engineering Department, University of California at Berkeley, 2010.

Towards a sustained presence in the ocean: sensor systems on networked vehicles, Department of Automatic Control, University of Lund, 2010.

Sensor systems on networked vehicles, 25th Intelligence Sensing Programme, London, UK, October, 2008.

Sensor systems on networked vehicles, Marinera project, Dublin, Ireland, October, 2008.

Sensor systems on networked vehicles, Portuguese Ministry of Defense, Lisbon, October, 2008.

Research and development at the Underwater Systems and Technologies Laboratory at Porto University, Centro de Instrução Tática Naval na Base Naval de Lisboa, MWC – CITAN Bilateral meeting Portuguese and Royal Navy, October, 2007.

Networking vehicles and systems, Naval Undersea Research Center, La Spezia, Italy, November, 2007.

Dynamic optimization techniques in the coordination and control of network vehicle systems, invited talk at the workshop Modeling and control of physical networks, satellite event of Hybrid Systems: Computation and Control (HSCC) 2007, Pisa, Italy, April, 2007.

Research and development at the Underwater Systems and Technologies Laboratory at Porto University, Civil Engineering Department, University of California at Berkeley, March 2007.

Academic Activities

Instruction

Undergraduate Courses (Porto University):

- Department of Mechanical Engineering: Programming languages (Spring 1990)
- Department of Electrical and Computer Engineering: Mathematical Analysis I (1991-93, 2001-04), Mathematical Analysis II (Spring 1990-93, 2000-16), Circuits and Systems (Spring 1990), Numerical Analysis (Spring 1990, Fall 1998), Mathematical Analysis III (1997, 1998, 2003-5), Optimal Control (Spring 1991, 1992, 1993), Optimization Methods (Fall 1991, 1992), Probabilities and Statistics (Fall 1990), Logistics (2003), Methods and Analysis of Production Systems (2002-5), Systems Engineering and Project Management (2005-2013).

Graduate Courses:

- Departamento de Engenharia Electrotécnica e de Computadores, Porto University: Hierarchical and Decentralized Control (Spring 1991), Mobile Robots (Fall 1994), Hybrid Systems (Spring 08, Spring 09, Spring 16).
- Norwegian University of Science and Technology, TK 8109 Advanced Topics in Guidance and Control, Fall 2014.
- Dynamic optimization for control and reach set computation. Part of the 291E Civil Engineering Course, University of California at Berkeley, (April 2004).

Short Courses (University of California at Berkeley):

- Differential Games: The Krasovskii-Subbotin Framework. Short course, University of California at Berkeley, July 1999.
- Dynamic optimization for control and reach set computation. Short course, University of California at Berkeley, April 2003.

University Committees

Faculdade de Engenharia da Universidade do Porto: Member of the Departamento de Engenharia Electrotécnica e de Computadores Advisory Board. 1998-1999.

Cooperation and leadership

Chief scientist on the Schmidt Ocean Institute Cruise Exploring Fronts with Multiple Robots, May 28th – June 17, 2018.

Launched the University of Porto Oceans Distinguished Lecture Series in May 2015.

Member of the presidential delegation that visited Norway, May 2015.

Established a collaborator agreement with the NASA-Ames (2016). This cooperation concerns ocean observation and life sciences.

Established a collaborator agreement with the Instituto Português do Mar e da Atmosfera (2015). This cooperation concerns the ocean operations with unmanned vehicles.

Established a collaborator agreement with the Norwegian University of Science and Technology (2013). This cooperation concerns the coordination and control of networked unmanned air and ocean vehicles.

Established a collaborator agreement with the Monterey Bay Aquarium Research Institute (2013). This cooperation concerns the coordination and control of networked vehicles and deliberative on-board planning.

Porto University representative for the cooperation with the Portuguese Air Force (2008-) and the Portuguese Navy (2009-). This cooperation concerns the coordination and control of networked submarines and air vehicles.

Member of the panel, appointed by the Portuguese government, to write the report “A strategy for the ocean”, 2003.

Established a joint research program between Porto University and UC-Berkeley for advancing the application of hybrid systems theory to the coordinated control of multiple autonomous underwater vehicles.

Led the setup of the Underwater Technology Laboratory at Porto University in 1997. Research addresses the application of recent advances in hybrid controller synthesis and related software tools to the coordinated operation of Autonomous Underwater Vehicles for Coastal Oceanography.

Led the setup of the Laboratory of Enterprise Engineering at Porto University in 1996. Research addresses the application of concepts from Systems Engineering and Control to the organization and coordination of SMEs and business processes.

Other Professional Activities

Advisory boards

Member of the Advisory Committee of Swedish Marine Robotics Center of Excellence (started in 2016).

Expert groups

Member of the Expert group on the evolution of the Copernicus Security Service, 2017.

Member of the International Evaluation Committee of the Aeronautics and Information Systems Division, FOI, Sweden, 2015.

Conferences and workshops

Chair of the 2018 IEEE OES Autonomous Underwater Vehicle Symposium, Rectory Building, University of Porto, Porto, Portugal, November 2018.

Chair of the International Program Committee of the IFAC Workshop Navigation, Guidance and Control of Underwater Vehicles, Girona, 2015.

Chair of the International Conference Oceans: challenges and opportunities, Porto, 2013.

Member of the Programme Committee of the International Workshop Research, Development and Education on Unmanned Aerial Systems, RED-UAS 2013, Compiegne, France.

Member of the International Program Committee 2013 International Conference on Unmanned Aircraft Systems May 28-31, 2013, Grand Hyatt Atlanta Atlanta, Georgia, USA.

Chair of the IFAC Workshop Navigation, Guidance and Control of Underwater Vehicles, Porto, 10-12 April, 2012.

Member of the Technical Program Committee of Second International Conference on Autonomous and Intelligent Systems, AIS 2012.

Member of the Programme Committee of the International Workshop Research, Development and Education on Unmanned Aerial Systems, RED-UAS 2011, Sevilha, Spain.

Member of the Technical Program Committee of Second International Conference on Autonomous and Intelligent Systems, AIS 2011, June 21 - 23, 2011, Burnaby, British Columbia, Canada.

Member of the Technical Program Committee of the International Conference on Autonomous and Intelligent Systems, AIS 2010, June 21-23, 2010.

Co-chair of the 2nd UTEN Workshop 2010 - Marine and Bio-Science Research Collaboration & Network Building for Commercialization, University of Algarve, September 27-28, 2010.

Chair of the NATO Lecture Series Multisensor Fusion: Advanced methodologies and applications, Porto, 6- 7 June 2011.

Chair of the workshop “Oportunidades e desafios na observação dos oceanos”, Porto, July 2009.

Member of the Technical Program Committee of ROBOCOMM, the Third International Conference on Robot Communication and Coordination, (2009).

Member of the International Technical Program Committee of 2008 IEEE Conference on Automation Science and Engineering, Washington DC, August 23-26, 2008.

Member of the Committee do IFAC Workshop on Navigation, Guidance and Control of Underwater Vehicles, NGCUV 2008, University of Limerick, Ireland, April 8-9, 2008.

Member of the Technical Program Committee of ROBOCOMM, the First International Conference on Robot Communication and Coordination (2007).

Editor

Associate Editor, IEEE Journal of Ocean Engineering. 2017-.

Associate Editor, IEEE Robotics and Automation Conference, 2016, 2017.

Associate Editor, IEEE/RSJ International Conference on Intelligent Robots and Systems, Hamburg, 2015, 2016, 2017.

Associate Editor, International Conference on Unmanned Aircraft Systems, 2015, 2016, 2017, 2018.

Member of the editorial board of the book *Coordination Control of Distributed Systems* to be published by Springer Verlag in 2014.

Member of the editorial board of Unmanned Systems Journal, World Scientific,

Referee

IEEE Control Systems Magazine. 1999, 2002.

Automatica. 1999, 2000, 2005.

IEEE Transactions of Systems, Man and Cybernetics, 2000.

IEEE Transactions on Automatic Control, 2002.

IEEE Transations on Control Systems Technology, 2006.

IEEE Transactions on Automation Science and Engineering, 2006.

IEEE Control Systems Magazine, 2006.

Journal of Field Robotics, 2006, 2009.

Journal of Field Robotics, 2006, 2009-2013.

Professional organizations

Institute of Electrical and Electronics Engineers (IEEE). Member of the Oceanic Engineering Society.

International Federation of Automatic Control (IFAC)

Association for Unmanned Vehicle Systems International (AUVSI) – member of the Maritime Advisory Committee.

Associação Portuguesa de Controlo Automático.

International Society for Dynamic Games.