

# Juan G. Victores

## Journal Articles

1. Eugenio Marinetto, Juan G. Victores, Mónica García-Sevilla, Mercedes Muñoz, Felipe Ángel Calvo, Carlos Balaguer, Manuel Desco, and Javier Pascau. Technical Note: Mobile accelerator guidance using an optical tracker during docking in IOERT procedures. *Medical Physics*, 44(10):5061–5069, 2017
2. Konstantinos Loupos, Anastasios D Doulamis, Christos Stentoumis, Eftychios Protopapadakis, Konstantinos Makantasis, Nikolaos D Doulamis, Angelos Amditis, Philippe Chrobocinski, Juan Victores, Roberto Montero, Elisabeth Menendez, Carlos Balaguer, Rafa Lopez, Miquel Cantero, Roman Navarro, Alberto Roncaglia, Luca Belsito, Stephanos Camarinopoulos, Nikolaos Komodakis, and Praveer Singh. Autonomous robotic system for tunnel structural inspection and assessment. *International Journal of Intelligent Robotics and Applications*, pages 1–24, 2017
3. David Estevez, Juan G. Victores, Santiago Morante, and Carlos Balaguer. Robot Devastation: Using DIY Low-Cost Platforms for Multiplayer Interaction in an Augmented Reality Game. *EAI Endorsed Transactions on Collaborative Computing*, 15(3):1–5, 2015
4. Santiago Morante, Juan G. Victores, and Carlos Balaguer. Cryptobotics: Why robots need cyber safety. *Frontiers in Robotics and AI*, 2(23):1–4, 2015
5. Roberto Montero, Juan G. Victores, Santiago Martínez, Alberto Jardón, and Carlos Balaguer. Past, Present and Future of Robotic Tunnel Inspection. *Automation in Construction*, 59:99–112, 2015
6. Santiago Morante, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. Humanoid Robot Imitation through Continuous Goal-Directed Actions: An Evolutionary Approach. *Advanced Robotics*, 29(Special issue: Humanoid robots):303–314, 2015
7. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. An Accessible Interface For Programming An Assistive Robot. *Journal of Accessibility and Design for All (JACCES)*, 4(3):161–176, 2014
8. Jonathan Crespo, Ramon Barber, Alberto Jardón, and Juan G. Victores. Algorithm for Graph Visibility Obtainment from a Map of Non-Convex Polygons. *Journal of Mechanical Engineering and Robotics Research*, 3(2):150–170, 2014
9. Santiago Martínez, Alberto Jardón, Juan G. Victores, and Carlos Balaguer. Flexible Field Factory for Construction Industry. *Assembly Automation*, 33(2):175–183, 2013
10. Alberto Jardón, Juan G. Victores, Santiago Martínez, and Carlos Balaguer. Experience acquisition simulator for operating microtunneling boring machines. *Automation in Construction*, 23(0):33–46, 2012
11. Alberto Jardón, Juan G. Victores, Santiago Martínez, Antonio Giménez, and Carlos Balaguer. Personal Autonomy Rehabilitation in Home Environments by a Portable Assistive Robot. *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, 42(4):561–570, 2011
12. Juan G. Victores, Santiago Martinez, Alberto Jardón, and Carlos Balaguer. Robot-aided tunnel inspection and maintenance system by vision and proximity sensor integration. *Automation in Construction*, 20(5):629–636, 2011

## Patents

1. Alberto Jardón Huete, Santiago Martínez, Juan G. Victores, Carlos Balaguer, Rafael Portero, and Marc Martí. Sistema y método para la verificación de la trayectoria de un tunel, 2014
2. Juan G. Victores, Santiago Martinez, Alberto Jardón, and Carlos Balaguer. Tool and method for the automatic remote application of strips of fibre-reinforced polymer tape, comprising the dispensing of epoxy adhesive, 2011

## Book Chapters

1. Raul Fernandez-Fernandez, Juan G. Victores, and Carlos Balaguer. New Trends and Challenges in the Automatic Generation of New Tasks for Humanoid Robots. In *Robocity16: Open Conference on Future Trends in Robotics*, pages 169–176. CSIC, Madrid, may 2016
2. David Estevez, Juan G. Victores, and Carlos Balaguer. A New Generation of Entertainment Robots Enhanced with Augmented Reality. In *RoboCity16: Open Conference on Future Trends in Robotics*, pages 129–136. CSIC, Madrid, may 2016
3. David Estevez, Juan G. Victores, and Carlos Balaguer. Future Trends in Perception and Manipulation for Unfolding and Folding Garments. In *RoboCity16: Open Conference on Future Trends in Robotics*, pages 333–340. CSIC, Madrid, may 2016
4. Roberto Montero, Juan G. Victores, Elisabeth Menéndez, and Carlos Balaguer. The Robot-Spect EU Project: Autonomous Robotic Tunnel Inspection. In *Robocity2030 13th Workshop EU robotic projects results*, pages 91–100. Leganés, 2015
5. Santiago Morante, Juan G. Victores, Santiago Martínez, and Carlos Balaguer. Force-sensorless friction and gravity compensation for robots. In *Advances in Intelligent Systems and Computing*, volume 418, chapter Robot 2015. Springer International Publishing, 2015
6. Alberto Jardón, Félix R. Cañadillas, Juan G. Victores, Santiago Martínez, and Carlos Balaguer. A Review of Eight Years of CEABOT Contest: A National Wide Mini Humanoids Competition. In Manuel A. Armada, Alberto Sanfeliu, and Manuel Ferre, editors, *ROBOT2013: First Iberian Robotics Conference*, pages 41–52. Springer International Publishing, 2014
7. Juan G. Victores, Félix R. Cañadillas, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Assistive Robot Multi-modal Interaction with Augmented 3D Vision and Dialogue. In Manuel A. Armada, Alberto Sanfeliu, and Manuel Ferre, editors, *ROBOT2013: First Iberian Robotics Conference*, pages 209–217. Springer International Publishing, Madrid, 2014
8. Carlos Balaguer and Juan G. Victores. Robotic tunnel inspection and repair. In *Technology Innovation in Underground Construction*, pages 445–460. CRC Press, 2010

## Conference Proceedings

1. David Estevez, Juan G. Victores, Raul Fernandez-Fernandez, and Carlos Balaguer. Robotic Ironing with 3D Perception and Force/Torque Feedback in Household Environments. In *2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, 2017
2. Elisabeth Menendez, Juan G. Victores, and Carlos Balaguer. Sistema robótico para la inspección y análisis estructural de túneles. In *Jornadas Nacionales de Robótica*, 2017

3. David Estevez, Juan G. Victores, and Carlos Balaguer. HORUS: Inspección robotizada de los trajes de protección del personal sanitario de pacientes en aislamiento de alto nivel, incluido el Ébola. In *Jornadas Nacionales de Robótica*, 2017
4. Elisabeth Menendez, Juan G. Victores, Roberto Montero, and Carlos Balaguer. Autonomous Robotic System with Tunnel Inspection Tool Positioning. In *Proceedings of the International Symposium on Automation and Robotics in Construction (ISARC)*, pages 655–662, Taipei, Taiwan, 2017
5. Roberto Montero, Elisabeth Menendez, Juan G. Victores, and Carlos Balaguer. Intelligent robotic system for autonomous crack detection and characterization in concrete tunnels. In *2017 IEEE International Conference on Autonomous Robot Systems and Competitions, ICARSC 2017*, pages 316–321. IEEE, 2017
6. David Estevez, Raul Fernandez-Fernandez, Juan G. Victores, and Carlos Balaguer. Robotic ironing with a humanoid robot using human tools. In *2017 IEEE International Conference on Autonomous Robot Systems and Competitions, ICARSC 2017*, pages 134–139. IEEE, 2017
7. David Estevez, Raul Fernandez-Fernandez, Juan G. Victores, and Carlos Balaguer. Improving and evaluating robotic garment unfolding: A garment-agnostic approach. In *2017 IEEE International Conference on Autonomous Robot Systems and Competitions, ICARSC 2017*, pages 210–215. IEEE, 2017
8. Raul Fernandez-Fernandez, David Estevez, Juan G. Victores, and Carlos Balaguer. Improving CGDA execution through Genetic Algorithms incorporating Spatial and Velocity constraints. In *2017 IEEE International Conference on Autonomous Robot Systems and Competitions, ICARSC 2017*, pages 290–295. IEEE, 2017
9. Raul Fernandez-Fernandez, David Estevez, Juan G. Victores, and Carlos Balaguer. Reducing the number of evaluations required for CGDA execution through Particle Swarm Optimization methods. In *2017 IEEE International Conference on Autonomous Robot Systems and Competitions, ICARSC 2017*, pages 284–289, 2017
10. Juan G. Victores, David Estevez, and Carlos Balaguer. A Lightweight Finite State Machine C++ Library aimed at Seamless Integration with Robotic Middlewares. In *Towards Humanoid Robots OS Workshop at HUMANOIDS 2016*, Cancun, nov 2016
11. Konstantinos Loupos, Angelos Amditis, Anastasios Doulamis, Philippe Chrobocinski, Juan G. Victores, Max Wietek, Panagiotis Panetsos, Alberto Roncaglia, Stephanos Camarinopoulos, Vassileios Kallidromitis, Dimitrios Bairaktaris, Nikolaos Komodakis, and Rafa Lopez. Integrated Robotic Solution for Tunnel Structural Evaluation and Characterization – ROBO-SPECT EC PROJECT. In *International Conference on Smart Infrastructure and Construction (ICSIC)*, Cambridge, 2016
12. David Estevez, Juan G. Victores, Santiago Morante, and Carlos Balaguer. Towards Robotic Garment Folding: A Vision Approach for Fold Detection. In *IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC)*, may 2016
13. Santiago Morante, Juan G Victores, and Carlos Balaguer. Automatic Demonstration and Feature Selection for Robot Learning. In *IEEE International Conference on Humanoid Robot - Humanoids*, pages 428–433, Seoul, 2015. IEEE
14. Konstantinos Loupos, Angelos Amditis, Christos Stentoumis, Juan G. Victores, Philippe Chrobocinski, Alberto Roncaglia, Stephanos Camarinopoulos, Nikos Komodakis, and Rafael Lopez. Robotic System with Intelligent Vision for Tunnel Structural Assessment - System Architecture – The ROBO-SPECT EC project. In *Third conference on smart monitoring, assessment and rehabilitation of civil structures (SMAR)*, 2015

15. David Estevez, Juan Victores, Santiago Morante, and Carlos Balaguer. Robot Devastation: Using DIY Low-Cost Platforms for Multiplayer Interaction in an Augmented Reality Game. In *7th International Conference on Intelligent Technologies for Interactive Entertainment (INTETAIN)*, volume 15, pages 32–36, Turin, jun 2015. IEEE
16. Konstantinos Loupos, Angelos Amditis, Christos Stentoumis, Philippe Chrobocinski, Juan G. Victores, Max Wietek, Panagiotis Panetsos, Alberto Roncaglia, Stephanos Camarinopoulos, Vassilis Kalidromitis, Dimitris Bairaktaris, Nikos Komodakis, and Rafa Lopez. Robotic Intelligent Vision and Control for Tunnel Inspection and Evaluation - The ROBINSPECT EC Project. In *IEEE International Symposium on Robotic and Sensors Environments (ROSE)*, Timisoara, Romania, 2014
17. Alberto Jardón, Santiago Martínez, Juan G. Victores, and Carlos Balaguer. Extended Range Guidance System for the Teleoperation of Microtunnelling Machines. In *31st International Symposium on Automation and Robotics in Construction and Mining (ISARC 2014)*, pages 837–846, Sydney, Australia, 2014. University of Technology, Sydney
18. Carlos Balaguer, Roberto Montero, Juan G. Victores, Santiago Martínez, and Alberto Jardón. Towards Fully Automated Tunnel Inspection: A Survey and Future Trends. In Quang Ha, Xuesong Shen, and Ali Akbarnezhad, editors, *Proceedings of the 31st International Symposium on Automation and Robotics in Construction and Mining (ISARC 2014)*, pages 19–33, Sydney, Australia, 2014. University of Technology, Sydney
19. Santiago Morante, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. On using guided motor primitives to execute Continuous Goal-Directed Actions. In *Proceedings - IEEE International Workshop on Robot and Human Interactive Communication*, volume 2014-Octob, 2014
20. Santiago Morante, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. Action Effect Generalization, Recognition and Execution through Continuous Goal-Directed Actions. In *ICRA IEEE International Conference on Robotics and Automation*, Hong Kong, China, 2014. IEEE
21. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Creación de Tareas de Asistencia Robótica Mediante la Interacción Multimodal. In *Congreso Iberoamericano de Tecnologías de Apoyo a la Discapacidad Iberdiscap*, pages 21–24, 2013
22. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Towards Robot Imagination Through Object Feature Inference. In *IROS IEEE/RSJ International Conference on Intelligent Robots and Systems*, pages 5694–5699, Tokyo, Japan, 2013. IEEE
23. Martin F. Stoelen, Virginia F. Tejada, Juan G. Victores, Alberto Jardón, Fabio Bonsignorio, and Carlos Balaguer. Adaptive collision-limitation behavior for an assistive manipulator. In *Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2013)*, pages 1143–1148, 2013
24. Félix R. Cañadillas, Alberto Jardón, Carlos Balaguer, and Juan G. Victores. Diseño Preliminar de Interfaces de Realidad Aumentada para el Robot Asistencial ASIBOT. In *V Congreso Internacional de Diseño, Redes de Investigación y Tecnología para todos (DRT4ALL)*, pages 213–219, 2013
25. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. “Give me the Red Can”: Assistive Robot Task Creation through Multi-Modal Interaction. In *V Congreso Internacional de Diseño, Redes de Investigación y Tecnología para todos (DRT4ALL)*, 2013
26. Miguel González-Fierro, Miguel Angel Maldonado, Juan G. Victores, Santiago Morante, and Carlos Balaguer. Object Tagging for Human-Robot Interaction by Recolorization Using Gaussian Mixture Models. In *Robocity2030 12th Workshop Robotica Cognitiva*, 2013

27. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Semantic Action Parameter Inference through Machine Learning Methods. In *Robocity2030 12th Workshop Robotica Cognitiva*, pages 35–46, 2013
28. Juan G. Victores, Santiago Morante, Miguel González-Fierro, and Carlos Balaguer. Augmented reality and social interaction platform through multirobot design. In *Robocity2030 11th Workshop Robots Sociales*, pages 131–143, 2013
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30. Alberto Jardón, Juan G. Victores, Martin F Stoelen, Santiago Martínez, and Carlos Balaguer. Experimental evaluation of assistive robots in virtual domestic scenarios. In *International Symposium for Automation and Robotics in Construction (ISARC/Gerontechnology 2012)*, 2012
31. Juan Gonzalez-Gomez, Juan G. Victores, Alberto Valero-Gomez, and Mohammed Abderrahim. Motion control of differential wheeled robots with joint limit constraints. In *IEEE International Conference on Robotics and Biomimetics (ROBIO)*, pages 596–601, 2011
32. Carlos Balaguer, Alberto Jardón, Concepción Monje, Fabio Bonsignorio, Martin F Stoelen, Santiago Martínez, and Juan G. Victores. SULTAN: Simultaneous User Learning and Task Execution, and its Application in Assistive Robotics. In Kazuyoshi Wada, Machiel Van der Loos, and Loredana Zollo, editors, *Workshop on New and Emerging Technologies in Assistive Robotics at IROS 2011*, pages 6–8, San Francisco, 2011
33. Alberto Jardón, Martin F Stoelen, Virginia Fernández, Juan G. Victores, Santiago Martínez, Carlos Balaguer, and Fabio Bonsignorio. Aplicación de teoría de la información para el modelado y cuantificación de la interacción persona-robot. In *IV Congreso Internacional de Diseño, Redes de Investigación y Tecnología para todos (DRT4ALL)*, pages 36–45, Madrid. Spain, 2011. Fundación ONCE
34. Juan G. Victores, Alberto Jardón, Santiago Morante, Martin F Stoelen, Santiago Martinez, and Carlos Balaguer. Interacción humano-robot a través de interfaces en la nube. In *Robocity2030 9th Workshop, Robots colaborativos e interaccion humano-robot*, pages 75–92, Madrid, 2011
35. Martin F Stoelen, Alberto Jardón, Virginia Fernández, Juan G. Victores, Santiago Martinez, Fabio Bonsignorio, and Carlos Balaguer. Methodologies for Experimental Evaluation of Assistive Robotics HRI. In *Robocity2030 9th Workshop. Robots colaborativos e interacción humano-robot*, Madrid. Spain, 2011
36. Juan G. Victores, Santiago Martinez, Alberto Jardón, and Carlos Balaguer. R.A.T.I.M. Sistema Robótico de Inspección y Mantenimiento de Túneles. In *Robocity2030 8th Workshop. Robots de Exteriores.*, pages 373–382, Arganda del Rey. Spain., 2010
37. Miguel González-Fierro, Alberto Jardón, Santiago Martinez, Martin F Stoelen, Juan G. Victores, and Carlos Balaguer. Educational initiatives related with the CEABOT contest. In *Proceedings of Int. Conf. on SIMULATION, MODELING and PROGRAMMING for AUTONOMOUS ROBOTS (SIMPAR2010) Workshops*, pages 649–658, Darmstadt, Germany, 2010
38. Juan G. Victores, Alberto Jardón, Martin F Stoelen, Santiago Martinez, and Carlos Balaguer. ASIBOT Assistive Robot with Vision in a Domestic Environment. In *Robocity2030 7th Workshop Visión en Robótica*, Móstoles. Spain., 2010
39. Martin F Stoelen, Alberto Jardón, Juan G. Victores, Carlos Balaguer, and Fabio Bonsignorio. Information Metrics for Assistive Human-In-The-Loop Cognitive Systems. In *Workshop on Good Experimental Methodology in Robotics and Replicable Robotics Research, Robotics Science and Systems (RSS)*, number c, pages 1–6. Zaragoza. Spain., 2010

40. Martin F Stoelen, Alberto Jardón, Fabio Bonsignorio, Juan G. Victores, Concepción Monje, and Carlos Balaguer. Towards an Enabling Multimodal Interface for an Assistive Robot. In *Workshop on Mutimodal Human-Robot Interfaces, IEEE International Conference on Robotics and Automation (ICRA)*, Anchorage, AK. USA, 2010
41. Juan G. Victores, Alberto Jardón, Fabio Bonsignorio, Martin F Stoelen, and Carlos Balaguer. Benchmarking Usability of Assistive Robotic Systems: Methodology and Application. In *Workshop on the Role of Experiments in Robotic Research, IEEE International Conference on Robotics and Automation (ICRA)*, Anchorage, AK. USA., 2010
42. Juan G. Victores, Santiago Martinez, Alberto Jardón, and Carlos Balaguer. Robot-aided Tunnel Inspection and Maintenance System. In *26th International Symposium on Automation and Robotics in Construction (ISARC)*, number Figure 1, pages 420–426, Austin, TX. USA., 2009
43. Alberto Jardón, Juan G. Victores, Martin F Stoelen, Santiago Martinez, and Carlos Balaguer. ASIBOT assistive robot in a domestic environment. In *Proceedings of the 2nd International Conference on PErvasive Technologies Related to Assistive Environments (PETRA)*, pages 611–614, Corfu, Greece, 2009. ACM Press

## Conference Videos

1. Juan G Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. On Using Humanoid Robot Imagination to Perform the Shortened Token Test. In *IEEE RAS International Conference on Humanoid Robots (Humanoids 2014)*, page 172, Madrid, 2014. IEEE
2. Santiago Morante, Juan G Victores, Santiago Martinez de la casa, and Carlos Balaguer. Sensorless Friction and Gravity Compensation. In *IEEE RAS International Conference on Humanoid Robots (Humanoids 2014)*, page 265, Madrid, 2014. IEEE

## PhD Thesis (author)

1. Juan G. Victores. *Robot Imagination System*. PhD thesis, Universidad Carlos III de Madrid, 2014

## PhD Thesis (advisor)

1. Santiago Morante. *Continuous Goal-Directed Actions: Advances in Robot Learning*. PhD thesis, Universidad Carlos III de Madrid, mar 2016

## Research Internships

Sept. 2011 – **Istituto Italiano di Tecnologia**. Department of Robotics, Brain and Cognitive Sciences.  
 Dic. 2011 Estancia de 3 meses destinado a la investigación del uso de Support Vector Machines y Gaussianas mixtas para el control en fuerza del robot iCub (Génova, Italia).

## Workshop Organizer

1. Juan G. Victores, Lorenzo Natale, Eiichi Yoshida. Towards Humanoid Robots OS. HUMANOIDS. Cancun, Mexico. Nov 15. 2016. <https://roboticslab-uc3m.github.io/workshop-humanoids2016/>

2. Angelos Amditis, Konstantinos Loupos, Juan G. Victores. Autonomous Robotic Systems for Inspection and Structural Assessment of Civil Underground Infrastructures. European Robotics Forum (ERF). Ljubljana, Slovenia. Mar 22. 2016. [https://www.eu-robotics.net/robotics\\_forum/upload/digest\\_1-96\\_without\\_emails\\_250ppi1.pdf](https://www.eu-robotics.net/robotics_forum/upload/digest_1-96_without_emails_250ppi1.pdf)

## Talks

1. Juan G. Victores. XGNITIVE: Avances hacia la generalización avanzada de acciones y sistemas de imaginación en robótica. Technology Festival (Techfest). Universidad Rey Juan Carlos (URJC). 2017. <https://www.eventbrite.es/e/registro-technology-festival-urjc-2017-28838850779?aff=es2#>
2. Angelos Amditis, Juan G. Victores, Fedi Francesco. Welcome and Introduction. Autonomous Robotic Systems for Inspection and Structural Assessment of Civil Underground Infrastructures. European Robotics Forum (ERF). Ljubljana, Slovenia. Mar 22. 2016. [https://www.eu-robotics.net/robotics\\_forum/upload/digest\\_1-96\\_without\\_emails\\_250ppi1.pdf](https://www.eu-robotics.net/robotics_forum/upload/digest_1-96_without_emails_250ppi1.pdf)