

Juan G. Victores

Journal Articles (29)

1. Ana Calzada-Garcia, Juan G. Victores, Francisco J. Naranjo-Campos, and Carlos Balaguer. Inverse kinematics for robotic manipulators via deep neural networks: Experiments and results. *Applied Sciences*, 15, 6 2025a. ISSN 2076-3417. doi: 10.3390/app15137226. URL <https://doi.org/10.3390/app15137226> [robot] [kinematics] (Q1)
2. Johnny J. Yopez-Figueroa, Juan G. Victores, Edwin Daniel Oña, Carlos Balaguer, and Alberto Jardón. Design and development of an omnidirectional three-wheeled industrial mobile robot platform. *Applied Sciences*, 15, 2025. ISSN 2076-3417. doi: 10.3390/app15105277. URL <https://doi.org/10.3390/app15105277> [robot] [design] (Q1)
3. Ana Calzada-Garcia, Juan G. Victores, Francisco J. Naranjo-Campos, and Carlos Balaguer. A review on inverse kinematics, control and planning for robotic manipulators with and without obstacles via deep neural networks. *Algorithms*, 18, 1 2025b. ISSN 1999-4893. doi: 10.3390/a18010023. URL <https://doi.org/10.3390/a18010023> [robot] [kinematics] (Q2)
4. Francisco J. Naranjo-Campos, Juan G. Victores, and Carlos Balaguer. Expert-trajectory-based features for apprenticeship learning via inverse reinforcement learning for robotic manipulation. *Applied Sciences*, 14, 11 2024a. ISSN 2076-3417. doi: 10.3390/app142311131. URL <https://doi.org/10.3390/app142311131> [robot] [assistive] (Q1)
5. Francisco J. Naranjo-Campos, Juan G. Victores, and Carlos Balaguer. Method for bottle opening with a dual-arm robot. *Biomimetics*, 9, 9 2024b. ISSN 2313-7673. doi: 10.3390/biomimetics9090577. URL <https://doi.org/10.3390/biomimetics9090577> [robot] [assistive] (Q2)
6. Francisco J. Naranjo-Campos, Ainhoa De Matías-Martínez, Juan G. Victores, José A. Gutiérrez Dueñas, Almudena Alcaide, and Carlos Balaguer. Assistance in picking up and delivering objects for individuals with reduced mobility using the tiago robot. *Applied Sciences*, 14, 8 2024c. ISSN 2076-3417. doi: 10.3390/app14177536. URL <https://doi.org/10.3390/app14177536> [robot] [assistive] (Q1)
7. Stephen Fox and Juan G. Victores. Safety of human-artificial intelligence systems: Applying safety science to analyze loopholes in interactions between human organizations, artificial intelligence, and individual people. *Informatics*, 11:36, 2024. doi: 10.3390/informatics11020036. URL <https://doi.org/10.3390/informatics11020036> [aml] (Q2)
8. Rubén de-la Torre, Edwin Daniel Oña, Juan G. Victores, and Alberto Jardón. Spasticsim: a synthetic data generation method for upper limb spasticity modelling in neurorehabilitation. *Scientific Reports*, 14:1646, 1 2024. ISSN 2045-2322. doi: 10.1038/s41598-024-51993-w. URL <https://doi.org/10.1038/s41598-024-51993-w> [robot] [rehabilitation] (Q2)
9. Raul Fernandez-Fernandez, Bartek Łukawski, Juan G. Victores, and Claudio Pacchierotti. Transferring human emotions to robot motions using neural policy style transfer. *Cognitive Systems Research*, 82:101121, 12 2023a. ISSN 1389-0417. doi: 10.1016/J.COGSYS.2023.05.010. URL <https://doi.org/10.1016/J.COGSYS.2023.05.010> [robot] [xgnitive: cgda] (Q2)
10. Raul Fernandez-Fernandez, Juan G. Victores, and Carlos Balaguer. Deep robot sketching: An application of deep q-learning networks for human-like sketching. *Cognitive Systems Research*, 81:57–63, 9 2023b. ISSN 1389-0417. doi: 10.1016/J.COGSYS.2023.05.004. URL <https://doi.org/10.1016/J.COGSYS.2023.05.004> [robot] [xgnitive: cgda] (Q2)

11. Raul Fernandez-Fernandez, Juan G. Victores, Jennifer J. Gago, David Estevez, and Carlos Balaguer. Neural policy style transfer. *Cognitive Systems Research*, 72:23–32, 3 2022a. ISSN 1389-0417. doi: 10.1016/j.cogsys.2021.11.003. URL <https://doi.org/10.1016/j.cogsys.2021.11.003> [robot] [xg-nitive: cgda] (Q2)
12. Andrea Gil Ruiz, Juan G. Victores, Bartek Łukawski, and Carlos Balaguer. Design of an active vision system for high-level isolation units through q-learning. *Applied Sciences*, 10:5927, 8 2020. ISSN 2076-3417. doi: 10.3390/app10175927. URL <https://doi.org/10.3390/app10175927> [robot] [textiles: horus] (Q2)
13. David Estevez, Juan G. Victores, Raul Fernandez-Fernandez, and Carlos Balaguer. Enabling garment-agnostic laundry tasks for a robot household companion. *Robotics and Autonomous Systems*, 123: 103330, 1 2020. ISSN 0921-8890. doi: 10.1016/j.robot.2019.103330. URL <https://doi.org/10.1016/j.robot.2019.103330> [robot] [textiles: folding] [textiles: ironing] (Q2)
14. Alice Stazio, Juan G. Victores, David Estevez, and Carlos Balaguer. A study on machine vision techniques for the inspection of health personnels’ protective suits for the treatment of patients in extreme isolation. *Electronics*, 8:743, 6 2019. doi: 10.3390/electronics8070743. URL <https://doi.org/10.3390/electronics8070743> [robot] [textiles: horus] (Q2)
15. Jennifer J. Gago, Juan G. Victores, and Carlos Balaguer. Sign language representation by teo humanoid robot: End-user interest, comprehension and satisfaction. *Electronics*, 8:57, 1 2019a. ISSN 2079-9292. doi: 10.3390/electronics8010057. URL <https://doi.org/10.3390/electronics8010057> [robot] [sign-language] (Q2)
16. Raul Fernandez-Fernandez, Juan G. Victores, David Estevez, and Carlos Balaguer. Real evaluations tractability using continuous goal-directed actions in smart city applications. *Sensors*, 18:3818, 11 2018a. ISSN 1424-8220. doi: 10.3390/s18113818. URL <https://doi.org/10.3390/s18113818> [robot] [xgntive: cgda] (Q1)
17. Santiago Martinez, Juan Miguel Garcia-Haro, Juan G. Victores, Alberto Jardon, and Carlos Balaguer. Experimental robot model adjustments based on force-torque sensor information. *Sensors*, 18:836, 3 2018. ISSN 14248220. doi: 10.3390/s18030836. URL <https://doi.org/10.3390/s18030836> [robot] [humanoid] (Q1)
18. Elisabeth Menendez, Juan G. Victores, Roberto Montero, Santiago Martínez, and Carlos Balaguer. Tunnel structural inspection and assessment using an autonomous robotic system. *Automation in Construction*, 87:117–126, 3 2018. ISSN 09265805. doi: 10.1016/j.autcon.2017.12.001. URL <https://doi.org/10.1016/j.autcon.2017.12.001> [robot] [construction] (Q1)
19. 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*, 44:5061–5069, 2017. ISSN 2473-4209. doi: 10.1002/mp.12482. URL <http://dx.doi.org/10.1002/mp.12482> [robot] [medical] (Q1)
20. Konstantinos Loupos, Anastasios D Doulamis, Christos Stentoumis, Eftychios Protopapadakis, Konstantinos Makantasis, Nikolaos D Doulamis, Angelos Amditis, Philippe Chrobocinski, Juan G. 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. ISSN 2366-598X. doi: 10.1007/s41315-017-0031-9. URL <https://doi.org/10.1007/s41315-017-0031-9> [robot] [construction]

21. 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*, 15:1–5, 2015a. doi: 10.4108/icst.intetain.2015.259753. URL <http://dx.doi.org/10.4108/icst.intetain.2015.259753> [robot] [video-game]
22. Santiago Morante, Juan G. Victores, and Carlos Balaguer. Cryptobotics: Why robots need cyber safety. *Frontiers in Robotics and AI*, 2:1–4, 2015a. doi: 10.3389/frobt.2015.00023. URL <http://dx.doi.org/10.3389/frobt.2015.00023> [robot] [cryptography]
23. 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, 2015a. doi: 10.1016/j.autcon.2015.02.003. URL <http://dx.doi.org/10.1016/j.autcon.2015.02.003> [robot] [construction] (Q1)
24. Santiago Morante, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. Humanoid robot imitation through continuous goal-directed actions: An evolutionary approach. *Advanced Robotics*, 29:303–314, 2015b. ISSN 1568-5535. doi: 10.1080/01691864.2014.964314. URL <http://dx.doi.org/10.1080/01691864.2014.964314> [robot] [xgnitive: cgda] (Q4)
25. 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)*, 4:161–176, 2014a. ISSN 2013-7087. doi: 10.17411/jacces.v4i3.49. URL <http://dx.doi.org/10.17411/jacces.v4i3.49> [robot] [assistive]
26. Jonathan Crespo, Ramon Barber, Juan G. Victores, and Alberto Jardón. Algorithm for graph visibility obtainment from a map of non-convex polygons. *Journal of Mechanical Engineering and Robotics Research*, 3:150–170, 2014. ISSN 2278-0149. URL http://www.ijmerr.com/v3n2/ijmerr_v3n2_19.pdf [robot] [planning]
27. Santiago Martínez, Alberto Jardón, Juan G. Victores, and Carlos Balaguer. Flexible field factory for construction industry. *Assembly Automation*, 33:175–183, 2013. doi: 10.1108/01445151311306708. URL <http://dx.doi.org/10.1108/01445151311306708> [robot] [construction] (Q4)
28. Alberto Jardón, Juan G. Victores, Santiago Martínez, and Carlos Balaguer. Experience acquisition simulator for operating microtunneling boring machines. *Automation in Construction*, 23:33–46, 2012a. doi: 10.1016/j.autcon.2011.12.002. URL <http://dx.doi.org/10.1016/j.autcon.2011.12.002> [robot] [construction] (Q1)
29. Alberto Jardón, Juan G. Victores, Santiago Martínez, Antonio Giménez, and Carlos Balaguer. Personal autonomy rehabilitation in home environments by a portable assistive robot. *IEEE Trans. on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, 42:561–570, 2011a. doi: 10.1109/TSMCC.2011.2159201. URL <http://dx.doi.org/10.1109/TSMCC.2011.2159201> [robot] [assistive] (Q1)
30. 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*, 20:629–636, 2011a. ISSN 09265805. doi: 10.1016/j.autcon.2010.12.005. URL <http://dx.doi.org/10.1016/j.autcon.2010.12.005> [robot] [construction] (Q1)

Patents (2)

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. URL <http://invenes.oepm.es/InvenesWeb/detalle?referencia=P201330794> [robot] [construction]

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, 2011b. URL <http://www.google.im/patents/WO2011138481A1?c1=en> [robot] [construction]

Book Chapters (9)

1. Juan G. Victores, Elisabeth Menendez, and Carlos Balaguer. Tunnel structural inspection and assessment using an autonomous robotic system. pages 185–203. Wiley Online Library, 2024. doi: 10.1002/9781394162871.ch9. URL <https://doi.org/10.1002/9781394162871.ch9> [robot] [construction]
2. Raul Fernandez-Fernandez, Juan G. Victores, and Carlos Balaguer. New trends and challenges in the automatic generation of new tasks for humanoid robots. pages 169–176. CSIC, 5 2016. ISBN 978-84-608-8452-1. URL <http://www.robocity2030.org/events/event/evento-esp-2-2/> [robot] [xgnitive: cgda]
3. David Estevez, Juan G. Victores, and Carlos Balaguer. A new generation of entertainment robots enhanced with augmented reality. pages 129–136. CSIC, 5 2016a. URL <http://www.robocity2030.org/events/event/evento-esp-2-2/> [robot] [video-game]
4. David Estevez, Juan G. Victores, and Carlos Balaguer. Future trends in perception and manipulation for unfolding and folding garments. pages 333–340. CSIC, 5 2016b. URL <http://www.robocity2030.org/events/event/evento-esp-2-2/> [robot] [textiles: folding]
5. Roberto Montero, Juan G. Victores, Elisabeth Menéndez, and Carlos Balaguer. The robot-spect eu project: Autonomous robotic tunnel inspection. pages 91–100. 2015b. URL <http://www.robocity2030.org/events/event/13th-robocity2030-workshop/> [robot] [construction]
6. Santiago Morante, Juan G. Victores, Santiago Martínez, and Carlos Balaguer. Force-sensorless friction and gravity compensation for robots. volume 418. Springer International Publishing, 2015c. ISBN 9783319271484. doi: 10.1007/978-3-319-27149-1_5. URL http://doi.org/10.1007/978-3-319-27149-1_5 [robot] [modelling]
7. 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. pages 41–52. Springer International Publishing, 2014a. ISBN 978-3-319-03652-6. doi: 10.1007/978-3-319-03653-3_4. URL http://dx.doi.org/10.1007/978-3-319-03653-3_4 [robot] [educational]
8. Juan G. Victores, Félix R. Cañadillas, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Assistive robot multi-modal interaction with augmented 3d vision and dialogue. pages 209–217. Springer International Publishing, 2014b. ISBN 978-3-319-03412-6. doi: 10.1007/978-3-319-03413-3_15. URL http://dx.doi.org/10.1007/978-3-319-03413-3_15 [robot] [assistive]
9. Carlos Balaguer and Juan G. Victores. Robotic tunnel inspection and repair. pages 445–460. CRC Press, 2010. URL <http://www.crcpress.com/product/isbn/9780415551052> [robot] [construction]

Conference Proceedings (75)

1. Ignacio Montesino, Aroa Bachiller Gomez, Juan G. Victores, Carlos Balaguer, and Alberto Jardon. Quasi-god object and geodesically restricted 6-dof haptic forces for compliant constraints and low frequency simulation. IEEE/RSJ, 10 2025 [robot] [assistive]

2. Bartek Łukawski, Miquel Martín, Carmen Menchén, Edwin D. Oña, Juan G. Victores, and Alberto Jardón. Espresso macchiato, por favore: collaborative robotic coffee-making for education. Universidade da Coruña. Servizo de publicacións, 9 2025a [robot] [assistive]
3. Bartek Łukawski, Mercedes Rebollo, Ángel Gilabert, Juan G. Victores, Carlos Balaguer, and Alberto Jardón. Yarp cartesian controller layers over ros 2 for teleoperation and web apps. Universidade da Coruña. Servizo de publicacións, 9 2025b [robot] [assistive]
4. Francisco J. Naranjo-Campos, Juan G. Victores, Ana Calzada-Garcia, and Carlos Balaguer. Manipulación robótica mediante aprendizaje por refuerzo inverso con características basadas en trayectorias expertas. Universidade da Coruña. Servizo de publicacións, 9 2025a [robot] [assistive]
5. Bartek Łukawski, Edwin Daniel Oña, Alberto Jardón, Juan G. Victores, and Carlos Balaguer. Development of educational applications with abb gofa collaborative robot using externally guided motion. 7 2025c [robot] [educational]
6. Bartek Łukawski, Juan G. Victores, Carlos Balaguer, and Alberto Jardón. Interaction with a humanoid robot through a conversational interface using deepseek. 6 2025d. doi: 10.64117/simposioscea.v1i1.65. URL <https://doi.org/10.64117/simposioscea.v1i1.65> [robot] [teleoperation]
7. Francisco J. Naranjo-Campos, Juan G. Victores, Carlos Balaguer, and Alberto Jardon. Algebraic machine learning for robotic garment unfolding. 6 2025b. doi: 10.64117/simposioscea.v1i1.35. URL <https://doi.org/10.64117/simposioscea.v1i1.35> [robot] [textiles: folding]
8. Bartek Łukawski, Ignacio Montesino, Edwin Daniel Oña, Juan G. Victores, Carlos Balaguer, and Alberto Jardon. Towards the development of telepresence applications with tiago and tiago++ using a virtual reality headset. pages 192–197, 4 2025e. doi: 10.1109/ICARSC65809.2025.10970173. URL <https://doi.org/10.1109/ICARSC65809.2025.10970173> [robot] [teleoperation]
9. Ignacio Montesino, Juan G. Victores, Carlos Balaguer, and Alberto Jardón. Cartesian impedance control generalized to one-parameter splines. pages 4701–4707, 2024a. doi: 10.1109/IROS58592.2024.10801939. URL <https://doi.org/10.1109/IROS58592.2024.10801939> [robot] [assistive]
10. Alicia Herrera García-Mascaraque, Ignacio Montesino, Juan G. Victores, Carlos Balaguer, and Alberto Jardón. Integrator for musculoskeletal simulation in python. Universidade da Coruña. Servizo de publicacións, 7 2024. URL <https://doi.org/10.17979/ja-cea.2024.45.10802> [robot] [assistive]
11. Ignacio Montesino, Hugo Alonso Camara, Juan G. Victores, Carlos Balaguer, and Alberto Jardón. Geodesic restricted aruco-based positioning for vr rehabilitation robotics. Universidade da Coruña. Servizo de publicacións, 7 2024b. URL <https://doi.org/10.17979/ja-cea.2024.45.10964> [robot] [assistive]
12. Jaime Mas, Juan G. Victores, and Carlos Balaguer. Optimización de caminata con aprendizaje por refuerzo en humanoide teo. Universidade da Coruña. Servizo de publicacións, 7 2024. URL <https://doi.org/10.17979/ja-cea.2024.45.10950> [robot] [humanoid]
13. Francisco J. Naranjo-Campos, Ainhoa De Matías-Martínez, Juan G. Victores, José A. Gutiérrez Dueñas, Almudena Alcaide, and Carlos Balaguer. Robot tiago para servicio en cafetería. Universidade da Coruña. Servizo de publicacións, 7 2024d. URL <https://doi.org/10.17979/ja-cea.2024.45.10795> [robot] [assistive]
14. Bartek Łukawski, Alberto Rodríguez-Sanz, Elisabeth Menendez, Juan G. Victores, and Carlos Balaguer. A user-friendly point cloud processing pipeline for interfacing pcl with yarp. Universidade da Coruña. Servizo de publicacións, 7 2024a. URL <https://doi.org/10.17979/ja-cea.2024.45.10925> [robot] [teleoperation]

15. Ana Calzada, Bartek Łukawski, Juan G. Victores, and Carlos Balaguer. Teleoperation of the robot tiago with a 3d mouse controller. pages 133–138. Universidad de Extremadura. Servicio de Publicaciones, 5 2024. ISBN 978-84-9127-262-5. URL <http://hdl.handle.net/10662/21260> [robot] [teleoperation]
16. Bartek Łukawski, Alberto Rodríguez Sanz, Juan G. Victores, and Carlos Balaguer. An open-source implementation of a force-torque sensor data acquisition device for the humanoid robot teo. pages 79–84. Universidad de Extremadura. Servicio de Publicaciones, 5 2024b. ISBN 978-84-9127-262-5. URL <http://hdl.handle.net/10662/21260> [robot]
17. Johnny J. Yopez-Figueroa, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. Diseño mecatrónico y construcción de un robot móvil omni-direccional de tres ruedas para transporte de carga en ambientes industriales. pages 43–48. Universidad de Extremadura. Servicio de Publicaciones, 5 2024. ISBN 978-84-9127-262-5. URL <http://hdl.handle.net/10662/21260> [robot] [design]
18. Francisco José Naranjo-Campos, Ainhoa de Matías Martínez, Juan G. Victores, José Antonio Gutiérrez Dueñas, Almudena Alcaide, and Carlos Balaguer. Detección y manipulación de botellas con el robot móvil manipulador tiago. pages 37–42. Universidad de Extremadura. Servicio de Publicaciones, 5 2024e. ISBN 978-84-9127-262-5. URL <http://hdl.handle.net/10662/21260> [robot] [assistive]
19. Bartek Łukawski, Juan G. Victores, and Carlos Balaguer. A generic controller for teleoperation on robotic manipulators using low-cost devices. pages 785–788. Servizo de Publicacións. Universidade da Coruña, 9 2023. doi: 10.17979/spudc.9788497498609.785. URL <https://doi.org/10.17979/spudc.9788497498609.785> [robot] [assistive]
20. Sofia Hernández Pérez, Ignacio Montesino Valle, Juan G. Victores, Edwin Daniel Oña, and Alberto Jardón Huete. Ros2 gesture classification pipeline towards gamified neuro-rehabilitation therapy. pages 611–616. Servizo de Publicacións. Universidade da Coruña, 9 2023. doi: 10.17979/spudc.9788497498609.611. URL <https://doi.org/10.17979/spudc.9788497498609.611> [robot] [assistive]
21. Ainhoa De Matías-Martínez, Francisco J. Naranjo-Campos, Juan G. Victores, and Carlos Balaguer. Planificador global se(2) para la navegación de robots móviles manipuladores en ros. pages 85–90. CEA UPM CSIC, 6 2023. ISBN 978-84-09-51892-0. doi: 10.20868/UPM.book.74896. URL <https://doi.org/10.20868/UPM.book.74896> [robot] [planning]
22. Bartek Łukawski, Ignacio Montesino Valle, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. An inverse kinematics problem solver based on screw theory for manipulator arms. pages 864–869. Servizo de Publicacións da UDC, 9 2022. doi: 10.17979/spudc.9788497498418.0864. URL <https://doi.org/10.17979/spudc.9788497498418.0864> [robot] [kinematics]
23. Ignacio Montesino Valle, Bartek Łukawski, Juan G. Victores, Alberto Jardón Huete, and Carlos Balaguer. Entorno de gym basado en impedancia para el robot colaborativo iiwa de cara a interacción humano robot. pages 762–769. Servizo de Publicacións da UDC, 9 2022. doi: 10.17979/spudc.9788497498418.0762. URL <https://doi.org/10.17979/spudc.9788497498418.0762> [robot] [assistive]
24. Francisco José Naranjo-Campos, Ainhoa de Matías Martínez, Juan G. Victores, Nicolás Álvarez López, Almudena Alcaide Raya, and Carlos Balaguer. Manipulación de objetos dirigida a la asistencia de personas con movilidad reducida. pages 798–803. Servizo de Publicacións da UDC, 9 2022. doi: 10.17979/spudc.9788497498418.0798. URL <https://doi.org/10.17979/spudc.9788497498418.0798> [robot] [assistive]
25. Raul Fernandez-Fernandez, Marco Aggravi, Paolo Robuffo Giordano, Juan G. Victores, and Claudio Pacchierotti. Neural style transfer with twin-delayed ddpg for shared control of robotic manipulators. pages 4073–4079, 5 2022b. doi: 10.1109/ICRA46639.2022.9812245. URL <https://doi.org/10.1109/ICRA46639.2022.9812245> [robot] [xgnitive: cgda]

26. Jennifer J. Gago, Bartek Łukawski, Juan G. Victores, and Carlos Balaguer. Under-actuation modelling in robotic hands via neural networks for sign language representation with end-user validation. pages 239–251. Springer International Publishing, 2020. ISBN 978-3-030-62365-4. URL https://doi.org/10.1007/978-3-030-62365-4_23 [robot] [sign-language]
27. J. Enrique Sierra-Garcia, Matilde Santos, and Juan G. Victores. Neural controller of uavs with inertia variations. pages 169–177. Springer International Publishing, 11 2019. ISBN 978-3-030-33617-2. doi: 10.1007/978-3-030-33617-2_19. URL https://doi.org/10.1007/978-3-030-33617-2_19 [robot] [control]
28. Jennifer J. Gago, Valentina Vasco, Bartek Łukawski, Ugo Pattacini, Vadim Tikhanoff, Juan G. Victores, and Carlos Balaguer. Sequence-to-sequence natural language to humanoid robot sign language. page 44. ARGESIM, 7 2019b. ISBN 978-3-901608-92-6. doi: 10.11128/arep.58. URL <https://www.doi.org/10.11128/arep.58> [robot] [sign-language]
29. David Estevez, Juan G. Victores, Raul Fernandez-Fernandez, and Carlos Balaguer. Towards clothes hanging via cloth simulation and deep convolutional networks. page 35. ARGESIM, 7 2019. ISBN 978-3-901608-92-6. doi: 10.11128/arep.58. URL <https://www.doi.org/10.11128/arep.58> [robot] [textiles: hanging]
30. Raul Fernandez-Fernandez, Juan G. Victores, David Estevez, and Carlos Balaguer. Quick, stat!: A statistical analysis of the quick, draw! dataset. page 27. ARGESIM, 7 2019. ISBN 978-3-901608-92-6. doi: 10.11128/arep.58. URL <https://www.doi.org/10.11128/arep.58> [robot] [xgnitive: drl]
31. Jennifer J. Gago, Bartek Łukawski, Juan G. Victores, and Carlos Balaguer. A study on the effects of an embodied humanoid robot representing sign language. pages 26–28, 2019c. URL https://calc.ff.cuni.cz/en/gswp19_programme/ [robot] [sign-language]
32. Raul Fernandez-Fernandez, Juan G. Victores, David Estevez, and Carlos Balaguer. Robot imitation through vision, kinesthetic and force features with online adaptation to changing environments. pages 6546–6551. IEEE, 2018b. ISBN 978-1-5386-8094-0. doi: IROS.2018.8593724. URL <https://doi.org/10.1109/IROS.2018.8593724> [robot] [xgnitive: cgda]
33. David Estevez, Juan G. Victores, Raul Fernandez-Fernandez, and Carlos Balaguer. Robotic ironing with 3d perception and force/torque feedback in household environments. volume 2017-Septe, pages 6484–6489. IEEE, 2017a. ISBN 9781538626818. doi: 10.1109/IROS.2017.8206556. URL <https://doi.org/10.1109/IROS.2017.8206556> [robot] [textiles: ironing]
34. Elisabeth Menendez, Juan G. Victores, and Carlos Balaguer. Sistema robótico para la inspección y análisis estructural de túneles. 2017a. URL <http://jnr2017.ai2.upv.es/wp-content/uploads/2016/11/Programa-JNR2017.pdf> [robot] [construction]
35. 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. 2017b [robot] [horus]
36. Elisabeth Menendez, Juan G. Victores, Roberto Montero, and Carlos Balaguer. Autonomous robotic system with tunnel inspection tool positioning. pages 655–662, 2017b. URL <https://doi.org/10.22260/ISARC2017/0091> [robot] [construction]
37. Roberto Montero, Elisabeth Menendez, Juan G. Victores, and Carlos Balaguer. Intelligent robotic system for autonomous crack detection and characterization in concrete tunnels. pages 316–321. IEEE, 2017. ISBN 9781509062331. doi: 10.1109/ICARSC.2017.7964094. URL <https://doi.org/10.1109/ICARSC.2017.7964094> [robot] [construction]

38. David Estevez, Raul Fernandez-Fernandez, Juan G. Victores, and Carlos Balaguer. Robotic ironing with a humanoid robot using human tools. pages 134–139. IEEE, 2017c. ISBN 9781509062331. doi: 10.1109/ICARSC.2017.7964065. URL <https://doi.org/10.1109/ICARSC.2017.7964065> [robot] [textiles: ironing]
39. David Estevez, Raul Fernandez-Fernandez, Juan G. Victores, and Carlos Balaguer. Improving and evaluating robotic garment unfolding: A garment-agnostic approach. IEEE, 2017d. ISBN 9781509062331. doi: 10.1109/ICARSC.2017.7964077. URL <https://doi.org/10.1109/ICARSC.2017.7964077> [robot] [textiles: folding]
40. Raul Fernandez-Fernandez, David Estevez, Juan G. Victores, and Carlos Balaguer. Improving cgda execution through genetic algorithms incorporating spatial and velocity constraints. pages 290–295. IEEE, 2017a. ISBN 9781509062331. doi: 10.1109/ICARSC.2017.7964090. URL <https://doi.org/10.1109/ICARSC.2017.7964090> [robot] [xgnitive: cgda]
41. 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. pages 284–289. IEEE, 2017b. ISBN 9781509062331. doi: 10.1109/ICARSC.2017.7964089. URL <https://doi.org/10.1109/ICARSC.2017.7964089> [robot] [xgnitive: cgda]
42. David Estevez, Juan G. Victores, and Carlos Balaguer. A lightweight finite state machine c++ library aimed at seamless integration with robotic middlewares. 11 2016c. URL <https://roboticslab-uc3m.github.io/workshop-humanoids2016> [robot] [video-game]
43. 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. 2016. URL <http://www.icsic.eng.cam.ac.uk/programme/programme21june/view> [robot] [construction]
44. David Estevez, Juan G. Victores, Santiago Morante, and Carlos Balaguer. Towards robotic garment folding: A vision approach for fold detection. 5 2016d. doi: 10.1109/ICARSC.2016.65. URL <https://doi.org/10.1109/ICARSC.2016.65> [robot] [textiles: folding]
45. Santiago Morante, Juan G. Victores, and Carlos Balaguer. Automatic demonstration and feature selection for robot learning. pages 428–433. IEEE, 2015d. doi: 10.1109/HUMANOIDS.2015.7363569. URL <http://dx.doi.org/10.1109/HUMANOIDS.2015.7363569> [robot] [xgnitive: cgda]
46. 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. 2015. URL https://data.smar-conferences.org/SMAR_2015_Proceedings/html/L.html [robot] [construction]
47. 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. volume 15, pages 32–36. IEEE, 6 2015b. ISBN 9781479983773. URL <http://ieeexplore.ieee.org/document/7325482/> [robot] [video-game]
48. 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. 2014. URL <http://dx.doi.org/10.1109/ROSE.2014.6952986> [robot] [construction]

49. Alberto Jardón, Santiago Martínez, Juan G. Victores, and Carlos Balaguer. Extended range guidance system for the teleoperation of microtunnelling machines. pages 837–846. University of Technology, Sydney, 2014b. URL http://www.isarc2014.org/pdfs/ISARC2014_Proceedings-NewISBN.pdf [robot] [construction]
50. Carlos Balaguer, Roberto Montero, Juan G. Victores, Santiago Martínez, and Alberto Jardón. Towards fully automated tunnel inspection: A survey and future trends. pages 19–33. University of Technology, Sydney, 2014. URL http://www.isarc2014.org/pdfs/ISARC2014_Proceedings-NewISBN.pdf [robot] [construction]
51. Santiago Morante, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. On using guided motor primitives to execute continuous goal-directed actions. volume 2014-Octob. IEEE, 2014a. doi: 10.1109/ROMAN.2014.6926320. URL <https://doi.org/10.1109/ROMAN.2014.6926320> [robot] [xgnitive: cgda]
52. Santiago Morante, Juan G. Victores, Alberto Jardón, and Carlos Balaguer. Action effect generalization, recognition and execution through continuous goal-directed actions. IEEE, 2014b. doi: 10.1109/ICRA.2014.6907098. URL <http://dx.doi.org/10.1109/ICRA.2014.6907098> [robot] [xgnitive: cgda]
53. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Creación de tareas de asistencia robótica mediante la interacción multimodal. pages 21–24, 2013a. URL <http://iberdiscap2013.pucmm.edu.do/programa> [robot] [assistive]
54. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Towards robot imagination through object feature inference. pages 5694–5699. IEEE, 2013b. doi: 10.1109/IROS.2013.6697181. URL <http://dx.doi.org/10.1109/IROS.2013.6697181> [robot] [xgnitive: ris]
55. Martin F. Stoelen, Virginia F. Tejada, Juan G. Victores, Alberto Jardón, Fabio Bonsignorio, and Carlos Balaguer. Adaptive collision-limitation behavior for an assistive manipulator. pages 1143–1148, 2013. doi: 10.1109/IROS.2013.6696494. URL <http://dx.doi.org/10.1109/IROS.2013.6696494> [robot] [control]
56. Félix R. Cañadillas, Alberto Jardón, Carlos Balaguer, and Juan G. Victores. Diseño preliminar de interfaces de realidad aumentada para el robot asistencial asibot. pages 213–219, 2013. URL <http://www.discapnet.es/Castellano/areastematicas/tecnologia/DRT4ALL/EN/DRT4ALL1013/Paginas/Introduction.aspx> [robot] [assistive]
57. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. “give me the red can”: Assistive robot task creation through multi-modal interaction. 2013c. URL <http://www.discapnet.es/Castellano/areastematicas/tecnologia/DRT4ALL/EN/DRT4ALL1013/Paginas/Introduction.aspx> [robot] [assistive]
58. 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. 2013. URL https://www.researchgate.net/publication/269631653_Object_Tagging_for_Human-Robot_Interaction_by_Recolorization_Using_Gaussian_Mixture_Models [robot] [vision]
59. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. Semantic action parameter inference through machine learning methods. pages 35–46, 2013d. URL https://www.researchgate.net/publication/269631454_Semantic_Action_Parameter_Inference_through_Machine_Learning_Methods [robot][xgnitive: ris]
60. Juan G. Victores, Santiago Morante, Miguel González-Fierro, and Carlos Balaguer. Augmented reality and social interaction platform through multirobot design. pages 131–143, 2013e. URL <https://>

www.researchgate.net/publication/269630253_Augmented_reality_and_social_interaction_platform_through_multirobot_design [robot] [assistive]

61. Alberto Jardón, Santiago Martínez, Juan G. Victores, M. Marti, and Carlos Balaguer. Extended range guidance system for micro-tunnelling machine. 2012b. URL <http://gerontechnology.info/index.php/journal/article/view/1814> [robot] [construction]
62. Alberto Jardón, Juan G. Victores, Martin F Stoelen, Santiago Martínez, and Carlos Balaguer. Experimental evaluation of assistive robots in virtual domestic scenarios. 2012c. URL <http://www.gerontechnology.info/index.php/journal/article/view/gt.2012.11.02.489.00> [robot] [construction]
63. Juan Gonzalez-Gomez, Juan G. Victores, Alberto Valero-Gomez, and Mohammed Abderrahim. Motion control of differential wheeled robots with joint limit constraints. pages 596–601, 2011. doi: 10.1109/ROBIO.2011.6181351. URL <http://dx.doi.org/10.1109/ROBIO.2011.6181351> [robot] [control]
64. 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. pages 6–8, 2011. URL http://www.iros2011.org/WorkshopsAndTutorialsProceedings/MW3/iros11ws_assistive_robotics.pdf [robot] [assistive]
65. 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. pages 36–45. Fundación ONCE, 2011b. URL <http://www.discapnet.es/Castellano/areastematicas/tecnologia/DRT4ALL/ES/DRT4ALL2011/Documents/Libro-de-actas-pdf> [robot] [assistive]
66. 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. pages 75–92, 2011c. ISBN 978-84-7484-238-8. URL https://www.researchgate.net/publication/269574247_Interaccion_humano-robot_a_traves_de_interfaces_en_la_nube [robot] [assistive]
67. 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. 2011. ISBN 978-84-614-5558. URL https://www.researchgate.net/publication/269574315_Methodologies_for_Experimental_Evaluation_of_Assistive_Robotics_HRI [robot] [assistive]
68. Juan G. Victores, Santiago Martinez, Alberto Jardón, and Carlos Balaguer. R.a.t.i.m. sistema robótico de inspección y mantenimiento de túneles. pages 373–382, 2010a. ISBN 978-84-614-5558. URL https://www.researchgate.net/publication/269574005_RATIM_Sistema_Robtico_de_Inspeccion_y_Mantenimiento_de_Tneles [robot] [construction]
69. Miguel González-Fierro, Alberto Jardón, Santiago Martinez, Martin F Stoelen, Juan G. Victores, and Carlos Balaguer. Educational initiatives related with the ceabot contest. pages 649–658, 2010. URL <http://asrob.uc3m.es/svn/ASROBrepo/Documentos/articulos/29-TeachingRobotics.pdf> [robot] [educational]
70. Juan G. Victores, Alberto Jardón, Martin F Stoelen, Santiago Martinez, and Carlos Balaguer. Asibot assistive robot with vision in a domestic environment. 2010b. ISBN 84-693-6777-3. URL https://www.researchgate.net/publication/269573982_ASIBOT_assistive_robot_with_vision_in_a_domestic_environment [robot] [vision]
71. Martin F Stoelen, Alberto Jardón, Juan G. Victores, Carlos Balaguer, and Fabio Bonsignorio. Information metrics for assistive human-in-the-loop cognitive systems. pages 1–6. Zaragoza. Spain.,

- 2010a. URL http://www.heronrobots.com/EuronGEMSig/Downloads/Zaragoza/rss2010_gemrrrr.pdf [robot] [control]
72. Martin F Stoelen, Alberto Jardón, Fabio Bonsignorio, Juan G. Victores, Concepción Monje, and Carlos Balaguer. Towards an enabling multimodal interface for an assistive robot. 2010b. URL https://www.researchgate.net/publication/269573950_Towards_an_Enabling_Multimodal_Interface_for_an_Assistive_Robot [robot] [assistive]
 73. Juan G. Victores, Alberto Jardón, Fabio Bonsignorio, Martin F Stoelen, and Carlos Balaguer. Benchmarking usability of assistive robotic systems: Methodology and application. 2010c. URL http://www.heronrobots.com/EuronGEMSig/downloads/Anchorage/ICRA10-experiments_final_uc3m.pdf [robot] [assistive]
 74. Juan G. Victores, Santiago Martinez, Alberto Jardón, and Carlos Balaguer. Robot-aided tunnel inspection and maintenance system. pages 420–426, 2009. URL http://www.iaarc.org/publications/fulltext/Robot-aided_Tunnel_Inspection_and_Maintenance_System.pdf [robot] [construction]
 75. Alberto Jardón, Juan G. Victores, Martin F Stoelen, Santiago Martinez, and Carlos Balaguer. Asibot assistive robot in a domestic environment. pages 611–614. ACM Press, 2009. ISBN 9781605584096. doi: 10.1145/1579114.1579175. URL <http://portal.acm.org/citation.cfm?doid=1579114.1579175> [robot] [assistive]

Conference Videos (2)

1. Juan G. Victores, Santiago Morante, Alberto Jardón, and Carlos Balaguer. On using humanoid robot imagination to perform the shortened token test. page 172. IEEE, 2014c. doi: 10.1109/HUMANOIDS.2014.7041355. URL <https://youtu.be/KFHFw9dJfzA> [robot] [xgnitive: ris]
2. Santiago Morante, Juan G. Victores, Santiago Martinez, and Carlos Balaguer. Sensorless friction and gravity compensation. page 265. IEEE, 2014c. doi: 10.1109/HUMANOIDS.2014.7041370. URL <https://www.dailymotion.com/video/x2vjrf8> [robot] [modelling]

PhD Thesis (Author)

1. Juan G. Victores. *Robot Imagination System*. PhD thesis, Universidad Carlos III de Madrid, 2014. URL <https://hdl.handle.net/10016/19834>

PhD Thesis (Advisor)

1. Raul Fernandez-Fernandez. *Action Generalization in Humanoid Robots Through Artificial Intelligence With Learning From Demonstration*. PhD thesis, Universidad Carlos III de Madrid, 9 2021. URL <https://hdl.handle.net/10016/33536>
2. David Estevez. *Robotic System for Garment Perception and Manipulation*. PhD thesis, Universidad Carlos III de Madrid, 11 2020. URL <https://hdl.handle.net/10016/32186>
3. Santiago Morante. *Continuous Goal-Directed Actions: Advances in Robot Learning*. PhD thesis, Universidad Carlos III de Madrid, 3 2016. URL <https://hdl.handle.net/10016/23459>

Research Stays (2)

- Oct. 2018 – **The University of Manchester.** Cognitive Robotics Lab.
Jan. 2019 Estancia de 3 meses destinado a la investigación del uso de Deep Learning para el estudio de conceptos abstractos con el robot iCub (Manchester, UK).
- 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 (2)

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

Talks (2)

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