

# Juan G. Victores

## Journal Articles (23)

1. 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] [assistive] (Q2)
2. 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)
3. 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)
4. 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] [xgnitive: cgda] (Q2)
5. 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)
6. 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)
7. 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)
8. 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)
9. 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] [xgnitive: cgda] (Q1)
10. 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)

11. 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)
12. 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)
13. 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]
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15. 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]
16. 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)
17. 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)
18. 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]
19. 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](http://www.ijmerr.com/v3n2/ijmerr_v3n2_19.pdf) [robot] [planning]
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21. 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)

22. 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)
23. 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?cl=en> [robot] [construction]

## Book Chapters (8)

1. Juan G Victores, E Menendez, and C Balaguer. Tunnel structural inspection and assessment using an autonomous robotic system. pages 185–203. Wiley Online Library, 2024 [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: cgdal]
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](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](http://dx.doi.org/10.1007/978-3-319-03653-3_4) [robot] [contests]

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](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]

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1. Raul Fernandez-Fernandez, Marco Aggravi, Paolo Robuffo Giordano, Juan G Victores, and Claudio Pacchierotti. Neural style transfer with twin-delayed ddpq 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]
2. 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](https://doi.org/10.1007/978-3-030-62365-4_23) [robot] [sign-language]
3. 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](https://doi.org/10.1007/978-3-030-33617-2_19) [robot] [control]
4. 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]
5. 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]
6. 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]
7. 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/](https://calc.ff.cuni.cz/en/gswp19_programme/) [robot] [sign-language]
8. 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]
9. 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]

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19. 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]
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29. 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]
30. 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]
31. 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]
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35. 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](https://www.researchgate.net/publication/269631454_Semantic_Action_Parameter_Inference_through_Machine_Learning_Methods) [robot][xgnitive: ris]
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## 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/>
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