

Enfoque y alcance

La **Revista Iberoamericana de Automática e Informática Industrial (RIAI)** es el órgano de expresión del **Comité Español de Automática (CEA)**, miembro de la Federación Internacional de Control Automático (**IFAC**). La revista se desarrolla en el marco de la comunidad iberoamericana, y en general, en los entornos en los que el español constituye el idioma básico y no excluyente de comunicación. RIAI engloba el amplio campo de la **Teoría de Control**, la **Ingeniería de Sistemas**, la **Automatización**, la **Robótica**, la **Regulación Automática** y las diferentes tecnologías empleadas en la realización de los sistemas de control, en particular los basados en computadores y redes de comunicaciones.

Dentro del campo citado previamente, RIAI engloba artículos enmarcados en las siguientes temáticas, **siempre que tengan contenidos relacionados con la Automática y la Informática Industrial.**

- Teoría de control y sistemas.
- Ingeniería de control de procesos e instrumentación.
- Técnicas de control avanzado.
- Automatización y control de sistemas de producción.
- Robótica y sistemas robotizados.
- Arquitecturas de control y tecnología de computadores aplicada al control automático de sistemas.
- Sistemas de tiempo real e informática industrial aplicados al control automático de sistemas.
- Filtrado, estimación y análisis y tratamiento de señales e imágenes aplicados al control automático de sistemas.
- Visión por computador aplicada al control automático de sistemas.
- Modelado, identificación, simulación y optimización de sistemas.
- Inteligencia computacional y técnicas de supervisión y detección de fallos aplicados al control automático de sistemas.
- Historia de la automática. La automática en sistemas sociales, económicos y empresariales.
- Cuestiones docentes y de formación en automática.
- Control de sistemas en red y complejos a gran escala.
- Control de procesos industriales, sistemas energéticos, mineros, ingeniería civil y edificios.
- Control de sistemas de transporte y vehículos.
- Control en bioingeniería, biología, agricultura, ecología y medicina.
- Control de máquinas y motores y mecatrónica.

LISTADO DE ARTÍCULOS RECIENTES POR AÑOS

<p>Sánchez, C., Muñoz de la Peña, D., Gómez-Estern, F. 2020. Automated generation of control design benchmark problems for computer-assessed education with Doctus. Revista Iberoamericana de Automática e Informática Industrial, 17(1):1-9. https://doi.org/10.4995/riai.2019.11243</p>	<p>Control education, Educational aids 2, Teaching, PID Control, Linear control systems, Benchmark examples, Software tools, Automated assessment.</p>
<p>Suárez, R. Palomo-Avellaneda, L., Martínez, J., Clos, D., García, N. 2020. Dual-arm dexterous mobile manipulator with new omnidirectional wheels. Revista Iberoamericana de Automática e Informática Industrial, 17(1):10-21. https://doi.org/10.4995/riai.2019.11422</p>	<p>Robotics and robotic systems, Industrial Robotics and robotic manipulators, Robot manipulators, Dexterous manipulators.</p>
<p>García-Moreno, A., González-Barbosa, J. 2020. Virtual 3D reconstruction of complex urban environments. Revista Iberoamericana de Automática e Informática Industrial, 17(1):22-33. https://doi.org/10.4995/riai.2019.11203</p>	<p>3D reconstruction, texturing, Meshing, LIDAR.</p>
<p>Roman, J. Marquez-Viloria, D., Velásquez, R.A., Botero-Valencia, J. 2020. Indoor Positioning system using FM radio stations signals and deep learning. Revista Iberoamericana de Automática e Informática Industrial, 17(1):34-43. https://doi.org/10.4995/riai.2019.10894</p>	<p>Frequency Modulation, Indoor, Position Estimation, Positioning Systems, Radio Signals.</p>
<p>Velasco, E., Zapata-Impata, B.S., Gil, P., Torres, F. 2020. Object classification using bimodal perception data extracted from single-touch robotic grasps. Revista Iberoamericana de Automática e Informática Industrial, 17(1):44-55. https://doi.org/10.4995/riai.2019.10923</p>	<p>Robotic manipulators, Proprioceptive-tactile perception, Proprioceptive-tactile learning, Objects classification, Objects recognition.</p>
<p>Hidalgo, C.E., Marcano, M., Fernández, G., Pérez, J.M. 2020. Cooperative maneuvers applied to automated vehicles in real and virtual environments. Revista Iberoamericana de Automática e Informática Industrial, 17(1):56-65. https://doi.org/10.4995/riai.2019.11155</p>	<p>Cooperative Maneuvers, Hybrid Cooperative Framework, ACC, Stop & Go, ITS, Fuzzy Logic.</p>
<p>Lattarulo, R., Matute, J.A., Pérez, J., Gomez Garay, V. 2020. Dual-modular architecture for developing and validation of decision and control modules for automated vehicles. Revista Iberoamericana de Automática e Informática Industrial, 17(1):66-75. https://doi.org/10.4995/riai.2019.9542</p>	<p>Automotive, Intelligent and automated vehicles, Guidance, Control architecture, Planning and trajectory tracking, Multibody systems.</p>
<p>Blanco, J., García, A., Cañas, V. 2020. Analysis and characterization of the backscatter-link frequency in passive UHF-RFID systems. Revista Iberoamericana de Automática e Informática Industrial, 17(1):76-83. https://doi.org/10.4995/riai.2019.11115</p>	<p>Radio-frequency identification, passive tag, Backscatter-Link Frequency, frequency dispersion, protocol communication, pseudorandom sequences.</p>
<p>Jove, E., Casteleiro-Roca, J., Quintián, H., Méndez-Pérez, J.A., Calvo-Rolle, J.L. 2020. Anomaly detection based on intelligent techniques over a bicomponent production plant used on wind generator blades manufacturing. Revista Iberoamericana de Automática e Informática Industrial, 17(1):84-93. https://doi.org/10.4995/riai.2019.11055</p>	<p>Renewable energy systems, Windmills, Fault detection, System diagnosis, Neural networks.</p>
<p>Núñez A., J.R., Benítez P., I.F., Proenza Y., R., Vázquez S., L., Díaz M., D. Methodology of fault diagnosis for grid-connected photovoltaic systems of network connection. 2020. Revista Iberoamericana de Automática e Informática Industrial, 17(1):94-105. https://doi.org/10.4995/riai.2019.11449</p>	<p>Detection, isolation, diagnosis, identification, estimation and accommodation of faults, photovoltaic systems, monitoring and supervision.</p>
<p>Arevalo, V., Vicente-del-Rey, J.M., Garcia-Morales, I., Rivas-Blanco, I. 2020. Minivideos tutorials to reinforce the learning of basic concepts for an Automatic Control course. Revista Iberoamericana de Automática e Informática Industrial, 17(2):107-115. https://doi.org/10.4995/riai.2020.12156</p>	<p>Control education, teaching tools, automatic control theory, linear control systems, e-learning.</p>

Zaragoza, S., Sánchez, J., Baños, A. 2020. Identification of first and second order systems by reset control. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):116-129. https://doi.org/10.4995/riai.2020.11598	Non-linear control systems, reset control, system identification and parameters estimation, closed-loop identification.
Terán, R., Pérez, J., Beristáin, J., Cárdenas, V. 2020. PI-STA cascade controller tuning for active power filter applications. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):130-143. https://doi.org/10.4995/riai.2020.12403	Active power filters, inverters, power electronics, cascade control, sliding-mode control, PI controller, power quality.
Mañas-Álvarez, F.J., Blanco-Claraco, J.L., Torres-Moreno, J.L., Giménez-Fernández, A. 2020. Modeling and multivariable control of the urban electric vehicle UAL-eCARM. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):144-155. https://doi.org/10.4995/riai.2019.12679	Multi-input/multi-output systems, PID control, electric and solar vehicles.
Manrique-Córdoba, J., Romero-Ante, J.D., Vivas, A., Vicente, J.M., Sabater-Navarro, J.M. 2020. Mathematical modeling of food intake and insulin infusion in a patient with type 1 Diabetes in closed loop. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):156-168. https://doi.org/10.4995/riai.2019.11161	Type 1 diabetes, mathematical model dynamic glucose insulin, insulin regulation in closed loop.
Cecilia, A., Costa-Castelló, R. 2020. High gain observer with dynamic deadzone to estimate liquid water saturation in PEM fuel cells. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):169-180. https://doi.org/10.4995/riai.2020.12689	State observers, measurement noise, nonlinear systems, renewable energy systems.
Villanueva, J., Bueno, M., Simón, J., Molinas, M., Flores, J., Méndez, P.E. 2020. Application of Hilbert-Huang transform in the analysis of satellite-communication signals. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):181-189. https://doi.org/10.4995/riai.2019.10878	Satellite-communication signals, empirical-mode-decomposition, instant-frequency, Hilbert Huang transform.
Torralba-Morales, L.M., Reynoso-Meza, G., Carrillo-Ahumada, J. 2020. Tuning and comparison of design concepts applying Pareto optimality. A case study of Cholette bioreactor. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):190-201. https://doi.org/10.4995/riai.2019.11424	PID control, design concepts, Cholette's bioreactor, optimum control, decision making.
García, J.M., Valero, A., Bohórquez, A. 2020. Suspension effect in tip-over stability and steerability of robots moving on terrain discontinuities. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):202-214. https://doi.org/10.4995/riai.2020.12308	Passive suspension, skid steer robot, tip-over stability, vehicle steerability, computer simulation.
Flores-Calero, M., Torres-Torriti, M., Retamales-Ortega, F., Rosas-Díaz, F. 2020. Low-cost virtual presence platform for people with severe motor disability. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):215-228. https://doi.org/10.4995/riai.2019.10634	Motor disability, low-cost, assistive technology, virtual presence, social interaction, children.
Toriz Palacios, A., Sánchez López, A. 2020. On the expected improvement of odometry estimation in integrated exploration. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):229-238. https://doi.org/10.4995/riai.2019.11828	Autonomous mobile robot, path planning, motion estimation, position errors, error rates.
Bordons, C., Garcia-Torres, F., Ridao, M.A. 2020. Model predictive control of interconnected microgrids and electric vehicles. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(3):239-253. https://doi.org/10.4995/riai.2020.13304	Microgrids, control of renewable energy resources, dynamic interaction of power plants, predictive control, multiagent systems, smart grids, optimal operation and control of power systems, intelligent control of power systems.
Madridano, Á., Campos, S., Al-Kaff, A., García, F., Martín, D., Escalera, A. 2020. Unmanned aerial vehicle for fire surveillance and monitoring. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(3):254-263.	UAVs, detection, sensors, intelligent autonomous vehicles, navigation,

https://doi.org/10.4995/riai.2020.11806	monitoring.
Sanchez-Fontes, E., Avila Vilchis, J.C., Vilchis-González, A.H., Saldivar, B., Jacinto-Villegas, J.M., Martínez-Mendez, R. 2020. New stable by construction autonomous aerial vehicle: configuration and dynamic model. Revista Iberoamericana de Automática e Informática Industrial, 17(3):244-275. https://doi.org/10.4995/riai.2020.11603	Stability, unmanned aerial vehicle (UAV), dynamic model, actuators.
Avalos Gómez, J.U., Stevens-Navarro, E., Pineda-Rico, U., Cárdenas-Juárez, M., Arce, A., González, S. 2020. Dynamic adaptation of delayed time of diffusion of emergency messages in cognitive vehicular networks. Revista Iberoamericana de Automática e Informática Industrial, 17(3):276-284. https://doi.org/10.4995/riai.2019.12067	Vehicular and transport systems, wireless technology and mobile devices, emergency messages and security, broadcast storm, spectrum sharing.
Temoltzi-Ávila, R., Ávila-Pozos, R. 2020. Attainability set of a mechanical controllable system and conditions of robust stability. Revista Iberoamericana de Automática e Informática Industrial, 17(3):285-293. https://doi.org/10.4995/riai.2020.11938	Differential equations, nonlinear systems of control, perturbations, robust stability.
Roldán-Gómez, J.J., de León Rivas, J., Garcia-Aunon, P., Barrientos, A. 2020. A review on multi-robot systems: current challenges for operators and new developments of interfaces. Revista Iberoamericana de Automática e Informática Industrial, 17(3):294-305. https://doi.org/10.4995/riai.2020.13100	Robotics, robots, operators, interfaces, man-machine interaction.
Oggier, E., Botterón, F., Oggier, G., García, G. 2020. Decoupled digital control of a three-phase four-leg inverter to feed balanced and unbalanced loads. Revista Iberoamericana de Automática e Informática Industrial, 17(3):306-317. https://doi.org/10.4995/riai.2020.13011	Three phase inverter, power electronics, internal model control, decoupling.
Schaaf, M. 2020. Hybrid model predictive control of a gravity separator with intermittent product extraction. Revista Iberoamericana de Automática e Informática Industrial, 17(3):318-328. https://doi.org/10.4995/riai.2020.11957	Process control, multivariable control, hybrid predictive control, mixed continuous-batch processes, image processing.
Gil, J.D., Roca, L., Berenguel, M. 2020. Modelling and automatic control in solar membrane distillation: Fundamentals and proposals for its technological development. Revista Iberoamericana de Automática e Informática Industrial, 17(4):329-343. https://doi.org/10.4995/riai.2020.13122	Modelling, control, membrane distillation, desalination, solar thermal energy.
Scaglia, G.J.E., Serrano, M.E., Albertos, P. 2020. Linear algebra based trajectory control. Revista Iberoamericana de Automática e Informática Industrial, 17(4):344-353. https://doi.org/10.4995/riai.2020.13584	Trajectory control, feedforward control, feedback control, disturbances, model uncertainty, model based control.
Solis, A., Hurtado, J. 2020. Software reuse in industrial robotics: A systematic mapping. Revista Iberoamericana de Automática e Informática Industrial, 17(4):354-367. https://doi.org/10.4995/riai.2020.13335	Reusability, industrial robotics, robotic manipulator, robot programming.
Sánchez-Sánchez, P., Arteaga-Pérez, M.A. 2020. Position and force control with mass estimation for cooperative systems. Revista Iberoamericana de Automática e Informática Industrial, 17(4):368-379. https://doi.org/10.4995/riai.2020.12432	Cooperative robots, adaptive control, force control, holonomic constraints, hyperbolic tangent functions.
González, G., Aligia, D., Pezzani, C., De Angelo, C. 2020. Ciclist's torque observer in electric power assisted bicycles. Revista Iberoamericana de Automática e Informática Industrial, 17(4):380-389. https://doi.org/10.4995/riai.2020.12923	Electric bicycle, electric power assistance, EPAC, Pedelec, load model, disturbance observer.
Rios, Y., García-Rodríguez, J., Sanchez, E., Alanis, A., Ruiz-Velázquez, E., Pardo, A. 2020. Neuro-fuzzy control for artificial pancreas: in silico development and validation. Revista Iberoamericana de Automática e Informática Industrial, 17(4):390-400.	Type1 Diabetes Mellitus, hardware in the loop, embedded controller, artificial pancreas.

https://doi.org/10.4995/riai.2020.13035	
Miranda-Vega, J.E., Rivas-López, M., Flores-Fuentes, W., Sergiyenko, O., Lindner, L., Rodríguez-Quiñonez, J.C. 2020. Pattern recognition applying LDA and LR to optoelectronic signals of optical scanning systems. Revista Iberoamericana de Automática e Informática Industrial, 17(4):401-411. https://doi.org/10.4995/riai.2020.12385	Analysis and treatment of signals, sensors and virtual instruments, noise, modulation, 3D stereo vision.
Mendoza, E., Fuentes, P., Benítez, I., Reina, D., Núñez, J. 2020. Network of multi-hop wireless sensors for low cost and extended area home automation systems. Revista Iberoamericana de Automática e Informática Industrial, 17(4):412-423. https://doi.org/10.4995/riai.2020.12301	Sensors, networks, communications systems, communications networks, microprocessors, architectures, distributed control.
Manilla-García, A., Rivas-Camero, I., Guerrero-Rodríguez, N.F. 2020. Proposal of model of current consumption variation of an MSIP due to the effect of imbalance due to the presence of surface cracks in the rotor. Revista Iberoamericana de Automática e Informática Industrial, 17(4):424-431. https://doi.org/10.4995/riai.2020.12200	Modeling of the continuous system, parameter estimation, system simulation, imbalance in rotor, inductance variation, fissure mechanism.
Belman-Lopez, C.E., Jiménez-García, J.A., Hernández-González, S. 2020. Comprehensive analysis of design principles in the context of Industry 4.0. Revista Iberoamericana de Automática e Informática Industrial, 17(4):423-447. https://doi.org/10.4995/riai.2020.12579	Industry 4.0, flexible and intelligent manufacturing systems, fourth industrial revolution, modeling and control of manufacturing systems, automation.
Guzmán, J.L., Acién, F.G., Berenguel, M. 2021. Modelling and control of microalgae production in industrial photobioreactors. Revista Iberoamericana de Automática e Informática Industrial, 18(1):1-18. https://doi.org/10.4995/riai.2020.13604	Microalgae; modelling; control; photobioreactors; biotechnology.
Mahulea, C., González, R., Montijano, E., Silva, M. 2021. Path planning of multirobot systems using Petri net models. Results and open problems. Revista Iberoamericana de Automática e Informática Industrial, 18(1):19-31. https://doi.org/10.4995/riai.2020.13785	Path planning; multirobot systems; discrete event systems; Petri nets.
Pantano, M.N., Fernández, M.C., Rodríguez, L., Scaglia, G.J.E. 2021. Dynamic optimization based on Fourier. Application to the biodiesel process. Revista Iberoamericana de Automática e Informática Industrial, 18(1):32-38. https://doi.org/10.4995/riai.2020.12920	Optimal control; parameterization; nonlinear systems; renewable energy systems; optimal trajectory.
Soto, I., Campa, R., Sánchez-Mazuca, S. 2021. Modeling and control with friction compensation of a pendubot system. Revista Iberoamericana de Automática e Informática Industrial, 18(1):39-47. https://doi.org/10.4995/riai.2020.13083	Modelling; control; friction; compensation; mechanical systems.
Cardona, M., Serrano, F., Martín, J.A., Rausell, E., Saltarén, R., García-Cena, C.E. 2021. The exoskeleton for gait rehabilitation ALICE: dynamic analysis and control system evaluation using Hamilton quaternions. Revista Iberoamericana de Automática e Informática Industrial, 18(1):48-57. https://doi.org/10.4995/riai.2020.12558	Control; dynamics; exoskeleton; multiple sclerosis; lower limb; rehabilitation; robotics.
Gallardo-Alvarado, J., Tinajero-Campos, J.H., Sánchez-Rodríguez, Á. 2021. Kinematic of a configurable manipulator using screw theory. Revista Iberoamericana de Automática e Informática Industrial, 18(1):58-67. https://doi.org/10.4995/riai.2020.12793	Industrial robotics and robotic manipulators; multibody systems; robot kinematics; robotic systems.
Massiris, M., Fernández, J.A., Bajo, J., Delrieux, C. 2021. An automated system for monitoring the use of personal protective equipment in the construction industry. Revista Iberoamericana de Automática e Informática Industrial, 18(1):68-74. https://doi.org/10.4995/riai.2020.13243	Automation; occupational risk prevention; personal protective equipment; neural networks; computer vision.
Orellana, A., Rodríguez, R., Yanez, D., Valdés-Sosa, P. 2021. Fusion of PET/CT neuroimaging using a Wavelet-based and the Haar discrete transform scheme. Revista Iberoamericana de Automática e Informática Industrial, 18(1):75-81. https://doi.org/10.4995/riai.2020.12977	Fusion of images; bicubic Interpolation; Wavelet transform; discrete Haar transform; image treatment.

<p>Espinosa, F., Santos, C., Sierra-García, J.E. 2021. Multi-AGV transport of a load: state of art and centralized proposal. Revista Iberoamericana de Automática e Informática Industrial, 18(1):82-91. https://doi.org/10.4995/riai.2020.12846</p>	<p>AVGs, automatic guided vehicle, omnidirectional transport unit, cooperative transport, industrial control, industrial sector.</p>
<p>Muros, F.J. 2021. Coalitional control in the framework of cooperative game theory. Revista Iberoamericana de Automática e Informática Industrial, 18(2):93-108. https://doi.org/10.4995/riai.2020.13456</p>	<p>Coalitional control; control by clustering; distributed control; optimal control; linear feedbacks; cooperative game theory; Shapley value; linear matrix inequalities.</p>
<p>Azketa, E., Mendiáldua, X., Ibarguren, I., Solís, A. 2021. Synchronization method for distributed systems with functional safety. Revista Iberoamericana de Automática e Informática Industrial, 18(2):109-114. https://doi.org/10.4995/riai.2020.14022</p>	<p>Clock synchronization; distributed systems; functional safety; redundancy.</p>
<p>Hidalgo, H., Huerta, H. 2021. Sliding mode control for an electric vehicle with differential speed. Revista Iberoamericana de Automática e Informática Industrial, 18(2):115-124. https://doi.org/10.4995/riai.2020.13440</p>	<p>Vehicle dynamic systems; electric vehicles; sliding mode control; robust control; lagrangian systems.</p>
<p>Hernandez-Vicen, J., Martinez, S., Balaguer, C. 2021. Basic principles for the development of an application to bi-manipulate boxes with a humanoid robot. Revista Iberoamericana de Automática e Informática Industrial, 18(2):125-133. https://doi.org/10.4995/riai.2020.13097</p>	<p>Computer vision; errors correction; classification; humanoid robot.</p>
<p>Escaño, J.M., Sánchez, A.J., Ceballos, M., Gallego, A.J., Camacho, E.F. 2021. Neuro-fuzzy estimator, with complexity reduction, of the temperatures of a parabolic-trough solar field. Revista Iberoamericana de Automática e Informática Industrial, 18(2):134-145. https://doi.org/10.4995/riai.2020.13261</p>	<p>Neurofuzzy systems; functional principal component analysis; state space estimation; solar trough plant; complexity reduction.</p>
<p>Marchante, G., Acosta, A., González, A.I., Zamarreño, J.M., Álvarez, V. 2021. Comfort constraints evaluation in predictive controller for energy efficiency. Revista Iberoamericana de Automática e Informática Industrial, 18(2):146-159. https://doi.org/10.4995/riai.2020.13937</p>	<p>Model predictive control; thermal comfort; energy consumption; adaptive model.</p>
<p>Márquez-Vera, M.A., López-Ortega, O., Ramos-Velasco, L.E., Ortega-Mendoza, R.M., Fernández-Neri, B.J., Zúñiga-Peña, N.S. 2021. Fault diagnosis in industrial process by using LSTM and an elastic net. Revista Iberoamericana de Automática e Informática Industrial, 18(2):160-171. https://doi.org/10.4995/riai.2020.13611</p>	<p>Fault diagnosis; wavelet transform; recurrent neural networks; independent component analysis; elastic net.</p>
<p>Díaz, J.M., Costa-Castelló, R., Dormido, S. 2021. An interactive approach to control systems analysis and design by the root locus technique. Revista Iberoamericana de Automática e Informática Industrial, 18(2):172-188. https://doi.org/10.4995/riai.2020.13811</p>	<p>Control education; computer-aided control system design; root locus diagrams; interactive approaches.</p>
<p>Lerma, E., Costa-Castelló, R., Griñó, R., Sanchis, C. 2021. Tools for teaching digital control in engineering degrees. Revista Iberoamericana de Automática e Informática Industrial, 18(2):189-199. https://doi.org/10.4995/riai.2020.13756</p>	<p>Digital implementation; linear systems; curricular developments for teaching control in engineering; education in the field of control using laboratory equipment.</p>
<p>Martínez, B.V., Sanchis, J., García-Nieto, S., Martínez, M. 2021. Active disturbance rejection control: a guide for design and application. Revista Iberoamericana de Automática e Informática Industrial, 18(3):201-217. https://doi.org/10.4995/riai.2020.14058</p>	<p>Active control; disturbance rejection; linear control systems; parametrization; linear estimation.</p>
<p>Rosas Almeida, D.I., González Solis, E.V., Raya Díaz, G. 2021. Robust teleoperation of mechanical systems based on active disturbances compensation control structure. Revista Iberoamericana de Automática e</p>	<p>Teleoperation; robust control; disturbance estimation.</p>

Informática Industrial, 18(3):218-229. https://doi.org/10.4995/riai.2021.14433	
García-Aunon, P., Roldán, J.J., De León, J., Del Cerro, J., Barrientos, A. 2021. Practical applications using multi-UAV systems and aerial robotic swarms. Revista Iberoamericana de Automática e Informática Industrial, 18(3):230-241. https://doi.org/10.4995/riai.2020.13560	Multi-UAV; Aerial swarms; Tasks; Deployment; Coverage; Search and rescue; Surveillance; Monitoring; Transport.
Ghersin, A.S., Giribet, J.I., Luiso, J., Tournour, A. 2021. H-infinity robust displacement velocity control of a UAV based upon optical flow estimation. Revista Iberoamericana de Automática e Informática Industrial, 18(3):242-253. https://doi.org/10.4995/riai.2021.14370	H-infinity robust control; optical flow; identification; UAV; dynamic uncertainty.
López-Estrada, F.R., Méndez-López, A., Santos-Ruiz, I., Valencia-Palomo, G., Escobar-Gómez, E. 2021. Fault detection in unmanned aerial vehicles via orientation signals and machine learning. Revista Iberoamericana de Automática e Informática Industrial, 18(3):254-264. https://doi.org/10.4995/riai.2020.14031	Unmanned aerial vehicle; Fault detection and isolation; Principal component analysis; Machine learning; Quadrotor.
Rico-Azagra, J., Gil-Martínez, M., Rico, R., Nájera, S., Elvira, C. 2021. A benchmark for orientation control of a multicopter in a three degrees-of-freedom rotation structure. Revista Iberoamericana de Automática e Informática Industrial, 18(3):265-276. https://doi.org/10.4995/riai.2021.14356	Unmanned aerial vehicle (UAV); attitude control; control education; simulator; testbed.
Aguilar-López, J.M., García, R.A., Camacho, E.F. 2021. Shape detection algorithm applicable to solar estimation. Revista Iberoamericana de Automática e Informática Industrial, 18(3):277-287. https://doi.org/10.4995/riai.2021.14765	Estimation; Mobile robots; Two layers algorithm.
Aparicio-Santos, J., Hermsillo-Gómez, J., Benítez-Pérez, H., Álvarez-Icaza, L. 2021. Fuzzy controller to compensate communication loads in real-time. Revista Iberoamericana de Automática e Informática Industrial, 18(3):288-299. https://doi.org/10.4995/riai.2021.14544	Resource manager; constant bandwidth server; timer resources allocation; fuzzy control; real-time systems.
Dintén, R., López Martínez, P., Zorrilla, M. 2021. Reference architecture for the design and development of applications for Industry 4.0. Revista Iberoamericana de Automática e Informática Industrial, 18(3):300-311. https://doi.org/10.4995/riai.2021.14532	Data-centric architecture; metamodel; model-based development; industrial applications; industry 4.0.
Vilanova, R., Alcántara, S., Pedret, C. 2021. PID Tuning: Analytical approach based on the weighted Sensitivity problem. Revista Iberoamericana de Automática e Informática Industrial, 18(4):313-326. https://doi.org/10.4995/riai.2021.15422	PID; Process Control; Robustness Analysis; Disturbance rejection; Tracking.
Sierra-García, J.E., Santos, M. 2021. Neural networks and reinforcement learning in wind turbine control. Revista Iberoamericana de Automática e Informática Industrial, 18(4):327-335. https://doi.org/10.4995/riai.2021.16111	Wind turbines; pitch control; intelligent control; neural networks reinforcement learning.
Pacheco-Montiel, J., Badaoui, M., Rodríguez-Rivas, J.J., Alvarado-Farías, J.M., Carranza-Castillo, O., Ortega-González, R. 2021. Optimization of the efficiency in an induction machine drive by algorithm based on the interior point method. Revista Iberoamericana de Automática e Informática Industrial, 18(4):336-346. https://doi.org/10.4995/riai.2020.13418	Inverter Drives; Controlling Induction Machines; efficiency Enhancement; Optimization Problems.
Troviano, M., Piri-Botalla, L.E., Oggier, G.G. 2021. Modulation strategy to minimize the reactive power in the AC-link of isolated three-port DC-DC converters. Revista Iberoamericana de Automática e Informática Industrial, 18(4):347-359. https://doi.org/10.4995/riai.2021.14612	Triple active bridge converter (TAB); reactive power; AC-link; modulation strategy; soft-switching.
Hernández-Méndez, A., Guerrero-Castellanos, J.F., Orozco-Urbieto, T., Linares-Flores, J., Mino-Aguilar, G., Curiel, G. 2021. Distributed event-triggered communication for angular speed synchronization of networked BLDC motors. Revista Iberoamericana de Automática e Informática Industrial, 18(4):360-370. https://doi.org/10.4995/riai.2021.14989	Disturbance rejection; cooperative control; event-based control; consensus; mechatronics; control theory.

<p>Rodríguez, F., Garrido, D., Núñez, R., Oggier, G., García, G. 2021. Dynamic and steady-state modeling of modular input-series-output-series connected dual active bridge converters Revista Iberoamericana de Automática e Informática Industrial, 18(4):371-384. https://doi.org/10.4995/riai.2021.14866</p>	<p>Average model; small signal analysis; series-connected DC-DC converters; power electronics systems; modeling and simulation.</p>
<p>Paredes, L., Molina, M., Serrano, B. 2021. Improvement of dynamic voltage stability in a microgrid using a DSTATCOM Revista Iberoamericana de Automática e Informática Industrial, 18(4):385-395. https://doi.org/10.4995/riai.2021.14813</p>	<p>Dynamic voltage stability; DSTATCOM; microgrid; dynamic loads; induction motors.</p>
<p>Hernández-Almudi, P., Suárez, D., Montijano, E., Merino, J. 2021. Intelligent control of temperature with dynamic voltage-frequency scaling (DVFS) in embedded processors Revista Iberoamericana de Automática e Informática Industrial, 18(4):396-406. https://doi.org/10.4995/riai.2021.14200</p>	<p>Intelligent control of temperature; computer architecture; DVFS.</p>
<p>del Horno, L., Somolinos, J.A., Segura, E., Morales, R. 2021. Comparative study of control algorithms for maneuvers of first generation TECs and two degrees of freedom Revista Iberoamericana de Automática e Informática Industrial, 18(4):407-418. https://doi.org/10.4995/riai.2021.14974</p>	<p>Marine renewable energies; dynamic modelling; multivariable control systems; OrcaFlex-Matlab integration; experimental prototype; emersion maneuvers.</p>

LISTADO DE ARTÍCULOS RECIENTES POR TEMÁTICAS



Revista Iberoamericana de Automática e Informática Industrial



Automática Marina

2020	
Paper	Original keywords

2021	
Paper	Original keywords
del Horno, L., Somolinos, J.A., Segura, E., Morales, R. 2021. Comparative study of control algorithms for maneuvers of first generation TECs and two degrees of freedom Revista Iberoamericana de Automática e Informática Industrial, 18(4):407-418. https://doi.org/10.4995/riai.2021.14974	Marine renewable energies; dynamic modelling; multivariable control systems; OrcaFlex-Matlab integration; experimental prototype; emersion maneuvers.

Bioingeniería – Ingeniería/Informática Médica

2020	
Paper	Original keywords
Manrique-Córdoba, J., Romero-Ante, J.D., Vivas, A., Vicente, J.M., Sabater-Navarro, J.M. 2020. Mathematical modeling of food intake and insulin infusion in a patient with type 1 Diabetes in closed loop. Revista Iberoamericana de Automática e Informática Industrial, 17(2):156-168. https://doi.org/10.4995/riai.2019.11161	Type 1 diabetes, mathematical model dynamic glucose insulin, insulin regulation in closed loop.
Rios, Y., García-Rodríguez, J., Sanchez, E., Alanis, A., Ruiz-Velázquez, E., Pardo, A. 2020. Neuro-fuzzy control for artificial pancreas: in silico development and validation. Revista Iberoamericana de Automática e Informática Industrial, 17(4):390-400. https://doi.org/10.4995/riai.2020.13035	Type1 Diabetes Mellitus, hardware in the loop, embedded controller, artificial pancreas.
2021	
Paper	Original keywords
Guzmán, J.L., Ación, F.G., Berenguel, M. 2021. Modelling and control of microalgae production in industrial photobioreactors. Revista Iberoamericana de Automática e Informática Industrial, 18(1):1-18. https://doi.org/10.4995/riai.2020.13604	Microalgae; modelling; control; photobioreactors; biotechnology.
Cardona, M., Serrano, F., Martín, J.A., Rausell, E., Saltarén, R., García-Cena, C.E. 2021. The exoskeleton for gait rehabilitation ALICE: dynamic analysis and control system evaluation using Hamilton quaternions. Revista Iberoamericana de Automática e Informática Industrial, 18(1):48-57. https://doi.org/10.4995/riai.2020.12558	Control; dynamics; exoskeleton; multiple sclerosis; lower limb; rehabilitation; robotics.

2020	
Paper	Original keywords
Hidalgo, C.E., Marcano, M., Fernández, G., Pérez, J.M. 2020. Cooperative maneuvers applied to automated vehicles in real and virtual environments. Revista Iberoamericana de Automática e Informática Industrial, 17(1):56-65. https://doi.org/10.4995/riai.2019.11155	Cooperative Maneuvers, Hybrid Cooperative Framework, ACC, Stop & Go, ITS, Fuzzy Logic.
Jove, E., Casteleiro-Roca, J., Quintián, H., Méndez-Pérez, J.A., Calvo-Rolle, J.L. 2020. Anomaly detection based on intelligent techniques over a bicomponent production plant used on wind generator blades manufacturing. Revista Iberoamericana de Automática e Informática Industrial, 17(1):84-93. https://doi.org/10.4995/riai.2019.11055	Renewable energy systems, Windmills, Fault detection, System diagnosis, Neural networks.
2021	
Paper	Original keywords
Escaño, J.M., Sánchez, A.J., Ceballos, M., Gallego, A.J., Camacho, E.F. 2021. Neuro-fuzzy estimator, with complexity reduction, of the temperatures of a parabolic-trough solar field. Revista Iberoamericana de Automática e Informática Industrial, 18(2):134-145. https://doi.org/10.4995/riai.2020.13261	Neurofuzzy systems; functional principal component analysis; state space estimation; solar trough plant; complexity reduction.
Márquez-Vera, M.A., López-Ortega, O., Ramos-Velasco, L.E., Ortega-Mendoza, R.M., Fernández-Neri, B.J., Zúñiga-Peña, N.S. 2021. Fault diagnosis in industrial process by using LSTM and an elastic net. Revista Iberoamericana de Automática e Informática Industrial, 18(2):160-171. https://doi.org/10.4995/riai.2020.13611	Fault diagnosis; wavelet transform; recurrent neural networks; independent component analysis; elastic net.
López-Estrada, F.R., Méndez-López, A., Santos-Ruiz, I., Valencia-Palomo, G., Escobar-Gómez, E. 2021. Fault detection in unmanned aerial vehicles via orientation signals and machine learning. Revista Iberoamericana de Automática e Informática Industrial, 18(3):254-264. https://doi.org/10.4995/riai.2020.14031	Unmanned aerial vehicle; Fault detection and isolation; Principal component analysis; Machine learning; Quadrotor.
Aguilar-López, J.M., García, R.A., Camacho, E.F. 2021. Shape detection algorithm applicable to solar estimation. Revista Iberoamericana de Automática e Informática Industrial, 18(3):277-287. https://doi.org/10.4995/riai.2021.14765	Estimation; Mobile robots; Two layers algorithm.
Aparicio-Santos, J., Hermosillo-Gómez, J., Benítez-Pérez, H., Álvarez-Icaza, L. 2021. Fuzzy controller to compensate communication loads in real-time. Revista Iberoamericana de Automática e Informática Industrial, 18(3):288-299. https://doi.org/10.4995/riai.2021.14544	Resource manager; constant bandwidth server; timer resources allocation; fuzzy control; real-time systems.
Sierra-García, J.E., Santos, M. 2021. Neural networks and reinforcement learning in wind turbine control Revista Iberoamericana de Automática e Informática Industrial, 18(4):327-335. https://doi.org/10.4995/riai.2021.16111	Wind turbines; pitch control; intelligent control; neural networks reinforcement learning.
Hernández-Almudi, P., Suárez, D., Montijano, E., Merino, J. 2021. Intelligent control of temperature with dynamic voltage-frequency scaling (DVFS) in embedded processors Revista Iberoamericana de Automática e Informática Industrial, 18(4):396-406. https://doi.org/10.4995/riai.2021.14200	Intelligent control of temperature; computer architecture; DVFS.

Educación

2020	
Paper	Original keywords
Sánchez, C., Muñoz de la Peña, D., Gómez-Estern, F. 2020. Automated generation of control design benchmark problems for computer-assessed education with Doctus. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(1):1-9. https://doi.org/10.4995/riai.2019.11243	Control education, Educational aids 2, Teaching, PID Control, Linear control systems, Benchmark examples, Software tools, Automated assessment.
Arevalo, V., Vicente-del-Rey, J.M., Garcia-Morales, I., Rivas-Blanco, I. 2020. Minivideos tutorials to reinforce the learning of basic concepts for an Automatic Control course. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):107-115. https://doi.org/10.4995/riai.2020.12156	Control education, teaching tools, automatic control theory, linear control systems, e-learning.
Flores-Calero, M., Torres-Torriti, M., Retamales-Ortega, F., Rosas-Díaz, F. 2020. Low-cost virtual presence platform for people with severe motor disability. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):215-228. https://doi.org/10.4995/riai.2019.10634	Motor disability, low-cost, assistive technology, virtual presence, social interaction, children.
Madridano, Á., Campos, S., Al-Kaff, A., García, F., Martín, D., Escalera, A. 2020. Unmanned aerial vehicle for fire surveillance and monitoring. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(3):254-263. https://doi.org/10.4995/riai.2020.11806	UAVs, detection, sensors, intelligent autonomous vehicles, navigation, monitoring.
2021	
Paper	Original keywords
Díaz, J.M., Costa-Castelló, R., Dormido, S. 2021. An interactive approach to control systems analysis and design by the root locus technique. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 18(2):172-188. https://doi.org/10.4995/riai.2020.13811	Control education; computer-aided control system design; root locus diagrams; interactive approaches.
Lerma, E., Costa-Castelló, R., Griñó, R., Sanchis, C. 2021. Tools for teaching digital control in engineering degrees. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 18(2):189-199. https://doi.org/10.4995/riai.2020.13756	Digital implementation; linear systems; curricular developments for teaching control in engineering; education in the field of control using laboratory equipment.

2020	
Paper	Original keywords
Zaragoza, S., Sánchez, J., Baños, A. 2020. Identification of first and second order systems by reset control. Revista Iberoamericana de Automática e Informática Industrial, 17(2):116-129. https://doi.org/10.4995/riai.2020.11598	Non-linear control systems, reset control, system identification and parameters estimation, closed-loop identification.
Mañas-Álvarez, F.J., Blanco-Claraco, J.L., Torres-Moreno, J.L., Giménez-Fernández, A. 2020. Modeling and multivariable control of the urban electric vehicle UAL-eCARM. Revista Iberoamericana de Automática e Informática Industrial, 17(2):144-155. https://doi.org/10.4995/riai.2019.12679	Multi-input/multi-output systems, PID control, electric and solar vehicles.
Cecilia, A., Costa-Castelló, R. 2020. High gain observer with dynamic deadzone to estimate liquid water saturation in PEM fuel cells. Revista Iberoamericana de Automática e Informática Industrial, 17(2):169-180. https://doi.org/10.4995/riai.2020.12689	State observers, measurement noise, nonlinear systems, renewable energy systems.
Torralba-Morales, L.M., Reynoso-Meza, G., Carrillo-Ahumada, J. 2020. Tuning and comparison of design concepts applying Pareto optimality. A case study of Cholette bioreactor. Revista Iberoamericana de Automática e Informática Industrial, 17(2):190-201. https://doi.org/10.4995/riai.2019.11424	PID control, design concepts, Cholette's bioreactor, optimum control, decision making.
Bordons, C., Garcia-Torres, F., Ridao, M.A. 2020. Model predictive control of interconnected microgrids and electric vehicles. Revista Iberoamericana de Automática e Informática Industrial, 17(3):239-253. https://doi.org/10.4995/riai.2020.13304	Microgrids, control of renewable energy resources, dynamic interaction of power plants, predictive control, multiagent systems, smart grids, optimal operation and control of power systems, intelligent control of power systems.
Temoltzi-Ávila, R., Ávila-Pozos, R. 2020. Attainability set of a mechanical controllable system and conditions of robust stability. Revista Iberoamericana de Automática e Informática Industrial, 17(3):285-293. https://doi.org/10.4995/riai.2020.11938	Differential equations, nonlinear systems of control, perturbations, robust stability.
Schaaf, M. 2020. Hybrid model predictive control of a gravity separator with intermittent product extraction. Revista Iberoamericana de Automática e Informática Industrial, 17(3):318-328. https://doi.org/10.4995/riai.2020.11957	Process control, multivariable control, hybrid predictive control, mixed continuous-batch processes, image processing.
Gil, J.D., Roca, L., Berenguel, M. 2020. Modelling and automatic control in solar membrane distillation: Fundamentals and proposals for its technological development. Revista Iberoamericana de Automática e Informática Industrial, 17(4):329-343. https://doi.org/10.4995/riai.2020.13122	Modelling, control, membrane distillation, desalination, solar thermal energy.
Scaglia, G.J.E., Serrano, M.E., Albertos, P. 2020. Linear algebra based trajectory control. Revista Iberoamericana de Automática e Informática Industrial, 17(4):344-353. https://doi.org/10.4995/riai.2020.13584	Trajectory control, feedforward control, feedback control, disturbances, model uncertainty, model based control.
González, G., Aligia, D., Pezzani, C., De Angelo, C. 2020. Ciclist's torque observer in electric power assisted bicycles. Revista Iberoamericana de Automática e Informática Industrial, 17(4):380-389. https://doi.org/10.4995/riai.2020.12923	Electric bicycle, electric power assistance, EPAC, Pedelec, load model, disturbance observer.
2021	
Paper	Original keywords

<p>Guzmán, J.L., Ación, F.G., Berenguel, M. 2021. Modelling and control of microalgae production in industrial photobioreactors. Revista Iberoamericana de Automática e Informática Industrial, 18(1):1-18. https://doi.org/10.4995/riai.2020.13604</p>	<p>Microalgae; modelling; control; photobioreactors; biotechnology.</p>
<p>Pantano, M.N., Fernández, M.C., Rodríguez, L., Scaglia, G.J.E. 2021. Dynamic optimization based on Fourier. Application to the biodiesel process. Revista Iberoamericana de Automática e Informática Industrial, 18(1):32-38. https://doi.org/10.4995/riai.2020.12920</p>	<p>Optimal control; parameterization; nonlinear systems; renewable energy systems; optimal trajectory.</p>
<p>Hidalgo, H., Huerta, H. 2021. Sliding mode control for an electric vehicle with differential speed. Revista Iberoamericana de Automática e Informática Industrial, 18(2):115-124. https://doi.org/10.4995/riai.2020.13440</p>	<p>Vehicle dynamic systems; electric vehicles; sliding mode control; robust control; lagrangian systems.</p>
<p>Marchante, G., Acosta, A., González, A.I., Zamarreño, J.M., Álvarez, V. 2021. Comfort constraints evaluation in predictive controller for energy efficiency. Revista Iberoamericana de Automática e Informática Industrial, 18(2):146-159. https://doi.org/10.4995/riai.2020.13937</p>	<p>Model predictive control; thermal comfort; energy consumption; adaptive model.</p>
<p>Martínez, B.V., Sanchis, J., García-Nieto, S., Martínez, M. 2021. Active disturbance rejection control: a guide for design and application. Revista Iberoamericana de Automática e Informática Industrial, 18(3):201-217. https://doi.org/10.4995/riai.2020.14058</p>	<p>Active control; disturbance rejection; linear control systems; parametrization; linear estimation.</p>
<p>Ghersin, A.S., Giribet, J.I., Luiso, J., Tournour, A. 2021. H-infinity robust displacement velocity control of a UAV based upon optical flow estimation. Revista Iberoamericana de Automática e Informática Industrial, 18(3):242-253. https://doi.org/10.4995/riai.2021.14370</p>	<p>H-infinity robust control; optical flow; identification; UAV; dynamic uncertainty.</p>
<p>Rico-Azagra, J., Gil-Martínez, M., Rico, R., Nájera, S., Elvira, C. 2021. A benchmark for orientation control of a multicopter in a three degrees-of-freedom rotation structure. Revista Iberoamericana de Automática e Informática Industrial, 18(3):265-276. https://doi.org/10.4995/riai.2021.14356</p>	<p>Unmanned aerial vehicle (UAV); attitude control; control education; simulator; testbed.</p>
<p>Vilanova, R., Alcántara, S., Pedret, C. 2021. PID Tuning: Analytical approach based on the weighted Sensitivity problem. Revista Iberoamericana de Automática e Informática Industrial, 18(4):313-326. https://doi.org/10.4995/riai.2021.15422</p>	<p>PID; Process Control; Robustness Analysis; Disturbance rejection; Tracking.</p>

2020	
Paper	Original keywords
Suárez, R. Palomo-Avellaneda, L., Martínez, J., Clos, D., García, N. 2020. Dual-arm dexterous mobile manipulator with new omnidirectional wheels. Revista Iberoamericana de Automática e Informática Industrial, 17(1):10-21. https://doi.org/10.4995/riai.2019.11422	Robotics and robotic systems, Industrial Robotics and robotic manipulators, Robot manipulators, Dexterous manipulators.
Roman, J. Marquez-Viloria, D., Velásquez, R.A., Botero-Valencia, J. 2020. Indoor Positioning System Using FM Radio Stations Signals and Deep Learning. Revista Iberoamericana de Automática e Informática Industrial, 17(1):34-43. https://doi.org/10.4995/riai.2019.10894	Frequency Modulation, Indoor, Position Estimation, Positioning Systems, Radio Signals.
Velasco, E., Zapata-Impata, B.S., Gil, P., Torres, F. 2020. Object classification using bimodal perception data extracted from single-touch robotic grasps. Revista Iberoamericana de Automática e Informática Industrial, 17(1):44-55. https://doi.org/10.4995/riai.2019.10923	Robotic manipulators, Proprioceptive-tactile perception, Propioceptive-tactile learning, Objects classification, Objects recognition.
Hidalgo, C.E., Marcano, M., Fernández, G., Pérez, J.M. 2020. Cooperative maneuvers applied to automated vehicles in real and virtual environments. Revista Iberoamericana de Automática e Informática Industrial, 17(1):56-65. https://doi.org/10.4995/riai.2019.11155	Cooperative Maneuvers, Hybrid Cooperative Framework, ACC, Stop & Go, ITS, Fuzzy Logic.
Lattarulo, R., Matute, J.A., Pérez, J., Gomez Garay, V. 2020. Dual-modular architecture for developing and validation of decision and control modules for automated vehicles. Revista Iberoamericana de Automática e Informática Industrial, 17(1):66-75. https://doi.org/10.4995/riai.2019.9542	Automotive, Intelligent and automated vehicles, Guidance, Control architecture, Planning and trajectory tracking, Multibody systems.
García, J.M., Valero, A., Bohórquez, A. 2020. Suspension effect in tip-over stability and steerability of robots moving on terrain discontinuities. Revista Iberoamericana de Automática e Informática Industrial, 17(2):202-214. https://doi.org/10.4995/riai.2020.12308	Passive suspension, skid steer robot, tip-over stability, vehicle steerability, computer simulation.
Toriz Palacios, A., Sánchez López, A. 2020. On the expected improvement of odometry estimation in integrated exploration. Revista Iberoamericana de Automática e Informática Industrial, 17(2):229-238. https://doi.org/10.4995/riai.2019.11828	Autonomous mobile robot, path planning, motion estimation, position errors, error rates.
Madridano, Á., Campos, S., Al-Kaff, A., García, F., Martín, D., Escalera, A. 2020. Unmanned aerial vehicle for fire surveillance and monitoring. Revista Iberoamericana de Automática e Informática Industrial, 17(3):254-263. https://doi.org/10.4995/riai.2020.11806	UAVs, detection, sensors, intelligent autonomous vehicles, navigation, monitoring.
Sanchez-Fontes, E., Avila Vilchis, J.C., Vilchis-González, A.H., Saldivar, B., Jacinto-Villegas, J.M., Martínez-Mendez, R. 2020. New stable by construction autonomous aerial vehicle: configuration and dynamic model. Revista Iberoamericana de Automática e Informática Industrial, 17(3):244-275. https://doi.org/10.4995/riai.2020.11603	Stability,unmanned aerial vehicle (UAV), dynamic model, actuators.
Roldán-Gómez, J.J., de León Rivas, J., Garcia-Aunon, P., Barrientos, A. 2020. A review on multi-robot systems: current challenges for operators and new developments of interfaces. Revista Iberoamericana de Automática e Informática Industrial, 17(3):294-305. https://doi.org/10.4995/riai.2020.13100	Robotics, robots, operators, interfaces, man-machine interaction.
Scaglia, G.J.E., Serrano, M.E., Albertos, P. 2020. Linear algebra based trajectory control. Revista Iberoamericana de Automática e Informática Industrial, 17(4):344-353. https://doi.org/10.4995/riai.2020.13584	Trajectory control, feedforward control, feedback control, disturbances, model uncertainty, model based control.

Solis, A., Hurtado, J. 2020. Software reuse in industrial robotics: A systematic mapping. Revista Iberoamericana de Automática e Informática Industrial, 17(4):354-367. https://doi.org/10.4995/riai.2020.13335	Reusability, industrial robotics, robotic manipulator, robot programming.
Sánchez-Sánchez, P., Arteaga-Pérez, M.A. 2020. Position and force control with mass estimation for cooperative systems. Revista Iberoamericana de Automática e Informática Industrial, 17(4):368-379. https://doi.org/10.4995/riai.2020.12432	Cooperative robots, adaptive control, force control, holonomic constraints, hyperbolic tangent functions.
2021	
Paper	Original keywords
Mahulea, C., González, R., Montijano, E., Silva, M. 2021. Path planning of multirobot systems using Petri net models. Results and open problems. Revista Iberoamericana de Automática e Informática Industrial, 18(1):19-31. https://doi.org/10.4995/riai.2020.13785	Path planning; multirobot systems; discrete event systems; Petri nets.
Cardona, M., Serrano, F., Martín, J.A., Rausell, E., Saltarén, R., García-Cena, C.E. 2021. The exoskeleton for gait rehabilitation ALICE: dynamic analysis and control system evaluation using Hamilton quaternions. Revista Iberoamericana de Automática e Informática Industrial, 18(1):48-57. https://doi.org/10.4995/riai.2020.12558	Control; dynamics; exoskeleton; multiple sclerosis; lower limb; rehabilitation; robotics.
Gallardo-Alvarado, J., Tinajero-Campos, J.H., Sánchez-Rodríguez, Á. 2021. Kinematic of a configurable manipulator using screw theory. Revista Iberoamericana de Automática e Informática Industrial, 18(1):58-67. https://doi.org/10.4995/riai.2020.12793	Industrial robotics and robotic manipulators; multibody systems; robot kinematics; robotic systems.
Espinosa, F., Santos, C., Sierra-García, J.E. 2021. Multi-AGV transport of a load: state of art and centralized proposal. Revista Iberoamericana de Automática e Informática Industrial, 18(1):82-91. https://doi.org/10.4995/riai.2020.12846	AVGs, automatic guided vehicle, omnidirectional transport unit, cooperative transport, industrial control, industrial sector.
Hidalgo, H., Huerta, H. 2021. Sliding mode control for an electric vehicle with differential speed. Revista Iberoamericana de Automática e Informática Industrial, 18(2):115-124. https://doi.org/10.4995/riai.2020.13440	Vehicle dynamic systems; electric vehicles; sliding mode control; robust control; lagrangian systems.
Hernandez-Vicen, J., Martinez, S., Balaguer, C. 2021. Basic principles for the development of an application to bi-manipulate boxes with a humanoid robot. Revista Iberoamericana de Automática e Informática Industrial, 18(2):125-133. https://doi.org/10.4995/riai.2020.13097	Computer vision; errors correction; classification; humanoid robot.
García-Aunon, P., Roldán, J.J., De León, J., Del Cerro, J., Barrientos, A. 2021. Practical applications using multi-UAV systems and aerial robotic swarms. Revista Iberoamericana de Automática e Informática Industrial, 18(3):230-241. https://doi.org/10.4995/riai.2020.13560	Multi-UAV; Aerial swarms; Tasks; Deployment; Coverage; Search and rescue; Surveillance; Monitoring; Transport.
Ghersin, A.S., Giribet, J.I., Luiso, J., Tournour, A. 2021. H-infinity robust displacement velocity control of a UAV based upon optical flow estimation. Revista Iberoamericana de Automática e Informática Industrial, 18(3):242-253. https://doi.org/10.4995/riai.2021.14370	H-infinity robust control; optical flow; identification; UAV; dynamic uncertainty.
López-Estrada, F.R., Méndez-López, A., Santos-Ruiz, I., Valencia-Palomo, G., Escobar-Gómez, E. 2021. Fault detection in unmanned aerial vehicles via orientation signals and machine learning. Revista Iberoamericana de Automática e Informática Industrial, 18(3):254-264. https://doi.org/10.4995/riai.2020.14031	Unmanned aerial vehicle; Fault detection and isolation; Principal component analysis; Machine learning; Quadrotor.
Rico-Azagra, J., Gil-Martínez, M., Rico, R., Nájera, S., Elvira, C. 2021. A benchmark for orientation control of a multirotor in a three degrees-of-freedom rotation structure. Revista Iberoamericana de Automática e Informática Industrial, 18(3):265-276. https://doi.org/10.4995/riai.2021.14356	Unmanned aerial vehicle (UAV); attitude control; control education; simulator; testbed.
Aguilar-López, J.M., García, R.A., Camacho, E.F. 2021. Shape detection	Estimation; Mobile robots; Two

algorithm applicable to solar estimation. Revista Iberoamericana de Automática e Informática Industrial, 18(3):277-287.
<https://doi.org/10.4995/riai.2021.14765>

layers algorithm.

Simulación y Optimización

2020	
Paper	Original keywords
Torralba-Morales, L.M., Reynoso-Meza, G., Carrillo-Ahumada, J. 2020. Tuning and comparison of design concepts applying Pareto optimality. A case study of Cholette bioreactor. Revista Iberoamericana de Automática e Informática Industrial, 17(2):190-201. https://doi.org/10.4995/riai.2019.11424	PID control, design concepts, Cholette's bioreactor, optimum control, decision making.
Bordons, C., Garcia-Torres, F., Ridaó, M.A. 2020. Model predictive control of interconnected microgrids and electric vehicles. Revista Iberoamericana de Automática e Informática Industrial, 17(3):239-253. https://doi.org/10.4995/riai.2020.13304	Microgrids, control of renewable energy resources, dynamic interaction of power plants, predictive control, multiagent systems, smart grids, optimal operation and control of power systems, intelligent control of power systems.
Schaaf, M. 2020. Hybrid model predictive control of a gravity separator with intermittent product extraction. Revista Iberoamericana de Automática e Informática Industrial, 17(3):318-328. https://doi.org/10.4995/riai.2020.11957	Process control, multivariable control, hybrid predictive control, mixed continuous-batch processes, image processing.
Belman-Lopez, C.E., Jiménez-García, J.A., Hernández-González, S. 2020. Comprehensive analysis of design principles in the context of Industry 4.0. Revista Iberoamericana de Automática e Informática Industrial, 17(4):423-447. https://doi.org/10.4995/riai.2020.12579	Industry 4.0, flexible and intelligent manufacturing systems, fourth industrial revolution, modeling and control of manufacturing systems, automation.
2021	
Paper	Original keywords
Guzmán, J.L., Ación, F.G., Berenguel, M. 2021. Modelling and control of microalgae production in industrial photobioreactors. Revista Iberoamericana de Automática e Informática Industrial, 18(1):1-18. https://doi.org/10.4995/riai.2020.13604	Microalgae; modelling; control; photobioreactors; biotechnology.
Mahulea, C., González, R., Montijano, E., Silva, M. 2021. Path planning of multirobot systems using Petri net models. Results and open problems. Revista Iberoamericana de Automática e Informática Industrial, 18(1):19-31. https://doi.org/10.4995/riai.2020.13785	Path planning; multirobot systems; discrete event systems; Petri nets.
Pantano, M.N., Fernández, M.C., Rodríguez, L., Scaglia, G.J.E. 2021. Dynamic optimization based on Fourier. Application to the biodiesel process. Revista Iberoamericana de Automática e Informática Industrial, 18(1):32-38. https://doi.org/10.4995/riai.2020.12920	Optimal control; parameterization; nonlinear systems; renewable energy systems; optimal trajectory.
Espinosa, F., Santos, C., Sierra-García, J.E. 2021. Multi-AGV transport of a load: state of art and centralized proposal. Revista Iberoamericana de Automática e Informática Industrial, 18(1):82-91. https://doi.org/10.4995/riai.2020.12846	AVGs, automatic guided vehicle, omnidirectional transport unit, cooperative transport, industrial control, industrial sector.

Sistemas de Control en Red

2020	
Paper	Original keywords
Avalos Gómez, J.U., Stevens-Navarro, E., Pineda-Rico, U., Cárdenas-Juárez, M., Arce, A., González, S. 2020. Dynamic adaptation of delayed time of diffusion of emergency messages in cognitive vehicular networks. Revista Iberoamericana de Automática e Informática Industrial, 17(3):276-284. https://doi.org/10.4995/riai.2019.12067	Vehicular and transport systems, wireless technology and mobile devices, emergency messages and security, broadcast storm, spectrum sharing.
Mendoza, E., Fuentes, P., Benítez, I., Reina, D., Núñez, J. 2020. Network of multi-hop wireless sensors for low cost and extended area home automation systems. Revista Iberoamericana de Automática e Informática Industrial, 17(4):412-423. https://doi.org/10.4995/riai.2020.12301	Sensors, networks, communications systems, communications networks, microprocessors, architectures, distributed control.
Belman-Lopez, C.E., Jiménez-García, J.A., Hernández-González, S. 2020. Comprehensive analysis of design principles in the context of Industry 4.0. Revista Iberoamericana de Automática e Informática Industrial, 17(4):423-447. https://doi.org/10.4995/riai.2020.12579	Industry 4.0, flexible and intelligent manufacturing systems, fourth industrial revolution, modeling and control of manufacturing systems, automation.
2021	
Paper	Original keywords
Hernández-Méndez, A., Guerrero-Castellanos, J.F., Orozco-Urbieta, T., Linares-Flores, J., Mino-Aguilar, G., Curiel, G. 2021. Distributed event-triggered communication for angular speed synchronization of networked BLDC motors Revista Iberoamericana de Automática e Informática Industrial, 18(4):360-370. https://doi.org/10.4995/riai.2021.14989	Disturbance rejection; cooperative control; event-based control; consensus; mechatronics; control theory.

2020	
Paper	Original keywords
Núñez A., J.R., Benítez P., I.F., Proenza Y., R., Vázquez S., L., Díaz M., D. Methodology of fault diagnosis for grid-connected photovoltaic systems of network connection. 2020. Revista Iberoamericana de Automática e Informática Industrial, 17(1):94-105. https://doi.org/10.4995/riai.2019.11449	Detection, isolation, diagnosis, identification, estimation and accommodation of faults, photovoltaic systems, monitoring and supervision.
Terán, R., Pérez, J., Beristáin, J., Cárdenas, V. 2020. PI-STA cascade controller tuning for active power filter applications. Revista Iberoamericana de Automática e Informática Industrial, 17(2):130-143. https://doi.org/10.4995/riai.2020.12403	Active power filters, inverters, power electronics, cascade control, sliding-mode control, PI controller, power quality.
Cecilia, A., Costa-Castelló, R. 2020. High gain observer with dynamic deadzone to estimate liquid water saturation in PEM fuel cells. Revista Iberoamericana de Automática e Informática Industrial, 17(2):169-180. https://doi.org/10.4995/riai.2020.12689	State observers, measurement noise, nonlinear systems, renewable energy systems.
Bordons, C., Garcia-Torres, F., Ridaó, M.A. 2020. Model predictive control of interconnected microgrids and electric vehicles. Revista Iberoamericana de Automática e Informática Industrial, 17(3):239-253. https://doi.org/10.4995/riai.2020.13304	Microgrids, control of renewable energy resources, dynamic interaction of power plants, predictive control, multiagent systems, smart grids, optimal operation and control of power systems, intelligent control of power systems.
Oggier, E., Botterón, F., Oggier, G., García, G. 2020. Decoupled digital control of a three-phase four-leg inverter to feed balanced and unbalanced loads. Revista Iberoamericana de Automática e Informática Industrial, 17(3):306-317. https://doi.org/10.4995/riai.2020.13011	Three phase inverter, power electronics, internal model control, decoupling.
González, G., Aligia, D., Pezzani, C., De Angelo, C. 2020. Ciclist's torque observer in electric power assisted bicycles. Revista Iberoamericana de Automática e Informática Industrial, 17(4):380-389. https://doi.org/10.4995/riai.2020.12923	Electric bicycle, electric power assistance, EPAC, Pedelec, load model, disturbance observer.
Manilla-García, A., Rivas-Camero, I., Guerrero-Rodríguez, N.F. 2020. Proposal of model of current consumption variation of an MSIP due to the effect of imbalance due to the presence of surface cracks in the rotor. Revista Iberoamericana de Automática e Informática Industrial, 17(4):424-431. https://doi.org/10.4995/riai.2020.12200	Modeling of the continuous system, parameter estimation, system simulation, imbalance in rotor, inductance variation, fissure mechanism.
2021	
Paper	Original keywords
Pacheco-Montiel, J., Badaoui, M., Rodríguez-Rivas, J.J., Alvarado-Farías, J.M., Carranza-Castillo, O., Ortega-González, R. 2021. Optimization of the efficiency in an induction machine drive by algorithm based on the interior point method Revista Iberoamericana de Automática e Informática Industrial, 18(4):336-346. https://doi.org/10.4995/riai.2020.13418	Inverter Drives; Controlling Induction Machines; efficiency Enhancement; Optimization Problems.
Troviano, M., Piri-Botalla, L.E., Oggier, G.G. 2021. Modulation strategy to minimize the reactive power in the AC-link of isolated three-port DC-DC converters Revista Iberoamericana de Automática e Informática Industrial, 18(4):347-359. https://doi.org/10.4995/riai.2021.14612	Triple active bridge converter (TAB); reactive power; AC-link; modulation strategy; soft-switching.
Hernández-Méndez, A., Guerrero-Castellanos, J.F., Orozco-Urbieto, T., Linares-Flores, J., Mino-Aguilar, G., Curiel, G. 2021. Distributed event-triggered communication for angular speed synchronization of networked BLDC motors Revista Iberoamericana de Automática e Informática Industrial, 18(4):360-370. https://doi.org/10.4995/riai.2021.14989	Disturbance rejection; cooperative control; event-based control; consensus; mechatronics; control theory.

<p>Rodríguez, F., Garrido, D., Núñez, R., Oggier, G., García, G. 2021. Dynamic and steady-state modeling of modular input-series-output-series connected dual active bridge converters <i>Revista Iberoamericana de Automática e Informática Industrial</i>, 18(4):371-384. https://doi.org/10.4995/riai.2021.14866</p>	<p>Average model; small signal analysis; series-connected DC-DC converters; power electronics systems; modeling and simulation.</p>
<p>Paredes, L., Molina, M., Serrano, B. 2021. Improvement of dynamic voltage stability in a microgrid using a DSTATCOM <i>Revista Iberoamericana de Automática e Informática Industrial</i>, 18(4):385-395. https://doi.org/10.4995/riai.2021.14813</p>	<p>Dynamic voltage stability; DSTATCOM; microgrid; dynamic loads; induction motors.</p>
<p>Hernández-Almudi, P., Suárez, D., Montijano, E., Merino, J. 2021. Intelligent control of temperature with dynamic voltage-frequency scaling (DVFS) in embedded processors <i>Revista Iberoamericana de Automática e Informática Industrial</i>, 18(4):396-406. https://doi.org/10.4995/riai.2021.14200</p>	<p>Intelligent control of temperature; computer architecture; DVFS.</p>

Teoría de Control Automático

2020	
Paper	Original keywords
Zaragoza, S., Sánchez, J., Baños, A. 2020. Identification of first and second order systems by reset control. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):116-129. https://doi.org/10.4995/riai.2020.11598	Non-linear control systems, reset control, system identification and parameters estimation, closed-loop identification.
Torralba-Morales, L.M., Reynoso-Meza, G., Carrillo-Ahumada, J. 2020. Tuning and comparison of design concepts applying Pareto optimality. A case study of Cholette bioreactor. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(2):190-201. https://doi.org/10.4995/riai.2019.11424	PID control, design concepts, Cholette's bioreactor, optimum control, decision making.
Temoltzi-Ávila, R., Ávila-Pozos, R. 2020. Attainability set of a mechanical controllable system and conditions of robust stability. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(3):285-293. https://doi.org/10.4995/riai.2020.11938	Differential equations, nonlinear systems of control, perturbations, robust stability.
Scaglia, G.J.E., Serrano, M.E., Albertos, P. 2020. Linear algebra based trajectory control. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 17(4):344-353. https://doi.org/10.4995/riai.2020.13584	Trajectory control, feedforward control, feedback control, disturbances, model uncertainty, model based control.
2021	
Paper	Original keywords
Soto, I., Campa, R. Sánchez-Mazuca, S. 2021. Modeling and control with friction compensation of a pendubot system. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 18(1):39-47. https://doi.org/10.4995/riai.2020.13083	Modelling; control; friction; compensation; mechanical systems.
Muros, F.J. 2021. Coalitional control in the framework of cooperative game theory. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 18(2):93-108. https://doi.org/10.4995/riai.2020.13456	Coalitional control; control by clustering; distributed control; optimal control; linear feedbacks; cooperative game theory; Shapley value; linear matrix inequalities.
Hidalgo, H., Huerta, H. 2021. Sliding mode control for an electric vehicle with differential speed. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 18(2):115-124. https://doi.org/10.4995/riai.2020.13440	Vehicle dynamic systems; electric vehicles; sliding mode control; robust control; lagrangian systems.
Martínez, B.V., Sanchis, J., García-Nieto, S., Martínez, M. 2021. Active disturbance rejection control: a guide for design and application. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 18(3):201-217. https://doi.org/10.4995/riai.2020.14058	Active control; disturbance rejection; linear control systems; parametrization; linear estimation.
Rosas Almeida, D.I., González Solis, E.V., Raya Díaz, G. 2021. Robust teleoperation of mechanical systems based on active disturbances compensation control structure. <i>Revista Iberoamericana de Automática e Informática Industrial</i> , 18(3):218-229. https://doi.org/10.4995/riai.2021.14433	Teleoperation; robust control; disturbance estimation.

2020	
Paper	Original keywords
Belman-Lopez, C.E., Jiménez-García, J.A., Hernández-González, S. 2020. Comprehensive analysis of design principles in the context of Industry 4.0. Revista Iberoamericana de Automática e Informática Industrial, 17(4):423-447. https://doi.org/10.4995/riai.2020.12579	Industry 4.0, flexible and intelligent manufacturing systems, fourth industrial revolution, modeling and control of manufacturing systems, automation.
2021	
Paper	Original keywords
Azketa, E., Mendiáldua, X., Ibarguren, I., Solís, A. 2021. Synchronization method for distributed systems with functional safety. Revista Iberoamericana de Automática e Informática Industrial, 18(2):109-114. https://doi.org/10.4995/riai.2020.14022	Clock synchronization; distributed systems; functional safety; redundancy.
Aparicio-Santos, J., Hermsillo-Gómez, J., Benítez-Pérez, H., Álvarez-Icaza, L. 2021. Fuzzy controller to compensate communication loads in real-time. Revista Iberoamericana de Automática e Informática Industrial, 18(3):288-299. https://doi.org/10.4995/riai.2021.14544	Resource manager; constant bandwidth server; timer resources allocation; fuzzy control; real-time systems.
Dintén, R., López Martínez, P., Zorrilla, M. 2021. Reference architecture for the design and development of applications for Industry 4.0. Revista Iberoamericana de Automática e Informática Industrial, 18(3):300-311. https://doi.org/10.4995/riai.2021.14532	Data-centric architecture; metamodel; model-based development; industrial applications; industry 4.0.

Visión por Computador/ Tratamiento de Señales

2020	
Paper	Original keywords
García-Moreno, A., González-Barbosa, J. 2020. Virtual 3D reconstruction of complex urban environments. Revista Iberoamericana de Automática e Informática Industrial, 17(1):22-33. https://doi.org/10.4995/riai.2019.11203	3D reconstruction, texturing, Meshing, LIDAR.
Roman, J. Marquez-Viloria, D., Velásquez, R.A., Botero-Valencia, J. 2020. Indoor positioning system using FM radio stations signals and deep learning. Revista Iberoamericana de Automática e Informática Industrial, 17(1):34-43. https://doi.org/10.4995/riai.2019.10894	Frequency Modulation, Indoor, Position Estimation, Positioning Systems, Radio Signals.
Velasco, E., Zapata-Impata, B.S., Gil, P., Torres, F. 2020. Object classification using bimodal perception data extracted from single-touch robotic grasps. Revista Iberoamericana de Automática e Informática Industrial, 17(1):44-55. https://doi.org/10.4995/riai.2019.10923	Robotic manipulators, Proprioceptive-tactile perception, Proprioceptive-tactile learning, Objects classification, Objects recognition.
Hidalgo, C.E., Marcano, M., Fernández, G., Pérez, J.M. 2020. Cooperative maneuvers applied to automated vehicles in real and virtual environments. Revista Iberoamericana de Automática e Informática Industrial, 17(1):56-65. https://doi.org/10.4995/riai.2019.11155	Cooperative Maneuvers, Hybrid Cooperative Framework, ACC, Stop & Go, ITS, Fuzzy Logic.
Blanco, J., García, A., Cañas, V. 2020. Analysis and characterization of the backscatter-link frequency in passive UHF-RFID systems. Revista Iberoamericana de Automática e Informática Industrial, 17(1):76-83. https://doi.org/10.4995/riai.2019.11115	Radio-frequency identification, passive tag, Backscatter-Link Frequency, frequency dispersion, protocol communication, pseudorandom sequences.
Villanueva, J., Bueno, M., Simón, J., Molinas, M., Flores, J., Méndez, P.E. 2020. Application of Hilbert-Huang transform in the analysis of satellite-communication signals. Revista Iberoamericana de Automática e Informática Industrial, 17(2):181-189. https://doi.org/10.4995/riai.2019.10878	Satellite-communication signals, empirical-mode-decomposition, instant-frequency, Hilbert Huang transform.
Madridano, Á., Campos, S., Al-Kaff, A., García, F., Martín, D., Escalera, A. 2020. Unmanned aerial vehicle for fire surveillance and monitoring. Revista Iberoamericana de Automática e Informática Industrial, 17(3):254-263. https://doi.org/10.4995/riai.2020.11806	UAVs, detection, sensors, intelligent autonomous vehicles, navigation, monitoring.
Miranda-Vega, J.E., Rivas-López, M., Flores-Fuentes, W., Sergiyenko, O., Lindner, L., Rodríguez-Quiñonez, J.C. 2020. Pattern recognition applying LDA and LR to optoelectronic signals of optical scanning systems. Revista Iberoamericana de Automática e Informática Industrial, 17(4):401-411. https://doi.org/10.4995/riai.2020.12385	Analysis and treatment of signals, sensors and virtual instruments, noise, modulation, 3D stereo vision.
2021	
Paper	Original keywords
Massiris, M., Fernández, J.A., Bajo, J., Delrieux, C. 2021. An automated system for monitoring the use of personal protective equipment in the construction industry. Revista Iberoamericana de Automática e Informática Industrial, 18(1):68-74. https://doi.org/10.4995/riai.2020.13243	Automation; occupational risk prevention; personal protective equipment; neural networks; computer vision.
Orellana, A., Rodríguez, R., Yanez, D., Valdés-Sosa, P. 2021. Fusion of PET/CT neuroimaging using a Wavelet-based and the Haar discrete transform scheme. Revista Iberoamericana de Automática e Informática Industrial, 18(1):75-81. https://doi.org/10.4995/riai.2020.12977	Fusion of images; bicubic Interpolation; Wavelet transform; discrete Haar transform; image treatment.
Hernandez-Vicen, J., Martinez, S., Balaguer, C. 2021. Basic principles for the development of an application to bi-manipulate boxes with a humanoid robot. Revista Iberoamericana de Automática e Informática Industrial, 18(2):125-133. https://doi.org/10.4995/riai.2020.13097	Computer vision; errors correction; classification; humanoid robot.

<p>Ghersin, A.S., Giribet, J.I., Luiso, J., Tournour, A. 2021. H-infinity robust displacement velocity control of a UAV based upon optical flow estimation. Revista Iberoamericana de Automática e Informática Industrial, 18(3):242-253. https://doi.org/10.4995/riai.2021.14370</p>	<p>H-infinity robust control; optical flow; identification; UAV; dynamic uncertainty.</p>
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