

DEPARTAMENTO DE
INGENIERIA DE SISTEMAS Y
AUTOMATICA

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Actividades de investigación

Tesis Doctorales

- Actuadores no lineales y entornos de simulación para dispositivos de rehabilitación
Autor: COPACI, D.S.
Director/Codirectores: MORENO, L.E.; BLANCO, M. D.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017
- Arquitectura y diseño de un sistema completo de navegación semántica. Descripción de su ontología y gestión de conocimiento.
Autor: CRESPO, J.
Director/Codirectores: BARBER, R.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017
- Autonomous decision-making for socially interactive robots
Autor: PERULA, R.
Director/Codirectores: ABDERRAHIM, M.; CASTRO, A.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017
- Avances en la interacción física segura humano-robot y el desarrollo de sistemas elásticos articulares
Autor: MEDINA, J.
Director/Codirectores: BALAGUER, C.; JARDON, A.; GIMENEZ, A.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017
- Development of a hybrid robotic system based on an adaptive and associative assistance for rehabilitation of reaching movement after stroke
Autor: RESQUIN, F.J.
Director/Codirectores: BLANCO, M. D.; PONS, J.L.; BRUNETTI, F.J.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017
- Fusión sensorial en Sistemas de Ayuda a la Conducción
Autor: PONZ, A.
Director/Codirectores: ARMINGOL, J.M.; GARCIA, F.
Universidad: UNIVERSIDAD CARLOS III DE MADRID

Año: 2017

- Methods and metrics for the improvement of the interaction and the rehabilitation of cerebral palsy through inertial technology
Autor: GARASA, M.A.
Director/Codirectores: GARRIDO, L. S.; CERES, R.; RAYA, R.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017

- Sistema Avanzado de Asistencia a la Conducción para Entornos Interurbanos
Autor: HERNAN, C.
Director/Codirectores: ESCALERA, A.; ARMINGOL, J.M.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017

- Vision-Based Navigation System for Unmanned Aerial Vehicles
Autor: AL KAFF, A.H.A.
Director/Codirectores: ESCALERA, A.; ARMINGOL, J.M.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2017

- Vision-based Navigation System for Unmanned Aerial Vehicles
Director/Codirectores: ESCALERA, A.; ARMINGOL, J.M.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Centro donde se presentó: ESCUELA POLITECNICA SUPERIOR
Año: 2017

Publicaciones y actividades de difusión de resultados

Publicaciones en revistas científicas nacionales

- CASTILLO, J.C.; FERNANDEZ-CABALLERO, A.; LOPEZ, M.T.
A review on intelligent monitoring and activity interpretation, *Inteligencia artificial: Iberoamerican journal of artificial intelligence*, Vol. 20, Núm. 59, 2017, pp. 53-69, ESPAÑA.

- OLIVEIRA, T.; CASTILLO, J.C.; NOVAIS, P.; SATOH, K.
Decision making in dynamic information environments, *Inteligencia artificial: Iberoamerican journal of artificial intelligence*, Vol. 20, Núm. 59, 2017, pp. 5-7, ESPAÑA.

Publicaciones en revistas científicas internacionales

- ABDERRAHIM, M.; SANTALLA, S.N.; ARRIBAS, S.M.; CONDEZO, L.A.
A novel pyrogallol red-based assay to assess catalase activity: optimization by response surface methodology, *TALANTA*, Vol. 166, 2017, pp. 349-356, REINO UNIDO.

- ABU-DAKKA, F.J.M.D.; ASSAD, I.F.; ALKHDOUR, R.M.I.; ABDERRAHIM, M.
Statistical evaluation of an evolutionary algorithm for minimum time trajectory planning problem for

industrial robots, *INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY*, Vol. 89, Núm. 1, 2017, pp. 389-406, REINO UNIDO.

- AL KAFF, A.H.A.; GARCIA, F.; MARTIN, D.; ESCALERA, A.; ARMINGOL, J.M.
Obstacle detection and avoidance system based on monocular camera and size expansion algorithm for UAVs, *SENSORS*, Vol. 17, Núm. 5, 2017, SUIZA.
- ALONSO, F.; CASTRO, A.; MALFAZ, M. A.; Malfaz, Maria; CASTILLO, J.C.; SALICHS, M.
Identification and distance estimation of users and objects by means of electronic beacons in social robotics, *EXPERT SYSTEMS WITH APPLICATIONS*, Vol. 86, 2017, pp. 247-257, ESTADOS UNIDOS DE AMERICA.
- ALONSO, F.; GAMBOA, J.J.; CASTILLO, J.C.; CASTRO, A.; SALICHS, M.
Detecting and Classifying Human Touches in a Social Robot Through Acoustic Sensing and Machine Learning, *SENSORS*, Vol. 17, Núm. 5-1138, 2017, pp. 1-19, SUIZA.
- ANAYA, J.J.; PONZ, A.; GARCIA, F.; TALAVERA, E.
Motorcycle detection for ADAS through camera and V2V Communication, a comparative analysis of two modern technologies, *EXPERT SYSTEMS WITH APPLICATIONS*, Vol. 77, 2017, pp. 148-159, ESTADOS UNIDOS DE AMERICA.
- BELLMAN, K.; HILDMANN, H.; BOTEV, J.; LEWIS, P.R.; MARSH, S.; PITT, J.; SCHOLTES, I.; TOMFORDE, S.
Socially-Sensitive Systems Design Exploring Social Potential, *IEEE TECHNOLOGY AND SOCIETY MAGAZINE*, Vol. 36, Núm. 3, 2017, pp. 72-80, ESTADOS UNIDOS DE AMERICA.
- CASTILLO, J.C.; FERNÁNDEZ, A.; SERRANO-CUERDA, J.; LOPEZ, M.T.; MARTINEZ-RODRIGO, A.
Smart environment architecture for robust people detection by infrared and visible video fusion, *Journal of Ambient Intelligence and Humanized Computing*, Vol. 8, Núm. 2, 2017, pp. 223-237.
- COBOS, J.C.; ABDERRAHIM, M.
Measuring heart and breath rates by image photoplethysmography using wavelets technique, *IEEE Latin America Transactions*, Vol. 15, Núm. 10, 2017, pp. 1864-1868, ESTADOS UNIDOS DE AMERICA.
- COPACI, D.S.; CANO, E.; LOPEZ, L.M.; MORENO, L.E.; BLANCO, M. D.
New design of a soft robotics wearable elbow exoskeleton based on shape memory alloy wire actuators, *Applied Bionics and Biomechanics*, Núm. Article ID 1605101, 2017, pp. 1-11, HOLANDA - PAISES BAJOS.
- CRESPO, J.; BARBER, R.; MOZOS, O.M.
Relational model for robotic semantic navigation in indoor environments, *JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS*, Vol. 86, Núm. 3-4, 2017, pp. 617-639, HOLANDA - PAISES BAJOS.
- CRESPO, J.; C. Gomez; A. C. Hernández; BARBER, R.
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- FERNANDEZ, E.; GONZALEZ, V.; CASTILLO, J.C.; CASTRO, A.; MALFAZ, M. A.; Malfaz, Maria;

SALICHS, M.

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- FERNÁNDEZ, J.; ALONSO, F.; CASTRO, A.; SALICHS, M.
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- HERNANDEZ, D.J.; MONJE, C.A.; BALAGUER, C.
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Colaboraciones en obras colectivas

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Ponencias y Comunicaciones a congresos

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- AL KAFF, A.H.A.; ESCALERA, A.; ARMINGOL, J.M.
Homography-based navigation system for unmanned aerial; en: Advanced Concepts for Intelligent Vision Systems: 18th International Conference, ACIVS 2017, Antwerp, Belgium, September 18-21, 2017, Proceedings, Springer International Publishing AG, SUIZA, 2017.
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Autonomy in human-robot interaction scenarios for entertainment; en: HRI '17 Proceedings of the Companion of the 2017 ACM/IEEE International Conference on Human-Robot Interaction, Association for Computing Machinery (ACM), ESTADOS UNIDOS DE AMERICA, 2017.
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Propiedad Industrial/intelectual

- *Inventores*: MARTIN, D.; CRUZADO, D.; PONZ, A.; URDIALES, J.; GARCIA, F.; ARMINGOL, J.M.; ESCALERA, A.; SÁNCHEZ, I.; ARTETA HERNANDEZ, G.
Vehículo ferroviario no tripulado, sistema y procedimiento para la inspección de infraestructura y superestructura ferroviaria
Tipo: PATENTE
Titular: UNIVERSIDAD CARLOS III DE MADRID
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