

DEPARTAMENTO DE
INGENIERIA DE SISTEMAS Y
AUTOMATICA

DEPARTAMENTO DE INGENIERIA DE SISTEMAS Y AUTOMATICA

Actividades de investigación

Tesis Doctorales

- Continuous goal-directed actions: advances in robot learning
Autores: MORANTE, S.
Director/Codirectores: BALAGUER, C.; J. G. VICTORES
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2016
- Locomotion Through Morphology, Evolution and Learning for Legged and Limbless Robots
Autores: RANGANATH, A.
Director/Codirectores: MORENO, L.E.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Centro donde se presentó: CAMPUS DE LEGANES
Año: 2016
- Métodos de visión artificial para la extracción de la pose de la mano humana y su representación virtual
Autores: LUMBIER, A.
Director/Codirectores: MORENO, L.E.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Centro donde se presentó: CAMPUS DE LEGANES
Año: 2016
- Model-based motor control learning in robotics
Autores: GONZALEZ-QUIJANO, J.
Director/Codirectores: GARRIDO, L. S. ; PERDEREAU, V.; ABDERRAHIM, M.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2016
- Planning and Estimation Algorithms for Human-like Grasping
Autores: ALVAREZ, D.
Director/Codirectores: MORENO, L.E.; GARRIDO, L. S.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Centro donde se presentó: CAMPUS DE LEGANES
Año: 2016
- Self-powered and low mass autonomous platform for planetary surface exploration
Autores: ALVAREZ, F.J.
Director/Codirectores: MORENO, L.E.; FERNANDEZ, D.
Universidad: UNIVERSIDAD CARLOS III DE MADRID
Año: 2016

- Visual Odometry and mapping using stereo vision and registration algorithms
Director/Codirectores: ESCALERA, A.; SÁNCHEZ,
Universidad: UNIVERSIDAD PONTIFICIA COMILLAS
Año: 2016

Publicaciones y actividades de difusión de resultados

Publicaciones en revistas científicas nacionales

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Advanced Rapid Control Prototyping system on engineering education for multidisciplinary student groups, *Revista iberoamericana de automática e informática industrial*, Vol. 13, Núm. 3, 2016, pp. 350-362, ESPAÑA.
- MARTIN, D.; Pablo Marín-Plaza; HUSSEIN, A.A.M.; ESCALERA, A.; ARMINGOL, J.M.
ROS-based architecture for autonomous intelligent campus automobile (iCab), *Revista de investigación universitaria*, Vol. 12, 2016, pp. 257-272, ESPAÑA.
- MEDINA, J.; JARDON, A.; BALAGUER, C.
Decoupled control of a variable stiffness actuator for assistive robots, *Revista iberoamericana de automática e informática industrial*, Vol. 13, Núm. 1, 2016, pp. 80-91, ESPAÑA.

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Object detection applied to indoor environments for mobile robot navigation, *Sensors*, Vol. 16, Núm. 8 (1180), 2016, SUIZA.
- ABDERRAHIM, M.; CONDEZO, L.A.
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- BARBER, R.; CASTEJON, C.; FLORES, A.; RUBIO, H.
A hardware-software approach for design and control of mechatronics devices, *International Journal of Research in Engineering and Science (IJRES)*, Vol. 4, Núm. 10, 2016, pp. 68-80.
- C. Gomez; A. C. Hernández; CRESPO, J.; BARBER, R.
A topological navigation system for indoor environments based on perception events, *INTERNATIONAL JOURNAL OF ADVANCED ROBOTIC SYSTEMS*, Vol. 14, 2016.
- CASTILLO, J.C.; CASTRO, A.; FERNÁNDEZ, A.; LATORRE, J.M.; PASTOR, J.M.; FERNÁNDEZ, A.; SALICHS, M.A.
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Stereo visual odometry in urban environments based on detecting ground features, *Robotics and autonomous systems*, Vol. 80, 2016, pp. 1-10, HOLANDA - PAISES BAJOS.
- FERNANDEZ-CABALLERO, A.; MARTINEZ-RODRIGO, A.; PASTOR, J. M.; CASTILLO, J.C.; LOZANO-MONASOR, E.; LOPEZ, M.T.; ZANGRONIZ, R.; LATORRE, J.M.; FERNÁNDEZ, A.
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- GONZALEZ-FIERRO, M.; MONJE, C.A.; BALAGUER, C.
Fractional Control of a Humanoid Robot Reduced Model with Model Disturbances, *Cybernetics and Systems*, Vol. 47, Núm. 6, 2016, pp. 445-459, ESTADOS UNIDOS DE AMERICA.
- HERNANDEZ, D.J.; MONJE, C.A.; BALAGUER, C.
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- KRUSMAA, M.; RIEUCAU, G.; CASTILLO, J.C.; MARKNA, R.; HANDEGARD, N.O.
Collective responses of a large mackerel school depend on the size and speed of a robotic fish but not on tail motion, *Bioinspiration & biomimetics*, Vol. 11, Núm. 5 (056020), 2016.
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Libros

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Colaboraciones en obras colectivas

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- MARTIN, D.; GARCIA, F.; ARMINGOL, J.M.
El color: modelos y transformaciones de los espacios de color, en: Conceptos y métodos en visión por computador, COMITE ESPAÑOL DE AUTOMATICA. GRUPO DE VISION POR COMPUTADOR, ESPAÑA, pp. 47-60, 2016.
- SERRANO-CUERDA, J.; CASTILLO, J.C.; LOPEZ, M.T.; FERNANDEZ-CABALLERO, A.

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- A. C. Hernández; C. Gomez; CRESPO, J.; BARBER, R.
A home made robotic platform based on Theo Jansen mechanism for teaching robotics; en: INTED2016: 10th annual International Technology, Education and Development Conference, 7-9 March 2016, Valencia (Spain): conference proceedings, IATED ACADEMY, 2016.

- A. C. Hernández; C. Gomez; CRESPO, J.; BARBER, R.
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- OÑA, E.D.; JARDON, A.; BALAGUER, C.; MARTINEZ, A.; SANCHEZ-HERRERA, P.; MIANGOLARRA, J.C.
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- Pablo Marín-Plaza; BELTRAN, J.; HUSSEIN, A.A.M.; MUSLEH, B.; MARTIN, D.; ESCALERA, A.; ARMINGOL, J.M.
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Propiedad Industrial/intelectual

- *Inventores*: MARTIN, D.; GUINDEL, C.; GARCIA, F.; ARMINGOL, J.M.; ESCALERA, A.; SÁNCHEZ, I.
Sistema y método de estimación de aproximación trenes y detección de roturas de carril
Tipo: PATENTE
Titular: UNIVERSIDAD CARLOS III DE MADRID
Número Solicitud: **P201630961**
Fecha Solicitud: 14/07/2016
Países: ESPAÑA

- *Inventores*: MEANA, J.L.; RUBIO, C.; GÓMEZ-CALCERRADA, P.; ESCALERA, A.; NIEVA, A.; ARMINGOL, J.M.; GARCIA, F.; MARTIN, D.; MORENO, F.; SAN JOSÉ, L.J.; AL KAFF, A.H.A.
A SYSTEM AND A METHOD FOR SURFACE AERIAL INSPECTION
Tipo: PATENTE
Titular: COPISA PROYECTOS Y MANTENIMIENTOS INDUSTRIALES S.A.U.
Número Registro: **P28238EP00**
Fecha Solicitud: 21/07/2016

Actividades de formación y movilidad de personal investigador

Estancias en otros centros

- FERNANDO GARCIA FERNANDEZ
Título: Estancia de Investigación postdoctoral de 2 semanas en Universidad de las Fuerzas Armadas ESPE
Centro Externo: Universidad de las Fuerzas Armadas ESPE
País: ECUADOR
Duración: 01/12/2016 a 15/12/2016.

- PABLO MARIN PLAZA
Título: Estancia de tres meses de duración en el centro de investigación nacional INRIA en el grupo RITS
Centro Externo: INRIA - RITS
País: FRANCIA

Duración: 13/09/2016 a 13/12/2016.

- RAUL PERULA MARTINEZ
Título: Estancia en la Universidad de Yale
Centro Externo: YALE
País: ESTADOS UNIDOS DE AMERICA
Duración: 01/12/2015 a 29/02/2016.