

Accepted papers

AI and Robotics

- Semantic localization of a robot in a real home
Edmanuel Cruz, Zuria Bauer, José Carlos Rangel, Miguel Cazorla and Francisco Gomez-Donoso
- Positioning system for an electric autonomous vehicle based on the fusion of Multi-GNSS RTK and Odometry by using an Extended Kalman Filter
Miguel Tradacete Ágreda, Álvaro Sáez Contreras, Juan Felipe Arango Vargas, Carlos Gómez Huélamo, Rafael Barea Navarro, María Elena López Guillén, Luis Miguel Bergasa Pascual and Pedro Alfonso Revenga de Toro
- Self-Driving a Car in simulation through a CNN
Javier del Egido Sierra, Luis Miguel Bergasa Pascual, Eduardo Romera Carmena, Carlos Gómez Huélamo, Javier Araluce Ruiz and Rafael Barea Navarro
- Study of obstacle avoidance strategies for efficient autonomous navigation of wheeled robots in unknown environments
Julián Efrén Cristiano Rodríguez, Hatem Rashwan and Domènec Puig
- Combination of semantic localization and conversational skills for assistive robots
Daniel González-Medina, Cristina Romero-González and Ismael Garcia-Varea
- Adaptation of the Difficulty Level in an Infant-Robot Movement Contingency Study
José Carlos Pulido Pascual, Rebecca Funke, Javier García-Polo, Beth A. Smith and Maja Matarić

Computer Vision and Robotics

- Convolutional Neural Networks vs Traditional Methods applied to off-line Recognition of Handwritten Digits
Edwin Antonio Enriquez, Nelly Gordillo Castillo, Luis Miguel Bergasa Pascual, Eduardo Romera Carmena and Carlos Gómez Huélamo
- Visual Attention Mechanisms
Cristina Mendoza Gutiérrez, Pilar Bachiller Burgos, Antonio Bandera and Pablo Bustos García de Castro
- Change Detection Tool based on GSV to help DNNs training
Carlos Gómez Huélamo, Pablo Fernández Alcantarilla, Luis Miguel Bergasa Pascual and María Elena López Guillén

Improving 3D estimation for the Pepper robot using monocular depth prediction
Zuria Bauer, Felix Escalona, Edmanuel Cruz, Miguel Cazorla and Francisco Gomez-Donoso

Person following robot behavior using Deep Learning
Ignacio Condés and José María Cañas

Human-Robot Interaction

Attentional mechanism based on a microphone array for embedded devices and a single camera
Antonio Martínez-Colon, Jose Manuel Perez-Lorenzo, Fernando Rivas, Raquel Viciano-Abad and Pedro Reche-Lopez

Challenges on the Application of Automated Planning for Comprehensive Geriatric Assessment using an Autonomous Social Robot.
Angel García-Olaya, Raquel Fuentetaja, Javier García-Polo, José Carlos González and Fernando Fernández

Planning Human-Robot Interaction for Social Navigation in Crowded Environments
Araceli Vega-Magro, Luis J. Manso Fernández-Argüelles, Ramón Cintas Peña and Pedro Miguel Núñez Trujillo

Talking with Sentiment: Adaptive Expression Generation Behavior for Social Robots
Igor Rodriguez Rodriguez, Adriano Manfre, Filippo Vella, Ignazio Infantino and Elena Lazkano

Mobile Robots

Auction model for transport order assignment in AGV systems
Daniel Rivas, Joan Jiménez-Jané and Lluís Ribas-Xirgo

Implementing Accountability in Mobile Service Robots
Ángel Manuel Guerrero-Higueras, Vicente Matellan, Francisco Javier Rodríguez-Lera, Francisco Martín-Rico and Jesús Balsa-Comerón

Robotic Manipulators

Topological road mapping for autonomous driving applications
Carlos Gómez Huélamo, Juan Felipe Arango Vargas, Miguel Tradacete Ágreda, Álvaro Sáez Contreras, Esther Murciago García, Rafael Barea Navarro, Luis Miguel Bergasa Pascual and Eduardo Romera Carmena

Design and implementation of a low cost 3D printed adaptive hand.....
Alberto J. Tudela, Joaquín Ballesteros and Antonio Bandera

Robocup and Soccer Robots

Planning-centered Architecture for RoboCup SSPL @Home

*Francisco Martín-Rico, Jonathan Ginés Clavero, David Vargas Frutos,
Francisco Javier Rodríguez-Lera and Vicente Matellan*

Opponent Modeling in RoboCup Soccer Simulation

Jose Antonio Iglesias, Agapito Ledezma and Araceli Sanchis

Other Topics

First Steps Towards a General Algorithm to Estimate the Mechanical
State of a Vehicle

Pablo Bernal-Polo and Humberto Martínez-Barberá