

WAF 2018 Program

Thursday, November 22

09:00 - 09:30	Registration	
09:30 - 09:40	Conference Opening	
Session 1 – AI and Robotics I		
Chair: Miguel Cazorla		
09:40 - 10:00	Semantic localization of a robot in a real home	<i>Edmanuel Cruz, Zuria Bauer, José Carlos Rangel, Miguel Cazorla and Francisco Gomez-Donoso</i>
10:00 - 10:20	Positioning system for an electric autonomous vehicle based on the fusion of Multi-GNSS RTK and Odometry by using an Extended Kalman Filter	<i>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</i>
10:20 - 10:40	Self-Driving a Car in simulation through a CNN	<i>Javier del Egado Sierra, Luis Miguel Bergasa Pascual, Eduardo Romera Carmena, Carlos Gómez Huélamo, Javier Araluce Ruiz and Rafael Barea Navarro</i>
10:40 - 11:00	Study of obstacle avoidance strategies for efficient autonomous navigation of wheeled robots in unknown environments	<i>Julián Efrén Cristiano Rodríguez, Hatem Rashwan and Domènec Puig</i>
11:00 - 11:30	Coffee Break	
Invited talk		
11:30 - 12:30	Human-Robot Augmentation. From sensorimotor extension to extended intelligence	<i>Raúl Arrabales. Co-founder of Serendeeppia Research and director of AI / Cognitive Neuroscience at Psicobótica.</i>
Session 2 – AI and Robotics II		
Chair: Vicente Matellán		
12:30 - 12:50	Combination of semantic localization and conversational skills for assistive robots	<i>Daniel González-Medina, Cristina Romero-González and Ismael Garcia-Varea</i>
12:50 - 13:10	Adaptation of the Difficulty Level in an Infant-Robot Movement Contingency Study	<i>José Carlos Pulido Pascual, Rebecca Funke, Javier García-Polo, Beth A. Smith and Maja Matarić</i>
13:10 - 13:30	Opponent Modeling in RoboCup Soccer Simulation	<i>Jose Antonio Iglesias, Agapito Ledezma and Araceli Sanchis</i>
13:30 - 13:50	Planning-centered Architecture for RoboCup SSPL @Home	<i>Francisco Martín-Rico, Jonathan Ginés Clavero, David Vargas Frutos, Francisco Javier Rodríguez-Lera and Vicente Matellán</i>
14:00 - 15:30	Lunch	
Session 3 – Human Robot Interaction		
Chair: José Manuel Pérez Lorenzo		
15:30 - 15:50	Attentional mechanism based on a microphone array for embedded devices and a single camera	<i>Antonio Martinez-Colon, Jose Manuel Perez-Lorenzo, Fernando Rivas, Raquel Viciano-Abad and Pedro Reche-Lopez</i>
15:50 - 16:10	Challenges on the Application of Automated Planning for Comprehensive Geriatric Assessment using an Autonomous Social Robot	<i>Angel García-Olaya, Raquel Fuente-taja, Javier García-Polo, José Carlos González and Fernando Fernández</i>
16:10 - 16:30	Planning Human-Robot Interaction for Social Navigation in Crowded Environments	<i>Araceli Vega-Magro, Luis J. Manso Fernández-Argüelles, Ramón Cintas Peña and Pedro Miguel Núñez Trujillo</i>

16:30 - 16:50	Talking with Sentiment: Adaptive Expression Generation Behavior for Social Robots	<i>Igor Rodriguez Rodriguez, Adriano Manfre, Filippo Vella, Ignazio Infantino and Elena Lazkano</i>
16:50 - 17:20	Coffee Break	
REDAF Event		
17:20 - 18:00	REDAF Annual Meeting	
18:30 - 20:30	Madrid Center Guided Walking Tour	
21:00	Conference Dinner	

Friday, November 23

Session 1 – Computer Vision and Robotics		
Chair: Pablo Bustos		
09:30 - 09:50	Convolutional Neural Networks vs Traditional Methods applied to off-line Recognition of Handwritten Digits	<i>Edwin Antonio Enriquez, Nelly Gordillo Castillo, Luis Miguel Bergasa Pascual, Eduardo Romera Carmena and Carlos Gómez Huélamo</i>
09:50 - 10:10	Visual Attention Mechanisms	<i>Cristina Mendoza Gutiérrez, Pilar Bachiller Burgos, Antonio Bandera and Pablo Bustos García de Castro</i>
10:10 - 10:30	Change Detection Tool based on GSV to help DNNs training	<i>Carlos Gómez Huélamo, Pablo Fernández Alcantarilla, Luis Miguel Bergasa Pascual and María Elena López Guillén</i>
10:30 - 10:50	Improving 3D estimation for the Pepper robot using monocular depth prediction	<i>Zuria Bauer, Felix Escalona, Edmanuel Cruz, Miguel Cazorla and Francisco Gomez-Donoso</i>
10:50 - 11:10	Person following robot behavior using Deep Learning	<i>Ignacio Condés and José María Cañas</i>
11:10 - 11:30	Coffee Break	
Present your research session		
11:30 - 12:00	Quick presentation of your research	<i>Volunteers for a quick presentation of their research on WAF topics. Time for each presentation will vary depending on the number of requests of interest</i>
Session 2 – Mobile Robots, Robotic Manipulators and Other Topics		
Chair: Humberto Martínez Barberá		
12:00 - 12:20	Auction model for transport order assignment in AGV systems	<i>Daniel Rivas, Joan Jiménez-Jané and Lluís Ribas-Xirgo</i>
12:20 - 12:40	Implementing Accountability in Mobile Service Robots	<i>Ángel Manuel Guerrero-Higueras, Vicente Matellan, Francisco Javier Rodríguez-Lera, Francisco Martín-Rico and Jesús Balsa-Comerón</i>
12:40 - 13:00	Topological road mapping for autonomous driving applications	<i>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</i>
13:00 - 13:20	Design and implementation of a low cost 3D printed adaptive hand	<i>Alberto J. Tudela, Joaquín Ballesteros and Antonio Bandera</i>
13:20 - 13:40	First Steps Towards a General Algorithm to Estimate the Mechanical State of a Vehicle	<i>Pablo Bernal-Polo and Humberto Martínez-Barberá</i>
13:40 - 13:55	Best Paper Award and Conference Closure	
14:00	Lunch	