

# **IWINAC 2015 Special Session on Machine Learning Methods applied to Vision and Robotics (MLMVR)**

Chairs:

José García-Rodríguez - University of Alicante (Spain)

Miguel Cazorla - University of Alicante (Spain)

Jorge Azorín - University of Alicante (Spain)

Tentative program committee:

Lourdes de Agapito - Queen Mary University of London (UK)

Anastassia Angelopoulou – University of Westminster (UK)

Enrique Dominguez - University of Malaga (Spain)

Richard Duro – University of Coruña (Spain)

Robert Fisher – University of Edinburgh (UK)

Manuel Graña - Basque Country University (Spain)

Magnus Johnsson- Lund University (Sweden)

Markos Mentzelopoulos – University of Westminster (UK)

Eduardo Nebot – Australian Centre for Field Robotics (Australia)

Asim Roy (Arizona State University, USA)

Peter Roth - TU Graz (Austria)

Sergio Velastin - Kingston University (UK)

Aims:

Over the last decades there has been an increasing interest in using machine learning methods combined with computer vision techniques to create autonomous systems that solve vision problems in different fields. This special session is designed to serve researchers and developers to publish original, innovative and state-of-the art algorithms and architectures for real time applications in the areas of computer vision, image processing, biometrics, virtual and augmented reality, neural networks, intelligent interfaces and biomimetic object-vision recognition.

This special session provides a platform for academics, developers, and industry-related researchers belonging to the vast communities of \*Neural Networks\*, \*Computational Intelligence\*, \*Machine Learning\*, \*Biometrics\*, \*Vision systems\*, and \*Robotics\*, to discuss, share experience and explore traditional and new areas of the computer vision and machine learning combined to solve a range of problems. The objective of the workshop is to integrate the growing international community of researchers working on the application of Machine Learning Methods in Vision and Robotics to a fruitful discussion on the evolution and the benefits of this technology to the society.

The Special Session topics can be identified by, but are not limited to, the following subjects:

Artificial Vision

Video tracking

3D Scene reconstruction

3D Tracking in Virtual Reality Environments  
Volume visualization  
Computational Intelligence  
Intelligent Interfaces (User-friendly Man Machine Interface)  
Self-adaptation and self-organisational systems  
Multi-camera and RGB-D camera systems  
Robust computer vision algorithms (operation under variable conditions,  
object tracking, behaviour analysis and learning, scene segmentation)  
Gesture and posture analysis and recognition  
Biometric Identification and Recognition  
Extraction of Biometric Features (fingerprint, iris, face, voice, palm, gait)  
Surveillance systems  
Robotics vision  
Hardware implementation and algorithms acceleration (GPUs, FPGA,s,...)

Important dates:

Paper Submission Deadline  
February 28, 2015

Paper acceptance notification date  
April 1, 2015

Conference:  
June, 1-5

Submission Guidelines:

Please follow the regular submission guidelines of IWINAC 2015. Please notify the chairs of your submission by sending an email to: [jgarcia@dtic.ua.es](mailto:jgarcia@dtic.ua.es).

Contact:

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Biographies

**Jose Garcia-Rodriguez** received his Ph.D. degree, with specialization in Computer Vision and Neural Networks, from the University of Alicante (Spain). He is currently Associate Professor at the Department of Computer Technology of the University of Alicante. His research areas of interest include: computer vision, computational intelligence, machine learning, pattern recognition, robotics, man-machine interfaces, ambient intelligence, computational chemistry, and parallel and multicore architectures. He has authored +100 publications in journals and top conferences and revised papers for several journals like Journal of Machine Learning Research, Computational intelligence, Neurocomputing, Neural Networks, Applied Softcomputing, Image Vision and Computing, Journal of Computer Mathematics, IET on Image Processing, SPIE Optical Engineering and many others, chairing sessions in the last four editions of IJCNN and IWANN and

participating in program committees of several conferences including IJCNN, ICRA, ICANN, IWANN, KES, ICDP and many others.

**Miguel Cazorla** Miguel Cazorla received a BS degree in Computer Science from the University of Alicante (Spain) in 1995 and a PhD in Computer Science from the same University in 2000. He is currently Associate Professor in the Dept Computer Science and Artificial Intelligence at the University of Alicante. His research interests are focused on computer vision and mobile robotics (mainly using vision to implement robotics tasks). He has published more than 100 papers in JCR journals and international conferences.

**Jorge Azorín** is Associate Professor of Computer Science at the Department of Computer Technology of the University of Alicante. He received the Computer Science Engineer degree in 2001 and Phd in Computer Science from the University of Alicante in 2007. His main topics of research are: Computer vision: modeling vision systems to: perceive under adverse conditions, real scenes segmentation and labeling and automated visual inspection, and Digital home and Ambient Intelligence.