

Ricardo Sanchez-Matilla

Ph.D.



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About me

I am a Ph.D. (expected in 2020) and research assistant in Electronic Engineering and Computer Science at Queen Mary University of London. Main current research interests are: machine learning, deep learning, computer vision, robotics, privacy, tracking

Skills

Python

C and C++

MatLab

PyTorch

Keras

TensorFlow

OpenCV

LaTeX

Hard working*5 Flexible*5 Quick learning*5 Teamwork*5 Ambition*5 Leadership*5 Problem solving*5

(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Education

- (exp.) 2020 Ph.D. in Elect. Eng. and Computer Science London (UK)
Ph.D. thesis *Object localisation, dimensions estimation and tracking* at Queen Mary University of London. Supervisor: Prof. Andrea Cavallaro
- 2014 B.Sc. and M.Sc. Telecommunication Engineering Madrid (Spain)
M.Sc. thesis *Hierarchical detection of groups of people under occlusions* at Universidad Autónoma de Madrid. Supervisor: Dr. José María Martínez Sánchez

Work experience

- Since 2014 Research Assistant at QMUL London (UK)
Computer Vision research in multiple international projects including *COPCAMS project* for multi-object tracking from visual data, the *CORSMAL project* for estimating the physical properties of objects for human-to-robot handover of unseen objects from multi-modal data. Supervisor: Prof. Andrea Cavallaro
- 2018-2019 Senior Teacher Assistant in *Data Mining* at QMUL London (UK)
Course for under- and post-graduate students. Topics: Regression • Classification • Clustering • Traditional and deep-based techniques. Supervisors: Prof. Ioannis Patras and Dr. Jesús Requena Carrión
- 2018 Intern at The Alan Turing Institute London (UK)
Deep learning for object tracking over occlusion. Supervisors: Dr. Vaishak Belle, Dr. Chris Russell and Dr. Brooks Paige
- 2018 Teacher Assistant in *Data Analytics* at QMUL London (UK)
Course for under- and post-graduate students. Topics: Graphs and networks • Machine Learning • Probability and Statistics. Supervisor: Dr. Anthony Constantinou
- 2013-2014 Researcher at Universidad Autónoma de Madrid Madrid (Spain)
Computer Vision researcher in the European *EventVideo project* for object detection from visual data. Object detection under occlusions from visual data. Supervisor: Dr. José María Martínez Sánchez

Selected publications

- 2020 *Benchmark for Human-to-Robot Handovers of Unseen Containers with Unknown Filling*. R. Sanchez-Matilla, et al. In IEEE Transactions on Robotics and Automation Letters - To appear
- 2020 *Towards Robust Sensing for Autonomous Vehicles*. A. Modas, R. Sanchez-Matilla, P. Frossard, A. Cavallaro. In IEEE Transactions on Signal Processing Magazine - To appear
- 2018 *A predictor of moving objects for first-person vision*. R Sanchez-Matilla, A Cavallaro. In Proc. of IEEE Int. Conf. on Image Processing
- 2019 *Scene privacy protection*. C.Y. Li, A.S. Shamsabadi, R. Sanchez-Matilla, R. Mazzon, A. Cavallaro. In Proc. of IEEE Int. Conf. on Acoustics, Speech and Signal Processing
- 2018 *Confidence intervals for tracking performance scores*. R Sanchez-Matilla, A Cavallaro. In Proc. of IEEE Int. Conf. on Image Processing
- 2018 *Tracking a moving sound source from a multi-rotor drone*. L. Wang, R Sanchez-Matilla, A Cavallaro. In Proc. of IEEE/RSJ Int. Conference on Intelligent Robots and Systems
- 2017 *Multi-Modal Localization and Enhancement of Multiple Sound Sources from a Micro Aerial Vehicle*. R. Sanchez-Matilla, L. Wang and A. Cavallaro. In Proc. of the ACM on Multimedia Conference
- 2016 *Online multi-target tracking with strong and weak detections*. R. Sanchez-Matilla, F. Poiesi, A Cavallaro. In Proc. of the European Conference on Computer Vision Workshop

Awards

- 2017, 2018 Post Graduate Research Funding by QMUL
- 2016 Best performing online tracker in MOT Challenge at ECCVw
- 2014 M.Sc. thesis mark 9.5/10