



Dr. Carol Martínez

Research Scientist, Space Robotics Research Group (SpaceR),
SnT-University of Luxembourg, Campus Kirchberg-JFK building

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Nationality: Spain, Colombia

Languages: English, Spanish

[Google scholar](#) [ORCID](#) [Webpage](#)

RESEARCH AND PROFESIONAL EXPERIENCE

Research Scientist with ADR, Space Robotics Research Group (SpaceR), SnT/University of Luxembourg
July 2020 - present

Assistant Professor, Pontificia Universidad Javeriana (PUJ), Bogotá

Maternity leave, 2018

July 2015 – June 2020

Postdoctoral Researcher, Universidad Politécnica de Madrid (UPM), Computer Vision Group

Maternity leave, 2015

September 2013 – July 2015

Visiting Researcher, University of Bristol (UK), Department of Aerospace Engineering

May – September 2011

Visiting Researcher, Australian Research Center for Aerospace Automation ARCAA-QUT Brisbane

July - October 2010

Researcher, Universidad Politécnica de Madrid (UPM), Computer Vision Group

Maternity leave, 2012

March 2007 - July 2013

Instrumentation Engineer, Consorcio Estudios Tecnicos S.A. (Etsa) – P.C.I. Ingenieros, Bogotá

January 2006 – August 2006

Project Engineer, Sensomatic & Cia Ltda, Bogotá

September 2004 - June 2005

EDUCATION

PhD in Robotics and Automation, Universidad Politécnica de Madrid (UPM)

Dissertation: "Visual Tracking, Pose Estimation, and Control of Aerial Vehicles"

Honors: "*Cum Laude*", "International mention", and "Best thesis award by UPM"

July 15 2013, Madrid-Spain

Master in Robotics and Automation, Universidad Politécnica de Madrid (UPM)

Thesis: "Trinocular Ground System to Control UAVs"

May 2009, Madrid-Spain

Bachelor in Mechatronics Engineering, Universidad Autónoma de Bucaramanga (UNAB)

Thesis: "Design of a Packing and Dosing Machine for Doughy Products", Honors: "*Cum Laude*"

July 2004, Bucaramanga-Colombia

ADDITIONAL EDUCATION

Scientist Need More, Professional Development, SnT University of Luxembourg
April – Sept 2021, Luxembourg

Space Resources Professional Course, International Space University
April 15-17, 2021, Luxembourg

Data Science for ALL DS4A, Artificial Intelligence-Job-Readiness Training by Correlation One
October-December 2019, Colombia

TEACHING EXPERIENCE

Lecturer University of Luxembourg Interdisciplinary Space Master Courses: <ul style="list-style-type: none">- Space Robotics II (Orbital Robotics)- Autonomous Space Systems- Space Robotics II (Planetary Robotics)	2020-current 2022 2021 2020
Assistant Professor Pontificia Universidad Javeriana, Bogotá- Colombia Courses: <ul style="list-style-type: none">- Laboratory of industrial processes- Systems and mechanical design- Convolutional Neural Networks (a module)	2015-2020 2015-2020 2017-2018 2019
Guest Lecturer Tsinghua University, Beijing-China Course: <ul style="list-style-type: none">- Computer Vision for Robotics	2014 2014 (July)
Teaching Assistant Universidad Politécnica de Madrid Master in Robotics and Automation Courses: <ul style="list-style-type: none">- Computer Vision- Advanced Computer Vision Techniques- Machine Learning and Neural Networks	2009-2015 2009-2015 2011-2015 2014

SHORT COURSES AND INVITED TALKS

Invited Talks

- Orbital Robotics. Colombia in Space 2021. 2nd of December 2021, Keynote
- Space robotics for planetary exploration and in-orbit servicing. IEEE, International conference on Engineering. Colombia Oct. 2021, Keynote
- Women in Space. World space week Colombia Oct. 2021, Panelist
- Making Industrial Robots See. Universidad Nacional de Colombia, January 2019
- Challenges of Industrial robots in Industry 4.0. Pontificia Universidad Javeriana, March 2019
- Making Robots See. Universidad Don Bosco del Salvador, September 2018

Short course taught on Computer Vision for Robotics.

- Latin American Congress on Automation and Robotics LACAR2017. Panama, February 2017.

Summer course taught on Service Robotics: Unmanned Aerial Vehicles for Civilian Tasks (Passive Sensors: "Cameras"). Pontificia Universidad Javeriana. Bogotá, Colombia. July 2016.

AWARDS, GRANTS, DISTINCTIONS AND FELLOWSHIPS

Best Paper Award, LACAR	2021
Selected by The Ministry of TIC Colombia For Data Science training program.	2019
Project Grant by Facebook in its Computer Vision for Global Challenges Request	2019
Best PhD thesis award by UPM "Premios extraordinarios tesis doctoral UPM"	2015
PhD scholarship by UPM	2008-2013
PhD scholarship by Santander Bank	2013
Master scholarship by Santander Bank	2008
Master scholarship (ICETEX)	2006-2007
Bachelor scholarship by Universidad Autónoma de Bucaramanga (UNAB)	1999-2005

R&D PROJECTS

MARTA (Multi-modAI peRception for space roboTic mAnipulators)
FNR-Core,
PI Submitted

Helen: High-fidELity tEsting enviroNment for Active Space Debris Removal
FNR-Bridge, SpaceR-Spacety
Vice-PI January 2022 –2025

Novel Architecture for Active Space Debris Removal Based on Small Satellite Solutions
SnT partnership program SpaceR - Spacety
Vice-PI March 2021 – 2025

Modular Perception and Autonomy for Light-Weight On-Orbit Robotic Manipulators
SnT partnership program SpaceR - Made In Space Europe
Vice-PI April 2021 – 2025

Vision Based Navigation system (VBN) for autonomous satellite navigation in space

Eurostars FNR-INTER Grant Number: INTER20/EUROSTARS/15254521

Vice-PI, June 2021 – May 2023

ZeroG Lab: Multi-Purpose Zero Gravity Lab Facility Communications Lab

SnT-Internal project

Implementation Leader and WP manager, July2020 – Dec 2022

SAFEMUV: Safe Airframe Inspection using Multiple UAVs

AAIP-University of York project

Implementation Leader and WP manager, July2020 – January 2022

5G Space Communications Lab

SnT-Internal project

Implementation Leader and WP manager, July2020 – December2020

Portable Device to Analyze Thick Blood Smears for Malaria Diagnosis in Field Laboratories

Funded by Facebook in its Computer Vision for Global Challenges Request of Proposals

PI, November 2019 - May 2020

Passengers counting system for the bus rapid transit (BRT) system Transmilenio

Funded by Transmilenio

Implementation Leader and WP manager, July 2019

Drones for Power Line Inspection

Funded by Pontificia Universidad Javeriana

Co-PI, March 2019- Sept 2019

Exoskeleton for powerline workers

Sponsored by ENEL-CODENSA

Consulting R&D, 2019-2020

PIR Project: Perception for Industrial Robots

Funded by Pontificia Universidad Javeriana

PI, October 2017- March 2019

Machine Learning for Operation Room Programming.

Funded by Pontificia Universidad Javeriana

Co-PI, January 2018 - December 2019

Aerial sensing and monitoring of rice crop fields applying precision agriculture techniques.

Consortia: PUJ and CIAT.

Funded by COLCIENCIAS conv. 715 2015.

Implementation Leader and WP manager 2015 – 2018

Test and develop computer vision algorithms for aerial refuelling

Funded by Pontificia Universidad Javeriana

PI, January 2016 – June 2016

Computer Vision for Industrial Robot: object tracking with cameras and IMUs.

Funded by SENA Young Researcher Grant

PI, January 2016 - June 2016

I2L Project: Intelligent Power Line Inspection

Unión Fenosa Distribución, Prysm, INTA and Diagnóstica, and Universidad Politécnica de Madrid.

Funded under INPACTO Program Spanish Ministry of Economy and Competitivity IPT-2012-0491-120000

Implementation Leader and WP manager, August 2013 - June 2015

Computer Vision for UAV, from visual information to visual guidance.

Funded by the Spanish Ministry of Science MICYT #DPI2010-20751-C02-01.

Researcher, 2011 - 2013

IPCUAS: International Cooperation Program for Unmanned Aerial Systems Research and Development

Queensland University of Technology (Australia), Cranfield University, and Universidad Politécnica de Madrid.

Funded by IRSES Program Marie Curie FP7
Researcher, 2009 - 2012

Computer vision for UAVs: Guidance, Control, Cooperation, and inspection.

Funded by the Spanish Ministry of Science MICYT #DPI2007-66156
Universidad Politécnica de Madrid (Computer Vision Group)
Researcher, January 2011 – December 2013

Visual Guidance of a Commercial Compact Car

Company: SIEMENS Spain S.A.
Universidad Politécnica de Madrid
Researcher, November 2008 - October 2010

THESIS SUPERVISION

PhD

- **Mohatahem Reyaz.** Interaction Strategies of Robot Manipulators for On-Orbit Servicing applications
Supervisor, 2021-current
- **Andrej Orsula.** Reinforcement Learning for Space Manipulation Tasks
Co-supervisor, member of the CET committee, 2021-current
- **Maxime Hubert.** Design of a Capturing, Absorbing, and SEcuring system for active space Debris removal
Co-supervisor, member of the CET committee, 2021-current
- **Xiao Li.** Design and implementation of software in the loop architecture for active space debris removal high-fidelity scenarios,
Co-supervisor, member of the CET committee, 2021-current
- **Deebul Nair.** Exploiting Constraints for Dependable Learning Enabled Robotics and Autonomous Systems,
Member of the CET committee, 2021-Current
- **Jose Delgado.** Image Super Resolution for Planning Safety Lunar Missions
Co-supervisor, member of the CET committee, 2020-current
- **Kuldeep Barad.** Towards Generalizable Vision-Based Autonomy for On-Orbit Manipulation
Co-supervisor, member of the CET committee, 2020-current

Master

- **Nicolás Barrera** Visual Inspection Using Deep Learning Techniques for Industrial Manufacturing Processes with Class Imbalance and Limited Labeled Data.
Supervisor, July 2020. Best thesis award
- **Diego Hernandez.** An Intelligent System for Counting People on Transmilenio.
Co-supervisor, July 2020
- **Esteban Fonseca.** Design and Implementation of a Hardware for Visual Servoing in an Industrial Manipulator.
Co-supervisor, July 2020
- **Wilson Hernandez.** An Intelligent Robotic System for Classifying Plastic Bottles.
Supervisor, July 2020. Best thesis award.
- **Wendy Fong.** Image processing for quality analysis of thick blood smears employed in malaria diagnosis
Supervisor, July 2020. Nominated for best thesis award.

- **Juan Pablo Rojas.** Image Mosaic for Monitoring Rice Crops. September 2018
Co-supervisor

Bachelor

- **Lina Amaya and Nicolás Duque.** Safety System for Industrial Robots based on Computer Vision and Deep Learning Techniques.
Supervisor. 2020, Best thesis award.
 - **David Rodriguez and Steven Forero.** Automatic cup extraction system for plastic bottles.
Co-supervisor, Nov. 2019
 - **Angie Medina, Juan Mora, and Esteban Ramirez.** Human Recognition Algorithm for Industrial Collaborative Robots in Automated Waste Separations Tasks.
Supervisor, July 2018
 - **Nicolás Barrera and Didier Galvis.** Designing a Framework to Give Perception Capabilities to an Industrial Robot for Waste Separation Tasks.
Supervisor, January 2018. Best thesis award
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PUBLICATIONS

Papers: 23 Journals, 35 Conferences, H-index: 18, Citations: 1302

INTERNATIONAL JOURNALS

Image Features for Quality Analysis of Thick Blood Smears Employed in Malaria Diagnosis

Wendy Fong Amarís, **Carol Martínez**, Daniel Suárez Venegas, and Liliana Cortes

Malaria Journal, March 2022

ET-Class, an Energy Transfer-based Classification of Space Debris Removal Methods and Missions

Baris Yalcin, **Carol Martínez**, Maxime Hubert, Miguel Olivares-Mendez.

Frontiers in Space Technologies, section Space Debris, January 2022

SORA Methodology for Multi-UAS Airframe Inspections in an Airport,

Carol Martínez, Pedro Sanchez, Abhishek Bera, Simos Gerasimou, Miguel Olivares-Mendez.

Drones, November 2021

Deep Learning for Safe Human-Robot Collaboration (Best paper award)

Nicolás Duque Suárez, Lina María Amaya Mejía, **Carol Martínez**, Daniel Jaramillo-Ramírez

Advances in Automation and Robotics Research, Lecture Notes in Networks and Systems, November 2021

Enhancing Lunar Reconnaissance Orbiter Images via Multi-frame Super Resolution for Future Robotic Space Missions

Jose Delgado, Pedro Sanchez, **Carol Martínez**, Miguel Olivares-Mendez

IEEE Robotics and Automation Letters Submission RA-L, October 2021

Machine Learning for Surgical Time Prediction

Oscar Martinez, **Carol Martínez**, Carlos Parra, Saul Rugeles, Daniel Suárez

Computer Methods and Programs in Biomedicine, September 2021

Power Line Insulator Inspection Based on Artificial Intelligence

Sergio Beleno, **Carol Martínez**, Ivan Mondragon, Carlos Parra

Revista Colombiana de Tecnología de Avanzada ISSN: 1692-7257 Volume 2 number 36. June 2020

A Fast Solution to the Dual Arm Robotic Sequencing Problem.

Francisco Suarez Ruiz and **Carol Martínez**.

Advances in Automation and Robotics Research, Lecture Notes in Networks and Systems DOI. 10.1007/978-3-030-40309-6_19 ISBN 978-3-030-40309-6. January 2020 Springer.

A Collaborative Vacuum Tool for Humans and Robots.

Wilson Hernandez, Alvaro Hilarión and **Carol Martínez**.

Advances in Automation and Robotics Research, Lecture Notes in Networks and Systems. January 2020 ISBN 978-3-030-40309-6. Springer.

High-Throughput Biomass Estimation in Rice Crops Using UAV Multispectral Imagery Carlos A. Devia, Juan P. Rojas, E. Petro, **Carol Martínez**, Ivan F. Mondragon, D. Patino, M. C. Rebolledo, J. Colorado Journal Intelligent and Robotic System. 2019 Springer

The Power Line Inspection Software (PoLIS): A Versatile System for Automating Power Line Inspection. **Carol Martínez**, Carlos Sampedro, Aneesh Chauhan, Jean François Collumeau, Pascual Campoy. Engineering Applications of Artificial Intelligence, 2018, ISSN 0952-1976, Elsevier.

HMPMR Strategy for Real-Time Tracking in Aerial Images, Using Direct Methods **Carol Martínez** and Campoy, Pascual and Mondragón, IvánF. and Sánchez-Lopez, JoséLuis and Olivares-Méndez, MiguelA., Journal of Machine Vision and Applications, issn=0932-8092, Springer, June 2014

A Vision-Based Strategy for Autonomous Aerial Refuelling Tasks. **Carol Martínez**, Thomas Richardson, Peter Thomas, Jonathan Luke du Bois, Pascual Campoy Journal of Robotics and Autonomous Systems. 2013 Elsevier

Autonomous Guided Car Using a Fuzzy Controller Miguel A. Olivares-Méndez,Pascual Campoy,Ignacio Mellado,Iván F. Mondragón, **Carol Martínez**, José Luis Sánchez-Lopez Book Chapter: Recent Advances in Robotics and Automation. Springer 2013

A Hierarchical Tracking Strategy for Vision-Based Applications On-Board UAVs **Carol Martínez**, Iván F. Mondragón, Pascual Campoy, José Luis Sánchez-Lopez, and Miguel A. Olivares-Méndez Journal Intelligent and Robotic System. 2012 Springer

On-board and Ground Visual Pose Estimation Technique for UAV Control **Carol Martínez**, Iván F. Mondragón, Miguel A. Olivares-Méndez, and Pascual Campoy Journal Intelligent and Robotic System. Volume 61, Issue 1-4. 2011 Springer

Unmanned Aerial Vehicles UAVs attitude, height, motion estimation and control using visual systems Iván F. Mondragón, Miguel A. Olivares-Méndez, Pascual Campoy, **Carol Martínez**, and Luis Mejías Journal of Autonomous Robots, Springer

Omnidirectional Vision Applied to Unmanned Aerial Vehicles UAVs Attitude and Heading Estimation Iván F. Mondragón, Pascual Campoy, **Carol Martínez**, and Miguel A. Olivares-Méndez Journal of Robotics and Autonomous System (Elsevier) 2010 Elsevier

Visual Servoing for UAVs Pascual Campoy, Iván F. Mondragón, Miguel A. Olivares-Méndez, and **Carol Martínez** Book chapter:" Visual Servoing", Intechweb.org Online Publication 2010

Non-Symmetric Membership Function for Fuzzy-based Visual Servoing On-board a UAV Miguel A. Olivares-Méndez, Pascual Campoy, Iván F. Mondragón, **Carol Martínez**, Book chapter in Computation Intelligence Foundations and Applications August 2010. Chengdu, China

Computer Vision Onboard UAVs for civilian tasks Pascual Campoy, Juan Correa, Iván Mondragón, **Carol Martínez**, Miguel Olivares, Jorge Artieda, Luis Mejías. Journal of Intelligent and Robotic Systems 2009 Springer Netherlands & Online Publication 2009

Visual 3D SLAM from UAVs Jorge Artieda, Jose Maria Sebastian, Pascual Campoy, Juan Correa, Iván Mondragón, **Carol Martínez**, and Miguel Olivares Journal of Intelligent and Robotic Systems. 2009, Springer

Fuzzy Control System Navigation Using Priority Areas Miguel Olivares, Pascual Campoy, **Carol Martínez**, Juan Correa Iván Mondragón, Book chapter Computational Intelligence in Decision and Control August 2008. Madrid, Spain

INTERNATIONAL CONFERENCES

Autonomous Control for Satellite rendezvous in near-Earth Orbits

Vivek Muralidharan, **Carol Martinez**, Augustinas Zinys, Marius Klimavicius, Miguel Olivares-Mendez.
6th International Conference on Control, Automation and Diagnosis (ICCAD22). Portugal, 2022.

Hardware-in-the-loop Proximity Operations in Cislunar Space

Vivek Muralidharan, Mohatahem Reyaz Makhdomi, Kuldeep Rambhai Barad, Kathleen C. Howell, **Carol Martinez**, Miguel Olivares-Mendez.
73rd International Astronautical Congress (IAC), 2022.

Exploring NVIDIA Omniverse for Future Space Resources Missions

Xiao Li, Baris Yalcin, **Carol Martinez**, Olga Christidi, Maxime Hubert, Gonzalo Rodriguez, James Zheng, Miguel Olivares-Mendez
Accepted to be presented in Space Resources Week 2022

The Best Space Resource is the One You Can Catch and Reuse

Maxime Hubert, Baris Yalcin, **Carol Martinez**, Olga Christidi, Xiao Li, Gonzalo Rodriguez, James Zheng, Miguel Olivares-Mendez
Accepted to be presented in Space Resources Week 2022

Towards Incremental Autonomy Framework For On-Orbit Vision-Based Grasping

Kuldeep R. Barad, **Carol Martinez**, Jan Dentler, Miguel Olivares-Mendez
72th International Astronautical Congress (IAC), Dubai, United Arab Emirates, 25-29 October 2021.

Lunar Highres-Net: Super Resolution For Lunar Surface Imagery

Jose Delgado, Pedro Sanchez, **Carol Martinez**, Miguel Olivares-Mendez
72th International Astronautical Congress (IAC), Dubai, United Arab Emirates, 25-29 October 2021.

Lunar Surface Images Enhancement for Space Resources Localization and Extraction

Jose Delgado, Pedro Sanchez, **Carol Martinez**, Miguel Olivares-Mendez
Space Resources Week 2021

The 5GSpaceLab

J. Querol, A. Astro, Z. Bokal, J. Duncan, M. Gholamian, O. Kodheli, J. Krivochiza, S. Kumar, **Carol Martinez**, N. Maturo, L. Rana, J. Thoemel, S. Chatzinotas, M. Olivares-Mendez, T. Van Dam, B. Ottersten
Space Resources Week 2021

A Vision-Based System for Evaluating the Quality of the Coloration of Thick Blood Smears in Malaria Diagnosis.

Wendy Fong Amarís, **Carol Martínez** and Daniel Suárez Venegas
II Congreso Latinoamericano de Automática y Robótica LACAR, 2019, Cali, Colombia.

A Deep Learning Approach to Detect and Classify Plastic Bottles for a Recycling Robot.

Wilson Hernandez and **Carol Martinez**
II Congreso Latinoamericano de Automática y Robótica LACAR, 2019, Cali, Colombia.

Aerial Monitoring of Rice Crop Variables Using a UAV Robotic System

C. Devia, J. Rojas, E. Petro, C. Martinez, I. Mondragon, D. Patino, C. Rebolledo, and J. Colorado. 16th International Conference on Informatics in Control, Automation and Robotics 2019, Prague, Czech Republic.

Safety Protocol for Collaborative Human-Robot Recycling Tasks.

Angie C. Medina, Juan F. Mora, **Carol Martinez**, Nicolas Barrero, Wilson Hernandez
9th IFAC Conference Manufacturing Modelling, Management and Control MIM 2019, Berlin Germany.

A Vision-Based Security System for Collaborative Human-Robot Waste Separation Tasks.

Juan f. Mora, Angie C. Medina, Nicolás Barrero, Wilson Hernández, and **Carol Martinez**. Congreso Internacional de Ingeniería Mecánica, Mecatrónica y Automatización. Bogotá Colombia 2019

A Tool For Human-Robot Collaborative Tasks.

Wilson Hernández, Álvaro Hilarión, Nicolás Barrero, and **Carol Martinez**. Congreso Internacional de Ingeniería Mecánica, Mecatrónica y Automatización. Bogotá Colombia 2019

Aerial Mapping of Rice Crops Using Mosaicking Techniques for Vegetative Index Monitoring

Juan P. Rojas B., Carlos A. Devia P., E. Petroy, **Carol Martinez**, Ivan F. Mondragon B, D. Patino, MC. Rebolledo, and J. Colorado.

2018 International Conference on Unmanned Aircraft Systems (ICUAS), Dallas, TX, USA, 2018

Industrial Robots for Waste Separation Tasks: An Approach to Industry 4.0 in Colombia

Nicolas Barrero, Didier Galvis, and **Carol Martinez**

The 9th International Conference on Production Research-Americas 2018

Towards Image Mosaicking with Aerial Images for Monitoring Rice Crops

Juan Rojas, **Carol Martinez**, Iván Mondragón, and Julián Colorado

1st Latin American Congress on Automation and Robotics, Panama City, Panama 2017

Setup of the Yaskawa SDA10F Robot for Industrial Applications, Using ROS-Industrial

Carol Martinez, Nicolás Barrero, Wilson Hernandez, Cesar Montaña and Iván Mondragón

1st Latin American Congress on Automation and Robotics, Panama City, Panama 2017

Towards Autonomous Detection and Tracking of Electric Towers for Aerial Power Line Inspection

Carol Martinez, Carlos Sampedro, Aneesh Chauhan and Pascual Campoy

International Conference on Unmanned Aircraft Systems ICUAS, May 2014. Orlando, USA

A Supervised Approach to Electric Tower Detection and Classification for Power Line Inspection

Carlos Sampedro, **Carol Martinez**, Aneesh Chauhan and Pascual Campoy

International Joint Conference on Neural Networks (IJCNN), July 2014, Beijing China.

Towards Autonomous Air-to-Air Refuelling for UAVs Using Visual Information

Carol Martinez, Thomas Richardson, and Pascual Campoy

IEEE International Conference on Robotics and Automation ICRA 2013, Karlsruhe, Germany. May 6 - 11

A Hierarchical Strategy for Real-Time Tracking On-board UAVs

Carol Martínez, Pascual Campoy, Iván Mondragón, Jose Luis Sánchez-Lopez, Miguel A. Olivares-Méndez.

The 2012 International Conference on Unmanned Aircraft Systems ICUAS'12, June 12-15, 2012. Philadelphia, PA USA.

Aerial Object Following Using Visual Fuzzy Servoing

Miguel A Olivares-Mendez, Ivan Mondragon, Pascual Campoy Cervera, Luis Mejias, **Carol Martinez**

Research, Development and Education on Unmanned Aerial Systems (RED-UAS 2011), Seville, Spain.

A Multi-resolution Image Alignment Technique Based on Direct Methods for Pose Estimation of Aerial Vehicles

Carol Martínez, Luis Mejías, and Pascual Campoy.

International Conference on Digital Image Computing: Techniques and Applications. December 6-8, 2011. Noosa, Queensland Australia.

A Visual AGV-Urban Car using Fuzzy Control

Miguel A Olivares-Mendez, Ignacio Mellado, Pascual Campoy, Ivan Mondragon, **Carol Martinez**

Proceeding of the 5th IEEE International Conference on Automation, Robotics and Applications ICARA'11. December 6 to 8 2011. Wellington, New Zealand.

3D Object Following Based on Visual Information for Unmanned Aerial Vehicles.

Iván F. Mondragón, Pascual Campoy, Miguel A. Olivares, **Carol Martinez**.

The Latin American Robotics Competition (LARC), The Latin American Robotics Symposium (LARS), The Colombian Conference on Automatic Control (CCAC) and The Industry Applications Colombian Workshop (IASCW). October 1-4, 2011 Bogotá-Colombia

On-board and Ground Visual Pose Estimation Technique for UAV Control

Carol Martínez, Iván F. Mondragón, Miguel A. Olivares-Méndez, and Pascual Campoy

3rd International Symposium on Unmanned Aerial Vehicles UAV'10. June 2010. Dubai, Arab Emirates

A Robotic Eye Controller Based on Cooperative Neural Agents

Oscar Chang, Pascual Campoy, **Carol Martínez**, Miguel A. Olivares-Méndez

International Joint Conference on Neural Networks (IJCNN). July 2010. Barcelona, Spain

Fuzzy Controller for UAV-Landing Task Using 3D-Position Visual Estimation

Miguel A. Olivares-Méndez, Iván F. Mondragón, Pascual Campoy, **Carol Martínez**

IEEE World Congress on Computational Intelligence (IEEE WCCI 2010-IEEE FUZZY 2010). July 2010 Barcelona, Spain

Fuzzy-4D/RCS for Unmanned Aerial Vehicles

Miguel A. Olivares-Méndez, Pascual Campoy, Iván F. Mondragón, **Carol Martínez**

International Congress of Brain Inspired Cognitive Systems BICS 2010

Madrid, Spain

3D Pose Estimation Based on Planar Object Tracking for UAVs Control

Iván Mondragón, Pascual Campoy, **Carol Martínez**, Miguel Olivares,

IEEE International Conference on Robotics and Automation ICRA 2010, May 2010 Anchorage, Alaska, USA

Trinocular Ground System to Control UAVs

Carol Martínez, Pascual Campoy, Iván Mondragón, Miguel Olivares

IEEE/RSJ International Conference on Intelligent Robots and Systems IROS 2009, October 2009. St. Louis, MO, USA

Pan-Tilt Camera Fuzzy Vision Controller on an Unmanned Aerial Vehicle

Miguel Olivares, Pascual Campoy, **Carol Martínez**, Iván Mondragón,

IEEE/RSJ International Conference on Intelligent Robots and Systems IROS 2009, October 2009. St. Louis, MO, USA

Vision for Guidance and Control of UAVs in Civilian Tasks

Pascual Campoy, Juan Fernando Correa, Iván Mondragón, **Carol Martínez**, Miguel Olivares

UAV'08 International Symposium on Unmanned Aerial Vehicles, June 2008. Orlando, Florida, USA.

Visually Guiding Autonomous Helicopters for Civilian Tasks

Pascual Campoy, Iván Mondragón, Juan Fernando Correa, **Carol Martínez**, Miguel Olivares

Innovation in Unmanned Aerial Systems. November 2007. Madrid, Spain.

Design of a Low-Cost Packing and Dosing Machine for Doughy Products.

Lengerke Pérez, Omar, **Martínez Carol Viviana**, Dutra Max Suell, Lopes e Silva Fabricio

19th International Congress of Mechanical Engineering, COBEM. November 2007. Brasília, DF.