Ignacio de Loyola Páez Ubieta

28/05/1998 (Spanish) Living in Alicante (Spain) Phone: +34 626 054 111
E-mail : ignaciopaezubieta@gmail.com LinkedIn : Ignacio de Loyola Paez Ubieta

Estimated PhD defense on December 2025. Looking forward to a challenging PostDoc at some top tier institution to continue my research career on computer vision, reinforcement learning, grasping or robotics in France, Switzerland, Germany, USA or Canada.

EDUCATION

02-2022 / XX-XXXX — *Alicante - Spain*

Computer Science Philosophy Degree (University of Alicante)
- Specialization in Robotics inside AUROVA group.
- Thesis on "Multisensorial perception for grasping objects with multifingered grippers", directed by Santiago T. Puente.
- Two research stays at Sorbonne University (France).

12-2023 / 05-2024 — *Paris – France*

PhD. Research Stay (Sorbonne University - CNRS)
- Worked on data driven methods for grasping objects in a new SOTA method.
- Supervised by Stéphane Doncieux (ISIR director) at AMAC/ASIMOV research teams.
- Two consecutive research stays: 1/12/2023 – 29/2/2024 & 14/3/2024 – 14/5/2024).

09-2020 / 06-2021 — *Alicante - Spain*

Automatic and Robotics Master's Degree (University of Alicante)
- Average mark of 9.56 / 10.0, including 5 A and 3 A+.
- Thesis on "Design, simulation and control of a robotic humanoid robot", with Jorge Pomares Baeza (University of Alicante) and Leonard Felicetti (Cranfield University) as tutors.
- Extraordinary award for the best academic record of the course 2020/2021.

09-2016 / 06-2020 — *Alicante - Spain*

Robotics Engineering Bachelor's Degree (University of Alicante)
- Average mark of 7.69 / 10.0, obtaining 7 A and 3 A+.
- Thesis on "Robotic satellites guideance with image-based control", with Jorge Pomares Baeza (Universidad of Alicante) and Leonard Felicetti (Cranfield University) as tutors. Evaluated with honors and obtained the "Best Bachelor Degree Project in Robotics 2020" by COITIA.

Languages:
Spanish : Native.
English : Certificate in Advanced English by Cambridge University (C1) -> Preparing C2 level.
Valencian / Catalan : Grau Mitjà de coneixements en valencià (C1).
French : Diplôme d'Etudes en Langue Française A1 (DELF A1).

Programation Languages : C, C++, Python and ROS.
Automatization : TIA Portal, PSIM, Unity Pro, CCS, Arduino and Verilog.
Modeling and Simulation : Gazebo, RVIZ, Autodesk Inventor, Matlab / Simulink, RoboGuide and RobotStudio.
Tools : Tensorflow, Pytorch, OpenCV, Dockerfile, Singularity and Slurm.
Operating Systems used : Windows, Linux and Raspbian.

EMPLOYMENT

12-2024 / XX-XXXX — *Alicante – Spain*

Adjunct Professor of Automation and Robotics (University of Alicante)
- Lectures on Bachelor's Degree (Robotics Engineering, Biomedical Engineering) and Master's Degree (Automation and Robotics) levels. Knowledge area in Systems Engineering and Automatics.
- Department of Physics, Systems Engineering and Signal Theory (DFESTS).

12-2024 / XX-XXXX — *Alicante - Spain*

Research Assistant (University Institute for Computer Research – University of Alicante)
- Working on "Autonomous mobile robots for intelligent manipulation in outdoors" project, funded by Ministry of Science, Innovation and Universities and European Union (PID2021-122685OB-I00). AUROVA research group.
- Research in intelligent manipulation, artificial vision and AI for robot control.

04-2022 / 12-2024 — *Elche - Spain*

Research Assistant (Miguel Hernández University of Elche)
- Working on "Towards greater integration of intelligent robots into society: navigate, recognize and manipulate" project, funded by the Regional Government of Comunidad Valenciana (PROMETEO/2021/075). AUROVA research group.
- Research in robotic manipulation and perception techniques.

09-2021 / 02-2022 — *Alicante - Spain*

Technical Research Assistant (University of Alicante)
- Worked on "Mobile manipulation for non-structured outdoor environents" project, funded by Ministry of Science, Innovation and Universities (RTI2018-094279-B-I00). AUROVA research group.
- Used 2D and 3D artificial vision techniques, neural networks, trajectory controllers and robotic grippers.

HONORS AND AWARDS

02/2025

ROBOVIS 2025: candidate to best poster award
- Achieved with "LiCAR: pseudo-RGB LiDAR image for CAR segmentation" article.

03/2024

Nova member – Global Top Talent Network
- Nova is the merit-based access network where the top 3% of talent connect, develop and accelerate their careers.

06/2023

Santander Bank / UA - Mobility Scholarships for international PhD mention
- Scholarship to facilitate opting for the International Mention in the PhD.

02/2022

Outstanding Student EPS/UA Hall of Fame 2022
- Achieved by showing up the EPS-UA beyond the school environment.
- Issued by University of Alicante.

01/2022 **Master's Degree Extraordinary Award**
- Best academic record of the academic year (2020/2021) in the "Automation and Robotics Master's Degree".
- Issued by University of Alicante.

10/2021 **Best Final Bachelor´s Degree Thesis 2020**
- Prize received after achieving the Special Mention in the Final Bachelor´s Degree Thesis.
- This thesis was called "Robotic satellite guidance using visual servoing" and was conducted by Jorge Pomares Baeza (University of Alicante) and Leonard Felicetti (Cranfield University) as conclusion of the Bachelor's Degree (2016/2020).
- Issued by Official Association of Industrial Engineers of Alicante (COITIA).

10/2020 **National Ranking of Academic Excellence 2020**
- Included in the "National Ranking of Academic Excellence 2020". Achieved position 6 out of 30 in the field "Other Engineering Degrees". Distinction awarded to the top 1% of graduates of Spanish universities.
- Issued by Spanish Society of Academic Excellence (SEDEA).

PUBLICATIONS

A) Journals

- [J1] I-L. Páez-Ubieta, D. Frau-Alfaro and S.T. Puente. "GeoGraspEvo: Multifinger Grasp Pose Estimation". Machine Vision and Applications (MVA). Under review.
- [J2] I-L. Páez-Ubieta, J. Castaño-Amorós, S.T. Puente and P. Gil. "Vision and Tactile Robotic System to Grasp Litter in Outdoor Environments", Journal of Intelligent and Robotic Systems (JINT), 109, 36 (2023), doi: 10.1007/s10846-023-01930-2. Impact Factor (JCR): 3.1, indexed in ROBOTICS and COMPUTER SCIENCE, ARTIFICIAL INTELLIGENCE fields.
- [J3] J. Castaño-Amorós, I-L. Páez-Ubieta, P. Gil, S.T. Puente. "Manipulación visual-táctil para la recogida de residuos domésticos en exteriores". Revista Iberoamericana de Automática e Informática Industrial (RIAII), 20(2), (2022), pp. 163-174, doi: 10.4995/riai.2022.18534. Impact Factor (JCR): 1.5, indexed in ROBOTICS and AUTOMATION & CONTROL SYSTEMS fields.

B) International conferences

- [IC1] J. Huber, F. Hélénon, M. Kappel, I-L. Páez-Ubieta, S.T. Puente, P. Gil, F.B. Amar and S. Doncieux. "QDGset: A Large Scale Grasping Dataset Generated with Quality-Diversity", 42nd IEEE International Conference on Robotics and Automation (ICRA 2025), Atlanta, U.S.A, 2025. doi: 10.48550/arXiv.2410.02319. Accepted. To be published.
- [IC2] I-L. Páez-Ubieta, D. Frau-Alfaro and S.T. Puente. "Transferability of labels between multilens cameras", 20th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISAPP 2025), Porto, Portugal, 2025, vol. 3, pp. 410-417, doi: 10.5220/0013154100003912.
- [IC3] I-L. Páez-Ubieta, E.P. Velasco-Sánchez and S.T. Puente. "LiCAR: pseudo-RGB LiDAR image for CAR segmentation", 5th International Conference on Robotics, Computer Vision and Intelligent Systems (ROBOVIS 2025), Porto, Portugal, 2025. doi: 10.48550/arXiv.2501.13960. Accepted. To be published.
- [IC4] D. Frau-Alfaro, S.T. Puente, I-L. Páez-Ubieta and E. Velasco-Sánchez. "Robotic approach trajectory using Reinforcement Learning with Dual Quaternions", 7th Iberian Robotics Conference (ROBOT 2024), Madrid, Spain, 2024. 1-6, doi: 10.1109/ROBOT61475.2024.10796878.
- [IC5] D. Frau-Alfaro, S.T. Puente and I-L. Páez-Ubieta. "Trajectory generation using Dual-Robot haptic interface for Reinforcement Learning from Demonstration", 6th Iberian Robotics Conference (ROBOT 2023), Coimbra, Portugal, 2023. Springer Lecture Notes in Networks and Systems, 976(444-455), doi: 10.1007/978-3-031-58676-7_36.
- [IC6] I-L. Páez-Ubieta, E. Velasco-Sánchez, S.T. Puente. and F. A. Candelas. "Detection and depth estimation for domestic waste in outdoor environments by sensors fusion", 22nd IFAC (International Federation of Automatic Control) World Congress 2023, Yokohama, Japan & IFAC-PapersOnLine, 56(2), 2023, pp. 9276-9281, doi: 10.1016/j.ifacol.2023.10.211. Impact Factor (no JCR): 1.8, 2023.
- [IC7] E. Velasco-Sánchez, I-L. Páez-Ubieta, F. A. Candelas and S. T. Puente. "LiDAR data augmentation by interpolation on spherical range image", 2023 IEEE 28th International Conference on Emerging Technologies and Factory Automation (ETFA), Sinaia, Romania, 2023, pp. 1-4, doi: 10.1109/ETFA54631.2023.10275512.
- [IC8] I-L. Páez-Ubieta, E. Velasco-Sánchez, S. T. Puente, P. Gil and F. A. Candelas. "GeoGraspEvo: grasping points for multifingered grippers", 2023 IEEE 28th International Conference on Emerging Technologies and Factory Automation (ETFA), Sinaia, Romania, 2023, pp. 1-4, doi: 10.1109/ETFA54631.2023.10275406.
- [IC9] V. Morell, D. Mira, C.A. Jara, J. Pérez, A. Bertomeu, J.L. Ramón, M.J. Blanes, D. Sánchez, I-L. Páez-Ubieta and G.J. García (2021). "Project-based learning in robotics subject of a Master's Degree". International Symposium on Project Approaches in Engineering Education; Active Learning in Engineering Education Workshop; International Conference on Active Learning in Engineering Education (PAEE/ALE), pp. 176-183, July 7-9, Braga (Portugal), doi: 10.5281/zenodo.5095636.

C) National conferences

- [NC1] J. Castaño-Amoros, I-L. Paez-Ubieta, M. A. Muñoz-Bañon, E. Velasco, F. A. Candelas, S. T. Puente, P. Gil, F. Torres. "Desarrollos en BLUE para Manipulación Móvil en Entornos Exteriores No Estructurados". 43rd Spanish National Automation Conference (JA), pp. 851-857, september 7-9, 2022, Logroño (La Rioja), doi: 10.17979/spudc.9788497498418.
- [NC2] J. Castaño-Amoros, I-L. Paez-Ubieta, S. T. Puente and P. Gil. "Hacia la recogida de residuos domésticos en exteriores: enfoque visual-táctil". Spanish National Robotics, Education and Bioengineering Conference (JREB), pp. 851-8577, may 18-20, 2022, Málaga, url: http://hdl.handle.net/10045/123911

D) Other

- [O1] I-L. Páez-Ubieta, J. Pomares, L. Felicetti (2020). "Guiado de satélites robóticos mediante control basado en imagen". La Revista, pp. 4-15, July-December 2020, ISSN: 1696-9200, url: http://www.coitialicante.es/repositorio/documentos/revistas/2020/revista_cogitia_125.pdf