CURRICULUM VITAE

CONTACT INFORMATION

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ACADEMIC INFORMATION (Degrees and certificates)

- **Phd student in Automatic Control, Robotics and Vision – UPC, Institute of Industrial and Control Engineering, IOC.** (15 May 2015 – 23 September 2020). <u>Final mark</u>: **Excellent Cum Laude with International mention**.

- **Master's degree in Automatic Control and Robotics – UPC, Barcelona School of Industrial Engineering, ETSEIB** (September 2013 – February 2016). <u>Final mark</u>: **8,22**.

- **Telecommunication Engineering – UPC, ETSETB** (September 2005 - September 2013). <u>Final mark</u>: **7**.

- **Certificate of secondary education (scientific technological)** – IES Marina (September 1999 - June 2005)

- **School graduate** – Escola Gílpe (September 1993-June 1999)

WORK EXPERIENCE

- **Tenure-track Lecturer Professor at the UPC** (2 January 2024 – Currently).

- **Post PhD related with the project AI4HRI – LAAS/CNRS, Toulouse, France** (1 September 2021 – 31 December 2023)

- **Associate Professor at UPC** (12 September 2019 – 30 August 2021).

- **Intermediate Technician Research Support -** UPC, Institute of Industrial and Control Engineering, part-time work (15 May 2019 – 30 June 2021).

- **Ph.D. student in Automatic Control, Robotics and Vision –** UPC, Institute of Industrial and Control Engineering, IOC. Full-time work (15 May 2015 – 23 September 2020).

- **Scholarship-Work for academic activities** aimed at supporting the teaching staff of the public universities of the Catalan university system (AAD), part-time work (15 January 2015 – 14 May 2015).

- **Study aid for research initiation**, part-time work (01 June 2014 – 31 December 2014).

RESEARCH

- **Post PhD related with the project AI4HRI – LAAS/CNRS, Toulouse, France** (1 September 2021 – Currently)

- **Contract as research support staff** to finish my Phd and other research activities related with my thesis and projects that I'm working at the IRI. (15 May 2019 - 30 June 2021).

- **PhD student at Institut de Robòtica I Informàtica industrial (IRI)**: Topic: Human-Robot Collaboration in urban areas. Focused on collaborative navigation to accompany and approach to people, with Tibi and Dabo robots. Supervisor: Alberto Sanfeliu. Use of: matlab, C++, ROS, rviz, Gazebo and Latex.

- **Final Master's Degree Project at Institut de Robòtica I Informàtica industrial (IRI)**: Extension of the multi-hypothesis tracker to include fusion of information from several detectors (laser and vision), deal with crosses and groups of people. Use of: matlab, C++, ROS, rviz, Gazebo and Latex.

- **Final Degree Project at Institut de Robòtica I Informàtica industrial (IRI)**: Programming one multi-hypothesis tracker and other smaller codes, as a floor detector to filter laser detections of the floor. Real tests on Tibi and Dabo robots of IRI. Use of: matlab, C++, ROS, rviz and Latex.

EUROPEAN PROJECTS

- **A European AI On Demand Platform and Ecosystem (AI4EU)**. Working as group member including several systems (a leg detector, the multi-hypothesis tracker developed in my Final Degree and Master projects, and the the one-person accompaniment of my Phd using two of our iri-robotic-platforms) in a docker that can be used by any person that has access to the project and developing several tutorials for these algorithms. Project code: H2020-ICT-2018-2-825619. (01/01/2019 - 31/12/2021)

- **TERRINET: The European robotics research infrastructure network.** Working as group member during my Doctoral Thesis: Collaborative Social Robot Navigation in Accompanying and Approaching Tasks. Project code: H2020-INFRAIA-2017-1-730994 (01/12/2017– 30/11/2021)

- **ROBOCOM++: Rethinking robotics for the robot companion of the future.** Working as group member during my Doctoral Thesis: Collaborative Social Robot Navigation in Accompanying and Approaching Tasks. Project code: FLAG-ERA-JTC-2016. (01/03/2017– 29/02/2020)

- **Cargo-ANTS: Cargo handling by Automated Next generation Transportation Systems for ports and terminals.** Working as group member in the adaptation of the multi-hypothesis tracker so that it can be used in autonomous vehicles. Project code: 605598. (01/06/2014 – 31/08/2016)

TRILATERAL PROJECTS

- **Artificial Intelligence for Human Robot Interaction (AI4HRI).** Working as Post PhD. Project code: Project-ANR-20-IADJ-0006 (01/09/2021 – Officially: 31 December 2023, unofficially: currently until finishing the works from the AI4HRI project). In collaboration with France, Germany and Japan. (Web ANR: https://anr.fr/Projet-ANR-20-IADJ-0006. Project web: https://www.laas.fr/projects/ai4hri/). France, Germany and Japan.

NATIONAL PROJECTS

- **Unit of Excellence Maria de Maeztu (MdM).** Working as group member during the actual year 2021, in the same tasks of my Doctoral Thesis. Project code: MDM-2016-0656. (01/07/2017– 30/06/2021).

- **ColRobTransp: Colaboración robots-humanos para el transporte en zonas urbanas.** Working as group member during my Doctoral Thesis: Collaborative Social Robot Navigation in Accompanying and Approaching Tasks. Project code: DPI2016-78957-R. (30/12/2016– 29/12/2019).

- **Robot-Int-Coop: Robot-Human Interaction, Cooperation and Learning in Urban Areas.** Working as group member during my Doctoral Thesis: Collaborative Social Robot Navigation in Accompanying and Approaching Tasks. Project code: DPI2013-42458-P. (01/01/2014 – 30/06/2017)

SMALL PARTICIPATION IN PROJECTS

- **Electro Physiological Involuntary Inputs for Collaborative robotics enhancement (EPIIC)**. Participation, with Aurélie Clodic PI of the project at LAAS, in selecting a Master student, with my expertise in teaching a subject of user studies in robotics, and trying to collaborate with some ideas (During my Postdoc at LAAS). (Web: https://anr.fr/Project-ANR-21-CE33-0005). National in France.

- **Effective Learning of Social Affordances for human-robot interaction (ELSA)**. Participation, with Aurélie Clodic PI of the project at LAAS, in selecting the PhD candidates and participating in some meetings (During my Postdoc at LAAS). (Web: https://www.isir.upmc.fr/news/elsa-project-giving-robots-the-ability-to-learn-social-affordances-to-improve-interaction-with-humans/?lang=en). France and Austria.

- **CREST Project. Human-Robot Interaction for Symbiotic Robots in a Public Space in a City. JST CREST (JPMJCR17A2)**. Japanese National project to promote internationally high-level basic research. I was linked to this project during my research stay at the ATR of Japan (During my PhD research stay at ATR: 3 months and a half). Also, my paper related with this stay includes this project. Project web: https://www.robot.soc.i.kyoto-u.ac.jp/en/english-crest-project/ about these projects: https://www.jst.go.jp/kisoken/crest/en/about/index.html

WORKSHOP ARTICLES

- Adrien Vigné, Guillaume Sarthou, Ely Repiso, and Aurélie Clodic (2022). **In which context are we interacting? A Context Reasoner for interactive and social robots.** *"Artificial Intelligence for Social Robots Interacting with Humans in the Real World (Intellect 4 HRI)"* at IROS2022, kyoto, Japan. Held on 27 of October of 2022.
Workshop web: https://intellect4hri.sciencesconf.org/resource/page/id/5

- A. Sanfeliu, E. Repiso, A. Garrell, (2020). **Collaborative-AI: Social robots accompanying and approaching people.** *Proceedings of the First International Workshop on New Foundations for Human-Centered AI (NeHuAI)*. CEUR-WS. Org, 2020.

CONFERENCE ARTICLES

- Repiso, E., Sarthou, G., & Clodic, A. (2023, August). Towards a system that allows robots to use commitments in joint action with humans. In *2023 32nd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)* (pp. 2638-2645). IEEE.

- Repiso, E., Garrell, A., & Sanfeliu, A. (2023, August). Real-Life Experiment Metrics for Evaluating Human-Robot Collaborative Navigation Tasks. In *2023 32nd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)* (pp. 660-667). IEEE.

- O. Castro, E. Repiso, A. Garrell, and A. Sanfeliu. **Classification of Humans Social Relations Within Urban Areas.** 5th Iberian Robotics Conference, 2022, Zaragoza, Spain, in Robot2022: Iberian Robotics Conference, (pp. 27-39). Springer, Cham.

- E. Repiso, A. Garrell, A. Sanfeliu, (2020). **People's Adaptive Side-by-Side Model Evolved to Accompany Groups of People by Social Robots.** EEE/RSJ International Conference on Robotics and Automation (RA-L + ICRA 2020), Paris, France. IEEE, 2020.

- M. Galvan*, E. Repiso*, A. Sanfeliu, (2019). **Robot Navigation to Approach People Using G^2-Spline Path Planning and Extended Social Force Model.** 4th Iberian Robotics Conference, 2019, Oporto, Portugal, in Robot 2019: Fourth Iberian Robotics Conference, (pp. 15-27). Springer, Cham. (* Means equal contributions)

- E. Repiso, F. Zanlungo, T. Kanda, A. Garrell, A. Sanfeliu, (2019). **People's V-Formation and Side-By-Side Model Adapted to Accompany Groups of People by Social Robots.** IEEE/RSJ International Conference on Intelligence Robots and Systems (IROS 2019), Macao, China, (pp. 2082-2088). IEEE, 2019.

- E. Repiso, A. Garrell, and A. Sanfeliu. **"Robot approaching and engaging people in a human-robot companion framework."** *2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Madrid, España, pp. 8200-8205*. IEEE, 2018.

- E. Repiso, A. Garrell, and A. Sanfeliu. **"On-line adaptive side-by-side human robot companion to approach a moving person to interact."** 3rd Iberian Robotics Conference, 2017, Seville, Spain, in Robot 2017: Third Iberian Robotics Conference, Vol 694 of Advances in Intelligent Systems and Computing, pp. 113-125. Springer, Cham, 2017.

- E. Repiso, G. Ferrer, and A. Sanfeliu. **"On-line adaptive side-by-side human robot companion in dynamic urban environments."** *2017 IEEE/RSJ International Conference on Intelligence Robots and Systems (IROS 2017), Vancouver, Canada, pp. 872-877*. IEEE, 2017.

- V. Vaquero*, E. Repiso*, A. Sanfeliu, J. Vissers, & M. Kwakkernaat, **"Low Cost, Robust and Real Time System for Detecting and Tracking Moving Objects to Automate Cargo Handling in Port Terminals".** In Robot 2015: Second Iberian Robotics Conference (pp. 491-502). Sprinter International Publishing. (* Means equal contributions)

JOURNAL ARTICLES

- E. Repiso, A.Garrell, and A. Sanfeliu. **"Adaptive Social Planner to Accompany People in Real-life Dynamic Environments".** *International Journal of Social Robotics* (2022): vol. 12, no 4, p. 909-930. ISSN 18754791, 18754805. Impact factor: 3.802 (2021). SJR 1.11 (2021). H-index 57. Robotics, Journal Q1 (2021). Indexes are currently to be determined for 2022.

- E. Repiso, A. Garrell, and A. Sanfeliu. **"People's Adaptive Side-by-Side Model Evolved to Accompany Groups of People by Social Robots."** IEEE Robotics and Automation Letters 5 (RA-L), 2020. ISSN 23773766. Impact factor: 3.6 (in 2019). SJR 1.555 (2019). H-index 63. Human-Computer Interaction, Journal Q1.

- E. Repiso, A. Garrell, and A. Sanfeliu. **"Adaptive Side-by-Side Social Robot Navigation to Approach and Interact with People."** *International Journal of Social Robotics* (2019): 1-22. ISSN 18754791, 18754805. Impact factor: 2.009. SJR 0.882 (2019). Robotics, Journal Q1.

- V. Vaquero*, E. Repiso*, and A. Sanfeliu. **"Robust and real-time detection and tracking of moving objects with minimum 2D LIDAR information to advance autonomous cargo handling in ports."** *Sensors* 19.1 (2019): 107. ISSN 14243210, 14248220. SJR 0.653 (2019). Impact factor: 2.475. H-Index 196. Instruments & Instrumentation, Journal Q1. (* Means equal contributions).

CHAPTERS OF BOOKS

- Aurélie Clodic, Raul Hakli, Ely Repiso-Polo and Katlheen Belhassein. Book title: Social Robots in Social Institutions. Chapter Title: **Roboticists' Perspective on Social Robots in Social Institutions: How to Design Social Robots That Can Operate in Complex Social Environments?.** January of 2023. IOS Press.

ACADEMIC ACTIVITIES

- **Associate Professor** to teach part of the subject 205059 - **Mobile Robotics (MR).** ESAII, UPC. Terrassa, Spain. Language: English. **Two mounts, 4 teaching hours per week. (17/02/2020 – 31/06/2020; Q2 in 2021 same duration as first)**

- **Associate Professor** to teach two laboratories of the subject 320015 - *Control i Automatització Industrial* **(CAI).** ESAII, UPC. Terrassa, Spain. Language: Spanish. **Two mounts, 4 teaching hours per week in 2020 and Two mounts, 6 teaching hours per week in 2021. (17/02/2020 - 31/06/2020, 22/02/2021 – 12/04/2021)**

- **Associate Professor** to teach part of the Laboratories of the subject 220107 - *Modelat i Simulació de Sistemes* **(MSS).** ESAII, UPC. Terrassa, Spain. Language: Spanish. **Two mounts, 2 teaching hours per week. (21/09/2020 – 31/10/2020)**

- **Associate Professor** to teach part of the Laboratories of the subject 220600 - *Simulació I Optimització* **(SIO).** ESAII, UPC. Terrassa, Spain. Language: Spanish. **Two mounts, 2 teaching hours per week. (21/09/2020 – 31/10/2020)**.

- **Associate Professor** to teach two laboratories of the subject 3200331 - *Modelització i Anàlisi de Sistemes Dinàmics 1* **(MASD1).** ESAII, UPC. Terrassa, Spain. Language: Spanish. **Four mounts, 2 teaching hours per week, some weeks 4 teaching hours per week. (16/09/2019 – 19/12/2019, 01/09/2019 – 23/12/2020).**

- Direct participation in the improvement of teaching, training and teaching innovation (1,42 credit)

- **Associate Professor** to teach the part of robot human interaction of the subject **Cognitive Interaction with Robots (CIR) of Master in Artificial Intelligence (MAI).** ESAII, UPC. Barcelona, Spain. Language: English. **Fourth moths, 2 teaching hours per week (09/09/2019 - 16/12/2019 and 20 of January of 2020).**

- **Grant to support academic activities of university professors (15/01/2015 – 14/05/2015).** Grant activity: Implement a new version of the practices of the subject System dynamics. Exact activities: Installation of a virtual machine to implement the software. Test different linux versions. Final Installation of linux-3.19 version, change its kernel to install and compile a new version. Patch the kernel with RTAI. Configure, compile and install RTAI. Install and compile several linux libraries. Solve Installation and compilation problems of all the libraries and software.

THESIS DIRECTION

- Clara Baffogne, Degree student at LAAS to start to convert my code of Human-Robot accompaniment in a robot guidance for the project AI4HRI (30 May 2023 – 1 September 2023). **TFG title: Adaptation of an Accompanying Algorithm to a Guidance Robot.** With Officially mention of her tutoring. In the code: she changed the robot's final goal, the Social Force Model (SFM), and used a simulator of Tibi of the UPC and changed the PR" of LAAS and we translate the code to the real-robot in LAAS, including an OptiTrack person detection to be able to track the person at the back of the PR2 robot because it does not have a back laser sensor to be able to do a proper autonomous guidance. (Publication to be send)

- Víctor Pozo Fernández, Master student at UPC in collaboration with LAAS/CNRS (01 February 2023 – 31 july 2023). **TFM title: Study of the customization of the behavior of a robot regarding multiple interactions with customers or employees of a store.** I will tutor his Master project and we will collaborate with the team of Japan for some aspects of the implementation. Also, by the moment at LAAS his is official under the supervision of Aurélie Clodict. And in the UPC, we will have as Ponent Rita Maria Planas Dangla. Then, I have official mention in the TFM of Victor Pozo Fernández, also a paper recognizing me as principal tutor of victor will be published somewhere.

- Adrien Vigné. Master thesis (July/August 2022 – September 2024). I helped him with the

presentation of his master thesis and to publish a workshop paper for the project AI4HRI because part of his current PhD is related with this project. However, I am not any one of his official tutors. The paper is here: https://intellect4hri.sciencesconf.org/resource/page/id/5

- Oscar Castro Arcusa, Master student at the UPC (February 2021 – October 2021). **TFM title: Clasificación de comportamientos sociales durante el acompañamiento entre humanos.** I was his official tutor and I tutor him during all his Master project. Official mention as tutor here, in his Master thesis: https://upcommons.upc.edu/handle/2117/356809. The paper: http://www.iri.upc.edu/files/scidoc/2648-Classification-of-Humans-Social-Relations-Within-Urban-Areas.pdf

- Marta Galvan. Master student at the UPC from (January 2019 – May 2019). Unofficially, due to that I pushed to publish a paper at ROBOT2019. **TFM title at UPC: Kinodynamic real-time motion planning for a mobile.** At this moment, I was not able to be included as official tutor in his Master thesis document. I helped her during her second half of the thesis. To unload her and achieve to have a Master thesis work, I get it part of the implementation and the experiments due to that I was also first author of the paper. Concretely, she implemented the part of the splines and I linked that part with our AKP planner. Also, she did the simulation experiments and set-up the parameters of the AKP. I set up the real-life experiments and I involved her during the performance of the real-life experiments with the volunteers. Her thesis: https://upcommons.upc.edu/handle/2117/171074 and the paper:http://www.iri.upc.edu/files/scidoc/2269-Robot-Navigation-to-Approach-People-Using-$G%5E2$-Spline-Path-Planning-and-Extended-Social-Force-Model..pdf

CIENTIFIC DIFUSION

- Several appearances in the 8M day to foment the women participation in Science. One is on YouTube: **https://www.youtube.com/watch?v=vh8Pz-rVcDw**
- Participation in tasks of promotion, evaluation and dissemination of teaching quality at IRI (1 credit).
- Several talks at IRI about my research

(http://www.iri.upc.edu/education/seminars/previous_seminars.html search for Ely Repiso)

- Talks at LAAS/CNRS about my research.
- A talk reviewing my whole research carrier at Kyoto University inside the Robotic department of Takayuki Kanda.
- Starting talk of workshop AI4HRI to share the workshop objectives and information about the trilateral project AI4HRI. (web: https://intellect4hri.sciencesconf.org/)

WORKSHOPS

- **Co-Organizer** of workshop with name: Companion robots: when?, at European Robotics Forum (ERF) March 14-16, 2023, in Odense, DK (web of ERF: https://eu-robotics.net/call-for-erf-2023-workshops/).

- **Main Organizer** of workshop with name: *"Artificial **Intel**ligence **for** Social **R**obots Interacting with **H**umans in the Real World (Intellect 4 HRI)"* at IROS2022, kyoto, Japan. Held on 27 of October of 2022. Workshop web: https://intellect4hri.sciencesconf.org/. Web entirely created by Ely Repiso using the sciencesconf.org tools.

- **Co-Organizer** of workshop with name: "Roboticists' Perspective on Social Robots in Social Institutions. How to design social robots that can operate in complex social environments?" at robophilo workshop series of 2022. Held on week 16th-19th of August of 2022. (web: https://cas.au.dk/robophilosophy/conferences/rpc2022/program/workshop-2-roboticists-perspective-on-social-robots-in-social-institutions)

GUEST EDITOR AT SPECIAL ISSUES:

- Principal guest editor at special issue of the international Journal of Social Robotics with name: Knowledge, Learning, Planning, and Human Behavior Modeling for Autonomous Social Robots (web: https://www.springer.com/journal/12369/updates/23641808).

MEMBER IN PROGRAM/TECHNICAL COMMITTEES

- Member of Sociedad Española para la Investigación y Desarrollo en Robótica (SEIDROB), (Intermitently from 2014).
- Member of IEEE (from 2017, 8 years).
- Member of IEEE Young Professionals (6 years).
- IEEE Women in Engineering Membership (3 years)
- Program committee member of Robot2022.
- IEEE Robotics and Automation Society Membership (2 years).
- Member of Technical committee of Cognitive Robotics from November 2022 (2 years). Web: https://www.ieee-ras.org/cognitive-robotics/

PARTICIPATION IN CONGRESSES

- **As researcher in IEEE RO-MAN 2023 with two paper presentations (Online due to possible moving to the UPC) in Busan, China (28-31/08/2023).**

- **As researcher in *Fifth Iberian Robotics conference (ROBOT2022)* in Zaragoza, Spain. (**23 – 25/**11/2022).**

- **As main workshop organizer at IROS2022 in Kyoto, Japan (23/10 – 27/10/2022)**

- **As ordinary Program Committee member of ROBOT2022** (2022).

- As researcher in *2020 IEEE/RSJ International Conference on Robotics and Automation (ICRA2020) [Telematic version due to covid19]* in Paris, France. (31/05 – 31/08/2020).

- As researcher in *Fourth Iberian Robotics conference (ROBOT'2019)* in Oporto, Portugal. (20 – 22/11/2019).

- As researcher in *2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)* in Macao, China. (4 – 8/11/2019).

- As researcher in *2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS2018)* in Madrid, Spain. (1 – 5/10/2018).

- As researcher in *Third Iberian Robotics conference (ROBOT'2017)* in Sevilla, Spain. (22 – 24/11/2017).

- As researcher in *2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS2017)* in Vancouver, Canada. (24 – 28/09/2017).

- As volunteer in the **2014** *International Conference on Emerging Technologies and Factory Automation (ETFA)* in Barcelona, Spain. (16 – 19/09/2014).

- As volunteer in the *2013 European conference on mobile robotics (ECMR)* in Barcelona, Spain. (25 - 27/09/2013).

RESEARCH STAYS ABROAD

Research stay at the Advanced Telecommunication Research Institute (ATR) of Japan in the department of Intelligent Robotics and Communication Laboratories (IRC) to develop new models of

accompaniment of people for humanoid robots (01/05/2018 - 10/08/2018).

ACTIVITY AS REVIEWER

Conferences:
- IEEE-RAS International Conference on Humanoid Robots (Humanoids).
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).
- IEEE International Conference on Robotics and Automation (ICRA).
- Springer – 14th International Conference on Social Robotics (ICSR 2022).
- ACM/IEEE International Conference on Human-Robot Interaction (HRI 2023).

Journals:
- IEEE Robotics and Automation Letters (RA-L). Journal Q1.
- Springer Journal International Journal of Social Robotics (SORO). Journal Q1.
- Springer Journal Intelligent Service Robotics (JIST). Journal Q1 or Q2
- Wiley Periodicals, LLC. Journal of Field Robotics. Journal Q1.

THESIS REVIEW AND EVALUATION.

- Reviewer of Master's Thesis of Vsevolod Glazov in the Skolkovo Institute of Science Technology that has as Research Advisor Gonzalo Ferrer. (May-Juny of 2020)

- Evaluator of Master thesis of Sridath Tula from the École Centrale de Nantes of his Master Stay at CNRS-LAAS under supervision of Aurélie Clodic and Raphaëlle N. Roy. (During July-August 2022)

- Realization of Report as and external expert for the PhD thesis of Claudia Álvarez Aparicio of the University of León under the supervision of Dr. Vicente Matellán Olivera, Dr. Ángel Manuel Guerrero Higueras y Dr. Francisco Javier Rodríguez Lera. (During october – November 2022)

GRANTS

- **Grant of the FPI stays grants, with code: EEBB-I-18-12-12958.** The grant was used in the research stay at the Advanced Telecommunication Research Institute (ATR) of Japan (01/05/2018 - 10/08/2018).

- **FPI grant of MINCIM with code: BES-2014-067713, from the project Robot-Int-Coop**, with code: DPI2013-42458-P (15/05/2015 - 14/05/2019).

- **Grant to support academic activities of university professors. Grant reference: UPCA26.** Issued by AGAUR, *Agència de Gestio d'Àjuts Universitaris I de Recerca.* (15/01/2015 – 14/05/2015).

AWARDS AND HONORS

- My PhD these was selected as one of the three finalists in the awards for the best Doctoral Thesis on Robotics carried out by the Comité Español de Automática (CEA) of 2021.

ACREDITATIONS:

- Accreditation of Lecturer professor obtained in 2021 from Agencia para la Calidad del Sistema Universitario de Cataluña (AQU).
- Accreditation of C1 Catalan Level (expedited on 2023).

ACADEMIC COURSES TO IMPROVE SKILLS:

Coursera courses of Machine learning to review and improve my knowledge of these techniques:

- Supervised Machine Learning: Regression and Classification. (Web: https://www.coursera.org/learn/machine-learning). Finished.
- Unsupervised Learning, Recommenders, Reinforcement Learning. (Web: https://www.coursera.org/learn/unsupervised-learning-recommenders-reinforcement-learning). Finished.
- Advanced Learning Algorithms. (Web: https://www.coursera.org/learn/advanced-learning-algorithms). Finished.

Coursera courses about writing articles to improve my skills on writing scientific articles:
- Writing in the Sciences (web: https://www.coursera.org/learn/sciwrite). Currently maybe finished at time of application.

PERSONAL HOBBIES

- Translate, develop and use some navigation and vision algorithms in a Roomba platform.
- Creation and programming small robots, as: Line followers, sumo, etc. (During some robotic courses, secondary education projects and on my own).

OPERATIVE SYSTEMS

- Linux/Ubuntu
- Windows

SOFWARE

- C and C++
- Python for Machine learning.
- Lisp (basic knowledge)
- Robot Operating System (ROS)
- Rviz
- Gazebo
- Matlab and Simulink
- Latex (Write papers)
- Html (Papers web pages)
- ARENA
- Power Point
- OpenShot Video Editor (Videos of my papers)
- CAD/ AUTOCAD (basic knowledge)
- 3DSMAX (basic knowledge)
- Unity (basic knowledge)
- svn
- github/gitlab
- docker
- CRAM (basic knowledge)

LANGUAGES

- Spanish: Native.
- Catalan: Native.
- English: upper-intermediate, B2 level.
- French: FLE A0, and autodidact learning.