Curriculum Vitae

José-Luis Vilchis-Medina

➔ ***PhD. in Computer Science*** [a]
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a. (based-logic Artificial Intelligence)

► Current Situation ◄

Sep-2023/today	**ENSTA – Institut Polytechnique de Paris** *Lab-STICC (UMR 6285), ROBEX team.* **Researcher of Computer Science** working on multi-agent coordination and behavioral simulation.	**Brest, France**

◖ Employment Situation ◗

Oct-2021/Aug-2023	**French Naval Academy** *French Naval Academy Research Institute (IRENav EA3634), MoTIM group.* **Assistant Professor of Computer Science.**	**Brest, France**
Oct-2020/Sep-2021	**ONERA-The French Aerospace Lab** *DTIS – Traitement de l'information et systèmes, Systèmes Embarqués, Autonomes et Sûrs (SEAS) unit.* **Postdoctoral position**	**Toulouse, France**
Oct-2019/Sep-2020	**Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier – LIRMM** *EXPLORE team.* **Postdoctoral position**	**Montpellier, France**
Sep-2018/Aug-2019	**Aix-Marseille Université** CAlcul NAturel team *Faculty of Sciences, Bachelor in Computer Science.* **Teaching-Research position (ATER ≈ 192H)**	**Marseille, France**

► Research Interest ◄

- *Knowledge Representation & Reasoning*
- *Non-monotonic Reasoning*
- *Autonomous–Intelligent Agents*
- *Logic & Proof Theory*

► Education ◄

Oct-2015/Dec-2018	**PhD. in Computer Science** **L**aboratoire d'**I**nformatique et **S**ystèmes (LIS) CAlcul NAturel team **Title :** *Modeling of Resilient System in Default Logic. Application to Solar Power UAV.* (**Supervisor**) PR Pierre Siegel, LIS, Marseille (**co-Supervisor**) PR Andrei Doncescu, LAAS, Toulouse (*Rapporteur*) PR Lakhdar Saïs, CRIL, Lens (*Rapporteur*) PR Jacques Demongeot, Université Grenoble Alpes PR Amal El Fallah Seghrouchni, LIP6, Paris PR Yves Lacroix, Université de Toulon MCF Vincent Risch, LIS, Marseille	**Marseille, France**
Sep-2015	**M.Sc. in Electrical and Automation Engineering** INP-ENSEEIHT **Option :** Control, Decision and Critical Computing Systems **Title :** *Design of a versatile electronic demonstrator for the measurement of displacements by optical re-injection in a laser diode, with control of the emitted beam.* **Supervisors :** Julien PERCHOUX and Antonio LUNA ARRIAGA	**Toulouse, France**
Aug-2012	**B.Sc. in Electronics Engineering** Universidad Autónoma de Baja California **Option :** Control Systems - *with Honors* **Final Project :** *Design of an embedded system for agricultural applications.*	**Ensenada, Mexico**

► Price – Awards ◄

High academic achievement by the National Evaluation Center (CENEVAL)

Universidad Autónoma de Baja California, Promotion 2012
B.Sc. in Electronic Engineering.

Mexico-France Exchange Engineers Technology (MEXFITEC)

Electronic and Signal Processing, 1-year exchange (BAC+4) at INP-ENSEEIHT.

► Languages ◄

Spanish Mother tongue	**English** Advanced level	**Français** Advanced level	**Portugais** Intermediate level

► Technical Skills ◄

Text editor : LaTeX, Vim ; **Programming languages :** Prolog, C/C++, Python, Bash, HTML, Matlab, ROS2/Gazebo ; **Operating System :** macOS, Linux, Windows (less usage)

► Supervision ◄

— **2022**
  — Master Students :
    - *Tom Ravaud from ParisTech, Master 1, research internship (6 months). Working on "Automatic docking of a drone on a mobile platform using ROS2–GAZEBO".*
    - *Maelys Lupin from ENIB, Master 1, mentored projet (4 months). Working on "Modeling of a hexapod robot using ROS2–GAZEBO".*

► Publications ◄

[13] Marisnel et al. "ORONER : An Ontology for Representing interOrganizational NEtworks Resilience. A Building Block Towards Adaptive Network Reconfiguration". In : *Knowledge-Based Systems (under revision)* (2025).

[12] José-Luis Vilchis-Medina. "Un cadre paraconsistant pour l'évaluation de similarité dans les bases de connaissances". In : *Journées d'Intelligence Artificielle Fondamentale (JIAF) (Accepted)*. 2025.

[11] José-Luis Vilchis-Medina et Benoit Zerr. "Dynamic Swarming Autonomous Underwater Vehicles through Behavioral Rules using Declarative Programming". In : *OCEANS (Accepted)*. 2025.

[10] José-Luis Vilchis-Medina. "Building Intelligent Databases through Similarity : Interaction of Logical and Qualitative Reasoning". In : *The 7th International Conference on Algorithms, Computing and Artificial Intelligence (ACAI)*. 2024. doi : 10.1109/ACAI63924.2024.10899649.

[9] José-Luis Vilchis-Medina. "Evaluation and Identification of Properties in a Set of Information through Qualitative and Non-monotonic Reasoning". In : *The 6th International Conference on Computer Science and Artificial Intelligence (CSAI, abstract only)*. preprint. 2022.

[8] José-Luis Vilchis-Medina, Karen Godary-Déjean et Charles Lesire. "Autonomous Decision-Making With Incomplete Information and Safety Rules Based on Non-Monotonic Reasoning". In : *IEEE Robotics and Automation Letters* 6.4 (2021), p. 8357-8362. doi : 10.1109/lra.2021.3103048.

[7] José-Luis Vilchis-Medina et al. "A Resilient Behavior Approach Based on Non-monotonic Logic". In : *Journées d'Intelligence Artificielle Fondamentale (JIAF)*. 2020, p. 16.

[6] José-Luis Vilchis-Medina et al. "A Resilient Behavior Approach Based on Non-monotonic Logic". In : *Mexican International Conference on Artificial Intelligence (MICAI)*. Springer. 2019, p. 403-413. doi : 10.1007/978-3-030-33749-0_32.

[5] José-Luis Vilchis-Medina et al. "An Implementation of a Nonmonotonic Logic in an Embedded Computer for a Motor-glider". In : *The 35th International Conference on Logic Programming (ICLP)*. 2019. doi : 10.4204/eptcs.306.37.

[4] José-Luis Vilchis-Medina, Pierre Siegel et Andrei Doncescu. "Non-monotonie et Resilience : Application au Pilotage d'un Motor-planeur Autonome". In : *Journées d'Intelligence Artificielle Fondamentale (JIAF)*. T. 12. 2018, p. 6.

[3] José-Luis Vilchis-Medina et al. "Intelligent and Adaptive System based on a Non-monotonic Logic for an Autonomous Motor-glider". In : *The 15th International Conference on Control, Automation, Robotics and Vision (ICARCV)*. IEEE. 2018, p. 442-447. doi : 10.1109/icarcv.2018.8581107.

[2] José-Luis Vilchis-Medina, Pierre Siegel et Andrei Doncescu. "Autonomous Aerial Vehicle Based on Non-Monotonic Logic". In : *3rd International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS)*. 2017, 6p. doi : 10.5220/0006304002360241.

[1] José-Luis Vilchis-Medina, Pierre Siegel et Andrei Doncescu. "Contrôle de Vol d'un Planeur Basé sur une Logique Non-monotone". In : *Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes (JFPDA 2017)*. 2017.