

DR. ALBERTO MUÑOZ



Working on A.I. Data Science within Mechatronics, Software Computer Engineering for Complex Systems should help understand human intelligence by doing basic and applied research on computer vision, cybernetics, automatic control and human-complex systems interactions towards a better scientific and technological improvement of value creation

CONTACT

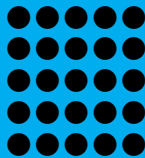
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📍 México

in Alberto Muñoz
id 0000-0002-5845-6663
🔄 Alberto Munoz

SKILLS

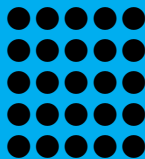
Innovation

TRL
CRISP-DM
Design Sprint
Customer Development
Miró



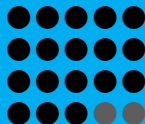
Programming

Matlab
Python
C++
LaTeX
Dataiku
Operating Systems



ROS 1-2

Linux
MacOS
Windows
Software & Tools



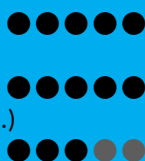
Visualisation

(e.g. matplotlib, gnuplot, ...)

Data handling/analysis

(e.g. numpy, scipy, pandas, ...)

Docker
Languages



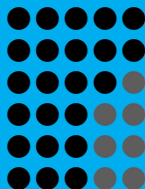
English
French

Italian

German

Japanese

Mandarin



🎓 VALUE CREATION

I take responsibility for creating technology products and services with commercial acceptance. I love coordinating actions to promote and unlock talent in the teams I create and coordinate. I am always close to people at different levels, without losing the big picture but very attentive to scientific, technological and operational details. The projects and companies in which I have participated always manage to exceed their goals, find new opportunities and new allies and, above all, create a practical vision of solutions.

🎓 EDUCATION

📅 09/2005 - 08/2006 📍 Tu Wien, Austria	Senior Research Scientist
📅 03/2000 - 12/2002 📍 Universum, UNAM	M.Sc. Science Outreach
📅 09/1998 - 02/2000 📍 University of Oxford, UK	PostDoc Senior Scientist
📅 09/1994 - 08/1998 📍 INRIA/ENSIMAG, FRANCE	Ph. D. in Vision and Robotics
📅 09/1993 - 08/1994 📍 INRIA/ENSIMAG, FRANCE	M.Sc. Intelligent Robotics
📅 08/1988 - 05/1993 📍 Tec de Mty, México	B.S. Electronic Systems Engineer

⚙️ WORK HISTORY

📅 01/09/2021 - now 📍 Tec de Monterrey Robotics, Computer Vision, Data Science, Intelligent Systems	Full Time Professor at EIC
📅 12/2008 - now 📍 México, USA Andromie, Cytron, Scicarta, Navic, Plenumsoft, Aluxoft, BioBird, MVP in a Box, SWIT, SISMIRC, Datadistik	CTO/CEO Founder of 14 Startups
📅 01/2005 - 8/2008 📍 UNAM-Faculty of Sciences	Full Time Professor
📅 01/2002 - 8/2005 📍 UADY-Maths Faculty	Full Time Professor
📅 09/2000-04/2002 📍 CONACYT	Senior Program Officer

ACHIEVEMENTS, HONOURS AND AWARDS

- 🏆 2022-2025 Member of the Mexican Systems of Research - CONACYT
- 🏆 2021 AirLab Robotics Challenge, "The Most Consistant Solution" with a team of ISDRs students
- 🏆 2015 Offshore Technology Conference "First place Startup-University Research Development Showcase Video Contest

FORMER TEAM MEMBERS & RESEARCH STUDENTS

François Boux de Casson (now at *Wright Medical*, France)
Anton Deguet (now at *JHU*, USA)
Richard Thompson (now at *Matlab*, UK)
Eric Haynman (now at *ChironHego*, Sweden)
Patricia Ortegón (now at *IBM*, USA)
Ricardo Pérez Alcocer (now at *IPN*, Mexico)
Annlyn Mcfee (now at *United Nations*, NY)
Alonso Patron (now at *Velodyne*, USA)
Jorge Rios Martinez (now at *UADY*, México)
Pablo Marrufo (now in *Apple*, USA)
Monir Mikati (now at *Eurowind Energy*, Sweden)
Ulsa Urea Mariño (now at *Texas AM*, USA)
Andrea Mestre (now at *Amazon*, France)
Ana Martinez (now at *Slack*, USA)
Oyuki Chian (now at *U. New Brunswick*, Canada)
José Devesa (now at *HSBC*, HK)
Gandhi Hernandez (now at *CentroGEO*, México)
Elvis Duran (now at *Texas AM*, USA)
Iván Fuentes (now at *Google*, USA)
Joaquín Esquivel (now at *Electronics Arts*, Vancouver)
Olmo Moreno (now at *ITT*, Italy)
Andres Vargas (now at *Visto AI*, Victoria, Canadá)
Javier Aldana (now at *Avast*, CzechRepublic)
Adrán Ramos (now at *B. Brown New Ventures*, Germany)
Carlos Brito (now at *UADY*)
Fabian Schwarzer (now at *ITK Engineering*, UK)
Rafael Rivera López (now at *UV*, México)
Daniel Rios Pavia (now at *Shopify*, Berlin)
Rich Peniche (now at *Tribe Labs*, Mx)
Ricardo Gamboa (now at *Yellow me*, Mx)
Alberto Palomo (now at *ESAY*, Yucatán)
Solangel Corpeño (now at *Humanagement*, Honduras)

SCIENCE AND TECHNOLOGY OUTREACH

- > 30 Automation Development Projects since 1992
- > 500 Technical Conferences
- > 200 Newspaper Articles (e.g. newspaper *El Financiero*)
- > 6,000 Robot Units sold by *Andromie Robotics*
- > 3,000 Users of *Vitadat* created by *Cytron Medical*
- > 300 MVPs Supported by *MVP in a Box*

RESEARCH & PROFESSIONAL ACTIVITIES

- Active member of IEEE, ACM, THA (Triple Helix Association), Nature, Science, The Futurist.
- Scientific Review Comitee for IEEE Transactions on Systems, Man and Cybernetics, IEEE Transactions on Robotics, IEEE International Conference on Robotics and Automation, IEEE International Conference on Intelligent Robots and Systems
- Patent Evaluation for IMPI, OMPI, European Patens Office. Patent application board (37 CFR 1.27) (37 CFR 1.29) Patent examination board (1090/2090/3090 or 1690/2690/3690)

NATIONAL & INTERNATIONAL ACTIVITIES


- Global Innovation Index advisor for México & LATAM (2012-2018)
- Active Member of the Steering Comitee of N2N Gulf of Mexico. Responsible for the Data Science Team
- Texas AM - Yucatan initiative steering comitee
- Startup México board of advisors



ACADEMIC INITIATIVES

- Former President of the Board of Directors of the *Heuristic Innovation Center*
- VP for Digital Agenda, CANIETI Chamber
- VP for Innovation and Tech Transfer, CANIETI Chamber
- Academic Advisor for the creation of *The Robotics Institute of Yucatán*
- Board of Directors at *The Polytechnical University of Yucatán*

PUBLICATIONS 2020-2022


Method for the customer identification for personalized sales and service opportunities from perception sensors



 Victor Alvaro Gutierrez Martinez, Vanessa Herrera Gutierrez, Wilberth Perez Ortiz, Jorge Carlos Borges Ku Yucatan, Gutierrez Martinez, **Muñoz Ubando, L.A.**

 2022  USPTO, Pat. pending US 63/267,426




Visual servoying and asset manipulation principles to redefined service retail through robotics technology



 Cisneros, J. A.; Altamirano-Avila, E.R.; Mendivil-Castro, R; Lugo, T.A., **Muñoz Ubando, L.A.**

 2022  Submitted to ICRA 2022



Software engineering principles for asset manipulation principles in retail with the Tiago Robot



 Altamirano-Avila, E.R.; Cisneros, J. A; Mendivil-Castro, R; Lugo, T.A., **Muñoz Ubando, L.A.**

 2022  Submitted to IROS 2022




Human-Firm-Method (HFM) Approach as an Integrated Methodological Support for Complex Tech-Based Entrepreneurship


 **Muñoz Ubando, L.A.**

 2021  2021 IEEE ICTE Leading Digital Transformation in Business and Society, (Track 6: Digitalization of Entrepreneurial Ecosystems, Connectivity of Business Models and Opening of Innovations)




Learning organization as a framework for networks' learning and collaboration



 Dirani, K., Baldauf, J., Medina-Cetina, Z., Wowk, K., Herzka, S., Bello Bolio, R., Gutierrez Martinez, V. and **Muñoz Ubando, L.A.**

 2021  The Learning Organization, Vol. 28 No. 4, pp. 428-443




Learning Organization as a Framework for Networks' Learning and Collaboration

 Dirani, Khalil; Baldauf, Jack; Medina-Cetina, Zenon; Wowk, Katya; Herzka, Sharon; Bello Bolio, Ricardo; Gutierrez Martinez, Victor; **Muñoz Ubando, L.A.**

 2021  12th Annual International Science of Team Science (SciTS) Conference




Modeling and Simulation of an Autonomous Surface Craft for Shallow Waters Mapping Research

 Raygoza, Rubén, **Muñoz Ubando, L.A.**

 2021  Submitted to the Journal of Ocean Engineering and Science




Non linear Kalman filter to estimate internal water temperature for a mesocosm with missing temperature measures

 Raygoza, Rubén, **Muñoz Ubando, L.A.**

 2021  Submitted Journal Computer and Geosciences



Artificial Intelligence in Mexico: A National Agenda. Agenda for México (2030)



 Del Pozo, Claudia May, Gómez Mont, Constanza and Martínez Pinto, Cristina, eds. Daniel Casados, Paola Cicero, Claudia May Del Pozo, Rodrigo Ferreira, Diego Flores, Carlos Gershenson, Miguel González-Mendoza, Erik Huesca, Víctor Daniel Maldonado Garibay, Ana Victoria Martín del Campo, Ivan Vladimir Meza-Ruiz, **Muñoz Ubando, L.A.**, Ricardo Michel Reyes, Gerardo Rodríguez, Ivete Sánchez Bravo, Arturo Sánchez Rodríguez y Sofía Trejo

 2020  C-Minds



Using Action Learning Model for International Network-to-Network Collaborations

 Dirani, **Muñoz Ubando, L.A.**

 2020  11th Annual International Science of Team Science (SciTS) Conference, 2020, Durham Convention Center Hosted by Duke University and the Duke Clinical Translational Science Institute

