Alba Cervera-Lierta | Full CV

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Senior resercher in quantum computation at the Barcelona Supercomputing Center and coordinator of the Quantum Spain project.

Education

Doctor of Philosophy (PhD) in Physics   **Universitat de Barcelona**
Supervisor: Dr. José Ignacio Latorre   *2015 – 2019*
Title: Maximal Entanglement: Applications to Quantum Computation and Particle Physics.

Master in Astrophysics, Particle Physics and Cosmology   **Universitat de Barcelona**
Specialized in Particle Physics and Gravitation.   *2014 – 2015*
Thesis title: Non-unitary neutrino oscillations.

Bachelor in Physics   **Universitat de Barcelona**
Specialized in Fundamental Physics   *2009 – 2014*
Thesis title: Scaling of entanglement support for iTEBD algorithm.

Positions

Research

Senior Researcher   **Barcelona Supercomputing Center**
Quantic group (CASE department)   *2021 – Present*

Postdoctoral Fellow   **University of Toronto**
Alán Aspuru-Guzik group   *2019 – 2021*

Technical Researcher   **Barcelona Supercomputing Center**
Quantic group (CASE department)   *2017 – 2019*

Specialized Technician   **Universitat de Barcelona**
Project: "Entanglement, tensor networks and cold gases"   *2014*

Coordinator

EuroQCS-Spain project   **Barcelona Supercomputing Center**
Quantum computing technology responsible (budget: 12,5 M €)   *2022 – Present*

Quantum Spain project   **Barcelona Supercomputing Center**
Project Principal Investigator (budget: 22M €)   *2021 – Present*

Visitor

Center of Quantum Technologies   **National University of Singapore**
Prof. Kwek Leong Chuan group.   *May 2017*

Instituto de Física Teórica   **CSIC**
Dr. César Gómez's group.   *Feb 2017*

Grupo de investigación en Información y Computación Cuántica   **Universidad Politécnica de Madrid**
Dr. Vicente Martín group   *Sep 2016*

Rudolph Pierls Institute for Theoretical Physics   **University of Oxford**
Dr. Juan Rojo's group.   *Jan - May 2016*

Teaching

Teacher Assistant   **Universitat Autònoma de Barcelona**
Calculus I-II, Theoretical Mechanics, Physics I - II.   *2017 – 2019*

Teacher Assistant   **Universitat de Barcelona**
Modern Physics Laboratory, Computational Physics.   *2016 – 2017*

Funded projects

European

EuroQCS-Spain project — **EuroHPC - Joint Undertaking**
Budget: 12,5 M €, Role: Quantum computing technology responsible — *2022 – 2026*

National

Quantum Spain project — **Secretary of State of Digitalization and AI (SEDIA)**
Budget: 22M €, Role: principal investigator — *2021 – 2025*
https://quantumspain-project.es

Industry

Quantum Experience for Academic Research Program — **IBM**
Funding: Exclusive access to pulse-level control of IBM quantum devices, Role: co-PI. — *2021 – 2022*
Project: High-dimensional quantum experiments superconducting circuits.

Awards and Honors

PhD Excellent Cum Laude — **Universitat de Barcelona**
Jun 2019

Teach Me QISKit Award — **IBM**
https://www.ibm.com/blogs/research/2018/06/teach-qiskit-winner/ — *Jun 2018*
Best interactive self-paced tutorial that explains a specific focus topic in quantum computing
using QISKit and the IBM Q Experience.

Publications

Link to Google Scholar and OrcID.

19. Workflows Community Summit 2022: A Roadmap Revolution — **Preprint**
R. Ferreira da Silva, R. M. Badia, V. Bala, et. al. — *2023*
arXiv:2304.00019 [cs.DC].

18. Multidimensional Fourier series with quantum circuits — **Phys. Rev. A**
B. Casas, A. Cervera-Lierta — *2023*
Physical Review A 107, 062612 (2023).

17. Design of quantum optical experiments with Logic Artificial Intelligence — **Quantum**
A. Cervera-Lierta, M. Krenn, A. Aspuru-Guzik — *2022*
Quantum **6**, 836 (2022).

16. On scientific understanding with artificial intelligence — **Nat. Rev. Phys.**
M. Krenn, R. Pollice, S. Y. Guo, et. al. — *2022*
Nature Review Physics (2022).

15. Modern applications of machine learning in quantum sciences — **Preprint/Book**
A. Dawid, J. Arnold, B. Requena, et. al. — *2022*
arXiv:2204.04198 [quant-ph].

14. Toward Reliability in the NISQ Era: Robust Interval Guarantee for Quantum Measurements on Approximate States — **Phys. Rev. Research**
2022
M. Weber, A. Anand, A. Cervera-Lierta, J. S. Kottmann, T. H. Kyaw, et. al.
Physical Review Research **4**, 033217 (2022).

13. Programming Physical Quantum Systems with Pulse-Level Control — **Front. Phys.**
K. N. Smith, G. S. Ravi, T. Alexander, et. al. — *2022*
Frontiers in Physics, **672** (2022).

12. Learning Interpretable Representations of Entanglement in Quantum Optics Experiments using Deep Generative Models — **Nat. Mach. Intell.**
2021
D. Flam-Shepherd, T. Wu, X. Gu, A. Cervera-Lierta, M. Krenn, A. Aspuru-Guzik
Nature Machine Intelligence **4** (6), 544-554 (2022).

11. Experimental high-dimensional Greenberger–Horne–Zeilinger entanglement with superconducting transmon qutrits   **Phys. Rev. Appl.** *2022*
<u>A. Cervera-Lierta</u>, M. Krenn, A. Aspuru-Guzik, A. Galda
Phyical Review Applied **17**, 024062 (2022).

10. Noisy intermediate-scale quantum algorithms   **Rev. Mod. Phys.** *2022*
K. Bharti, <u>A. Cervera-Lierta</u>, T. H. Kyaw, T. Haug, et. al.
Review of Modern Physics **94**, 015004 (2022).

9. The Meta-Variational Quantum Eigensolver (Meta-VQE): Learning energy profiles of parameterized Hamiltonians for quantum simulation   **PRX Quantum** *2021*
<u>A. Cervera-Lierta</u>, J. S. Kottmann and A. Aspuru-Guzik
PRX Quantum **2**, 020329 (2021).

8. Tequila: A platform for rapid development of quantum algorithms   **Quantum Sci. Technol.** *2021*
J. S. Kottmann, S. Alperin-Lea, T. Tamayo-Mendoza, <u>A. Cervera-Lierta</u> et. al.
Quantum Science and Technology **6** 024009 (2021).

7. Data Re-uploading for a Universal Quantum Classifier   **Quantum** *2020*
A. Pérez-Salinas, <u>A. Cervera-Lierta</u>, E. Gil-Fuster, J. I. Latorre
Quantum **4**, 226 (2020).

6. Maximal Entanglement: Applications in Quantum Information and Particle Physics   **PhD Thesis** *2019*
<u>A. Cervera-Lierta</u>
arXiv:1906.12099 [quant-ph].

5. Quantum Circuits for Maximally Entangled States   **Phys. Rev. A** *2019*
<u>A. Cervera-Lierta</u>, J. I. Latorre, D. Goyeneche
Physical Review A **100**, 022342 (2019).

4. Exact Ising Simulation on a Quantum Computer   **Quantum** *2018*
<u>A. Cervera-Lierta</u>
Quantum **2**, 114 (2018).

3. Multipartite Entanglement in Spin Chains and the Hyperdeterminant   **J. Phys. A Math. Theor.** *2018*
<u>A. Cervera-Lierta</u>, A. Gasull, J. I. Latorre and G. Sierra.
Journal of Physics A: Mathematical and Theoretical **51**, 505301 (2018).

2. Maximal Entanglement in High Energy Physics   **SciPost Phys.** *2017*
<u>A. Cervera-Lierta</u>, J. I. Latorre, J. Rojo and L. Rottoli
SciPost Physics **3**, 036 (2017).

1. Operational Approach to Bell Inequalities: Application to qutrits   **Phys. Rev. A** *2016*
D. Alsina, <u>A. Cervera</u>, D. Goyeneche, J. I. Latorre and K. Zyczkowski
Physical Review A **94**, 032102 (2016).

Software development

Libraries..

Quantum computing open-source library "Tequila"   **Python** *2021*
Developer., https://github.com/tequilahub/

Codes and demos..

Logic AI algorithm "Klaus"   **Mathematica** *2022*
Creator and developer., https://github.com/AlbaCL/Klaus

Meta Variational Quantum Eigensolver   **Python** *2021*
Co-creator and developer., https://github.com/aspuru-guzik-group/Meta-VQE

Talks and seminars

* Virtual talks due to COVID-19 pandemic.

Keynote...

The quest for the quantum computer 10th **BSC Doctoral Symposium**
Barcelona, Spain   *May 9, 2023*

The Noisy Intermediate-Scale Quantum era — **CARLA 2022**
Porto Alegre, Brasil — *Sep 28-30, 2022*

Colloquium

Tecnologies quàntiques: present i futur — **ICCUB Colloquia**
Universitat de Barcelona — *Feb 16, 2022*

Invited

Variational Quantum Algorithms — **CSIC, Madrid**
QTYR 2023 — *Jul 04, 2023*

Quantum Spain in the NISQ era — **BSC-CNS**
QBN Meeting on Quantum Computing and Applications — *Jun 15, 2023*

High-dimensional quantum computation: opportunities and challenges — **ICFO**
Symposium on Open-Source Tools for Quantum Computing & Simulation — *Mar 31, 2023*

High-dimensional quantum computation — **QT4HPC**
CERN — *Nov 2, 2022*

Quantum algorithms in near term devices — **New Trends in Computational Chemistry**
IQTC, University of Barcelona (Spain). — *Sep 9, 2022*

Quantum Spain — **Quantum 2022**
Barcelona (Spain). — *Jun 22, 2022*

Quantum Spain: un impulso para el ecosistema de computación cuántica — **Jornada cuántica**
NASERTIC, Pamplona (Spain). — *May 4, 2022*

Quantum Spain: un impulso para el ecosistema de computación cuántica — **Jornada Eco. Cuántico**
SCAYLE, León (Spain). — *Mar 1, 2022*

Near term quantum computation: opportunities and challenges — **Quantum 2021**
Bilbao (Spain). — *Nov 24, 2021*

Noisy Intermediate-Scale Quantum era — **JURES 2021**
Virtual (*). — *Sep 17, 2021*

Noisy Intermediate-Scale Quantum algorithms — **CERN**
Perspectives on Quantum Sensing and Computation for Particle Physics. Virtual (*). — *Jul 15, 2021*

The Meta-Variational Quantum Eigensolver — **Machine Learning for Quantum X**
Virtual (*). — *Jul 6, 2021*

The Meta-Variational Quantum Eigensolver — **QWorld Quantum Science Days**
Virtual (*). — *Jun 1, 2021*

Chronicles of Entangland, the foundation of the SC town — **Qiskit Hackathon Europe**
Virtual (*). — *May 26, 2021*

Experimental high-dimensional GHZ entanglement with *superconducting transmon qutrits* — **Pulse-level Quantum Control Workshop**
Chicago. Virtual (*). — *May 18, 2021*

Maximal Entanglement in High Energy Physics — **APS April Meeting**
Topical Group on Hadronic Physics. Virtual (*). — *Apr 15, 2021*

Noisy Intermediate-Scale Quantum algorithms — **Universidad Iberoamericana**
Virtual (*). — *Apr 13, 2021*

Please, feed the quantum troll! — **Q-Hack 2021**
Virtual (*). — *Feb 19, 2021*

Testing and designing quantum algorithms for the NISQ era — **INT-20-3**
Quantum Computing and Simulation on Near-Term Devices. Virtual (*). — *Nov 21, 2020*

Maximal Entanglement in High Energy Physics, Quantum Entanglement *at Collider Energies* — **CFNS Stony Brook**
Sep 11, 2018

Stony Brook (United States).

Exact simulation of a Quantum Phase Transition　　　　**Quantum Phase Transitions**
on a quantum computer　　　　　　　　　　　　　　　*Apr 05, 2018*
Barcelona (Spain).

Emergence of Gauge Symmetry　　　　**Universidad Complutense de Madrid**
from a Maximal Entanglement Principle　　　　　　　　　　*Sep 21, 2016*
Madrid (Spain).

Contributed..

The Meta-Variational Quantum Eigensolver　　　　**APS March Meeting 2021**
Virtual (*).　　　　　　　　　　　　　　　　　　　　*Mar 18, 2021*

Data re-uploading for a universal quantum classifier　　　　**Q-Turn 2020**
Virtual (*).　　　　　　　　　　　　　　　　　　　　*Nov 24, 2020*

Data re-uploading for a universal quantum classifier　　　　**QTML 2020**
Quantum Techniques Machine Learning. Virtual (*).　　　　　*Nov 12, 2020*

Maximal Entanglement in Quantum Computation　　**BSC Severo Ochoa Doctoral Symposium**
Barcelona (Spain).　　　　　　　　　　　　　　　　　　*May 07, 2019*

Seminars...

A roadmap to quantum computing integration into HPC infrastructures　　**RISC2 Seminar Series**
　　　　　　　　　　　　　　　　　　　　　　　　　　　Mar 15, 2023

Noisy Intermediate Scale Quantum Computation　　　　**Universidad de Zaragoza**
Dept. Condensed Matter Physics.　　　　　　　　　　　　*Jun 3, 2022*

Noisy Intermediate Scale Quantum Computation　　　　**Universidad Nacional de Colombia**
Virtual.　　　　　　　　　　　　　　　　　　　　　　*Apr 21, 2022*

Design of quantum optical experiments with logic artificial intelligence　　**MPQ**
Quantum Optics group seminar.　　　　　　　　　　　　　*Oct 29, 2021*

High-dimensional quantum computing experiments　　　　**CQT**
*Prof. Manas Mukherjee group meeting (Singapore, Virtual *)*　　*Aug 03, 2021*

Maximal Entanglement in a Quantum Computer　　　　**Fermilab**
Fermilab theory seminars. Virtual (*)　　　　　　　　　　*Jun 15, 2021*

The Meta-Variational Quantum Eigensolver　　　　**Oxford**
Oxford Quantum Information Society. Virtual (*)　　　　　　*May 20, 2021*

The Meta-Variational Quantum Eigensolver　　**Scientific Machine Learning Webinars**
Virtual.　　　　　　　　　　　　　　　　　　　　　*May 6, 2021*

Noisy Intermediate-Scale Quantum algorithms　　　　**Alexandria University**
Hypatia Series. Virtual(*).　　　　　　　　　　　　　　*Apr 8, 2021*

Maximal Entanglement in High Energy Physics　　　　**University of Maryland**
Nuclear Theory series. Virtual(*).　　　　　　　　　　　　*Apr 2, 2021*

Noisy Intermediate-Scale Quantum algorithms　　　　**Académie Royale de Belgique**
Belgian Quantum Physics Initiative. Virtual(*).　　　　　　*Mar 4, 2021*

Designing VQA with Tequila　　　　**Quantum Conversations by the Bay**
Virtual.　　　　　　　　　　　　　　　　　　　　　*Nov 28, 2020*

Maximal Entanglement. Applications to Quantum Computation and Particle Physics　　**UofT**
Matterlab group meeting. Toronto (Canada).　　　　　　　　*Mar 1, 2029*

Committees

European

Quantum Computing working group   **European Quantum Flagship and EuroHPC**
Quantum Coordination Board   *2023 - Present*

Quantum Standarization working group   **European Quantum Flagship and EuroHPC**
Quantum Coordination Board   *2023 - Present*

Quantum - HPC Working group   **European Quantum Flagship**
    2022 - Present

Scientific Advisory Board

Finish Quantum Initiative   **CSC, Aalto University, VTT**
    2023 - Present

Consell de les Tecnologies Quàntiques de Catalunya   **Generalitat de Catalunya**
Board member   *2022 − Present*

Scientific Committee

Quantum Techniques in Machine Learning 2023, CERN.

ICE8 2023, Santiago de Compostela.

Quantum Matter 2023, Madrid.

Quantum Matter 2022, Barcelona.

Quantum Techniques in Machine Learning 2020, Virtual.

PhD Thesis committees

Fault tolerant quantum algorithms   **Universidad Complutense de Madrid**
Pablo Moreno-Casares   *Jan 17, 2023*
Supervisor: Miguel Ángel Martín-Delgado

Quantum information in lattices   **Universitat Autònoma de Barcelona**
Bruna Gabrielly De Moraes Araújo   *Jul 22, 2022*
Supervisors: Antonio Acín dal Maschio, Daniel Cavalcanti Santos and Stephan Jean Louis Roche

Conference and seminars organization

Quantum Matter International Conference   **Madrid**
Industrial forum co-organizer.   *May 22-25, 2023*

Quantum Research Seminars Toronto.   **Virtual**
Co-organizer and chair. Youtube: Quantum Research Seminars Toronto.   *2020 − 2021*

Lectures and courses

A gentle introduction to quantum computing   **ACM Europe, Barcelona**
ACM Europe Summer School on HPC   *July 7, 2023*

Quantum Algorithms I and II   **Centro de Ciencias de Benasque Pedro Pascual**
Spring School on Superconducting Qubit Technology   *Apr 11-21, 2023*

The Noisy Intermediate Scale Quantum Computation   **Universidad Complutense de Madrid**
Escenarios Científicos   *Mar 14, 2023*

The Noisy Intermediate Scale Quantum Computation   **Universitat Autònoma de Barcelona**
Master Modelling for Science and Engineering Research and Innovation   *Oct 4, 2022*

Variational Quantum Computing   **Universidad Internacional Menéndez-Pelayo**
IV Summer School on Quantum Computing   *Sep 5-9, 2022*

Near-term quantum computing   **Universidad Castilla La-Mancha**
Clase introducción al curso en Quantum Computing software.   *Jun 20, 2022*

NISQ computing	**Institut de Ciències Fotòniques (ICFO)**
Theory lectures	*Mar 15-24, 2022*
Variational Quantum Computing	**Universidad Internacional Menéndez-Pelayo**
III Summer School on Quantum and Q-Inspired Computing	*Sep 7, 2021*
Noisy Intermediate-Scale Quantum Algorithms	**Warsaw, Poland**
Summer School "Machine Learning in Quantum Physics and Chemistry"	*Aug 25, 2021*
Quantum Computing in the NISQ era	**UCL**
Talk in Quantum Technologies Winter School	*Dec 10, 2020*
Bojos per la Supercomputació	**BSC**
Introductory course in quantum computation for high-school students	*26 Apr – 04 May, 2019*
The Quantum Revolution	**ESADE Business School**
Seminar at Master in Finance	*Jun 07, 2018*

Panels and round tables

As a moderator

Round table Industrial forum	**Quantum Matter 2023**
Participants: Marta Estarellas, Richard Kienhoefer, Pascale Senellart,	*May 24, 2023*
Fernando de la Iglesia and Bilal Kalyoncu	
Round table Industrial forum	**Quantum Matter 2022**
Participants: Marc Almendros, Niels Bultink, Gianni del Bimbo, Daniel Szombati,	*Jun 22, 2022*
Yonatan Cohen, Josep M. Martorell, Heike Riel and Carmen Palacios.	

As a participant

Quantum computing + Communications: meet at the halfway.	**PuzzleX**
Pannel with Hugues de Riedmatten.	*Oct 7, 2022*
Modarated by Carmen G. Almudéver.	
Catalan Nanotech Ecosystem Session	**ACM Nanocomm**
Modarated by Stephan Roche.	*Oct 7, 2022*
Women in ACM/IEEE WICE Luncheon	**ACM Nanocomm**
Modarated by Núria Castell.	*Oct 6, 2022*
Quantum Computing: Changing the Course of Industry	**Barcelona New Economy Week**
Round table with Carlos Kuchkovsky, Marta Pita, and Enrique Sanchez.	*Oct 3, 2022*
Modarated by Jaime Gómez.	
Quantum Technologies	**Barcelona Deep Tech Summit**
Panel with Silvia Carrasco, Carlos Abellán and Enrique Mora.	*Sep 22, 2022*
Moderated by Rubén Criado	
The Impact of Advanced Computing in AI	**Science|Business**
Round table with Jean Pierre Panziera and Nicolas Moes.	*Sep 19 2022*
Moderated by David Pringle	
The Future of HPC	**ACM Europe Summer School**
Panel with Paul Messina, Per Stenström, Uri Weiser and Min Li.	*Sep 2 2022*
Moderated by Josephine Wood	
Young People Program Career Panel	**DATE 2022**
	Mar 21 2022
Quantum Software Ecosystem	**IEEE Services**
Pannel discussion with industry and academic members	*Sep 9 2021*

Students

Berta Casas Font   **University of Barcelona**
                                                        Sep 2022 – Present

Master...

Juan Francisco Martín Bravo   **University of Barcelona**
Quantum benchmarking: entanglement measures in a quantum computer   *Feb 2023 – Jul 2023*
Master Quantum Science and Technology.

Berta Casas Font   **University of Barcelona**
Quantum function fitting and classification beyond the single-qubit model   *Feb 2022 – Jul 2022*
Master Quantum Science and Technology.

Undergraduate (degree)...

Marc Farreras   **University of Barcelona**
Exact XY model simulation with a quantum computer   *Feb 2023 – Jul 2023*
Physics Degree

Alex Alemany   **Universitat Politècnica de Catalunya**
The HHL algorithm   *Feb 2023 – Jul 2023*
Computer Science Degree. Co-supervised with Jordi Delgado.

Júlia Barberà Rodríguez   **University of Barcelona**
Application of Grover's quantum algorithm for string matching   *Feb 2022 – Jul 2022*
Physics Degree

Elies M. Gil Fuster   **University of Barcelona**
Variational Quantum Classifier   *Feb 2019 – Jul 2019*
Physics Degree. Co-supervised with J. I. Latorre.

Outreach

Mentorship programs...

Quantum Open Source Foundation mentorship program   **QOSF**
Mentor   *Sep 2020 – Jan 2021*

Girls E-Mentorship program   **GEM**
Mentor   *Sep 2020 – June 2021*

Panels and round tables...

Jornades REACT   **Barcelona**
Round table with Teresa Riesgo Alcaide, Laia Bonet, Xavier Azemar Mallard Mateo Valero Cortes. *Mar 29, 2023*
Moderated by Elena Arrieta Palacio.

Premios Nacionales de Investigación   **Barcelona**
Presenter and moderator of the act.   *May 5, 2022*
Chaired by HRH King and Queen of Spain, Spanish Minister of Science and Universities and Barcelona Mayor.

Mujeres y Digitalización: Por una España Igualitaria   **MINECO**
Round table with Marta Villegas, Lucía Flecha and Susana Fernández.   *Mar 8, 2022*
Moderated by the Secretary of State of Digitalization and AI Carme Artigas.

Dia Internacional Dona i Nena a la ciència   **Ajuntament de Barcelona**
Event with Barcelona city Mayor and government.   *Feb 11, 2022*

Women in Physics path   **Universitat de Barcelona**
Organized by the Equality commission from the Physics Faculty   *Mar 3 2021*

Keynote speech...

Margarita Salas Honoris Causa PhD act   **Universidad de Extremadura**
Talk "De las computadoras a los ordenadores"   *Feb 2 2019*

Bojos de la Ciència   **Fundació Catalunya-La Pedrera**
Speech about Bojos per la Supercomputació program   *Dec 10 2018*

Bojos de la Ciència   **Fundació Catalunya-La Pedrera**
Speech at Master grants act   *Oct 16 2018*

Articles

Computación Cuántica en la Nube   **RSEF**
Revista Española de Física   *Mar 2020*

How I became a quantum computation scientist
Medium article for @qiskit   *Jul 2018*

Contributing Writer   **Quantum World Association**
Medium articles, @quantum_wa.   *2018 – 2019*

Talks and courses

Computació quàntica: passat, present i futur d'una (r)evolució tecnològica   **Universitat de Girona**
Cicle Últimes fronteres: la ciència del segle XXI   *May 4, 2023*

Computación cuántica: presente y futuro de una revolución tecn.   **Uni. Las Palmas de Gran Canaria**
Jornada tecnología.   *Apr 18, 2023*

Computació Quàntica i els reptes de Talent TIC en els propers anys   **Lul·liana**
Col·legi d'Informàtica de Catalunya   *Nov 24, 2022*

Tecnologies quàntiques: present i futur d'una (r)evolució tecnológica   **Jornades Feministes**
Casal de Joves Sant Just Desvern   *Nov 20, 2022*

Present i futur de les tecnologies quàntiques   **A-12 Estudis i Recerca Universitaria**
Two-day introductory course for senior citizens.   *Oct 20-26, 2022*

Computació quàntica: present i futur d'una revolució tecnològica   **Open Day TIC**
Universitat Politècnica de Catalunya.   *May 12, 2022*

Tecnologías Cuánticas: presente y futuro   **Pint of Science**
Barcelona.   *May 11, 2022*

Quantum Spain: un impulso para el ecosistema de computación cuántica   **CTA**
Seminar for la Corporación Tecnológica de Andalucía. Virtual.   *Apr 26, 2022*

Supercomputación y Quantum Spain   **PTE Disruptive**
Seminar for la Plataforma Tecnologíca Española y de Tecnologías Disruptivas. Virtual.   *Mar 22, 2022*

Tecnologías cuánticas: presente y futuro   **Col·legi de Biòlegs de Catalunya**
Virtual.   *Mar 16, 2022*

Computación Cuántica   **Live Talks Cosmocaixa**
Cosmocaixa (Barcelona)   *Feb 16, 2022*

Quantum Spain   **Meet-up**
Quantum Barcelona and Madrid meet-up.   *Dec 13, 2021/Feb 9, 2022*

Quantum Calling   **K-W Quantum Enthusiasts Meetup**
Waterloo Quantum Meet-up   *Jun 18, 2020*

Quantica   **CCCB**
Quantum computing talk and participation in the exhibition (video)   *Apr 10-Sep 26, 2019*

De las computadoras a los ordenadores   **Margarita Salas Honoris Causa PhD event**
Badajoz, Spain   *Feb 26, 2019*

Technology to manipulate Nature   **El País con tu Futuro**
Madrid, Spain   *Dec 18, 2018*

Quantum Computation: a new paradigm   **TEDx talk**
Sant Feliu de Llobregat, Barcelona, Spain   *Sep 15, 2018*

Other skills

Programming Languages...

Classical: Fortran, Python, Mathematica.

Quantum: QisKit (IBM), Qiskit Pulse (IBM), pyquil (Rigetti Computing), Cirq (Google), Tequila (MatterLab), Qibo.

Languages..

English (fluent), Spanish (mothertongue), Catalan (mothertongue).

Media..

All videos, links and audio can be found in my webpage.

Television: Interviews in Spanish and Catalan television (Orbita Laika, Els Matins TV3, News, ...)

Newspapers: Several interviews in Spanish and Catalan newspapers (La Contra de La Vanguardia, El Periódico, El Mundo, ...)

Radio and podcast: Several interviews in Spanish and Catalan radio programs and English podcasts (RAC1, Catalunya Radio, RNE, ...)

Twitter: Creator and manager of research group's account, @QUANTIC_BSC (until Jul 2019) and @QRSToronto (until Sep 2021).