Álvaro Yángüez Bachiller

📍 **Work** : 4 place Jussieu, 75252 , Paris, France

✉ **Email:** alvaro.yanguez@lip6.fr

Date of birth: 16/06/1999 **Nationality:** Spanish

EDUCATION AND TRAINING

[01/10/2023 – Current]

PhD student

Sorbonne Université

City: Paris | **Country:** France |

Doctoral candidate inside the Marie Curie Doctoral Network "Quantum Safe Internet".

The objective of my project is to develope efficient quantum-safe functionalities by embedding quantum subroutines in post-quantum cryptogaphic schemes such as Multiparty Computing.

[12/10/2021 – 10/09/2023]

M.Sc. Quantum Science and Technology

TUM and LMU

City: Munich | **Country:** Germany | | **Thesis:** Quantum tomography enabled by homogeneous Markovian evolutions (supervised by Prof. Dr. Michael Wolf)

I took the following courses:

-*Quantum Information* (Prof. Dr. Igancio Cirac)

-*Quantum Optics* (Prof. Dr. Immanuel Bloch)

-*Quantum Statistical Inference* (Prof. Dr. Michael Wolf)

-*Tensor Networks* (Prof. Dr. Jan von Delft)

-*Quantum Communication* (Prof. Dr. Harald Weinfuerter)

-*Quantum Hardware* (Prof. Dr. Monika Aidelsburger)

[09/09/2015 – 23/06/2017]

Spanish Baccalaureate (in Science)

IES Ramiro de Maeztu

City: Madrid | **Country:** Spain |

[17/09/2017 – 08/02/2022]

Degree in Physics

Universidad Complutense de Madrid

City: Madrid | **Country:** Spain |

[09/09/2015 – 20/05/2017]

International Baccalaureate

IES Ramiro de Maeztu

City: Madrid | **Country:** Spain |

WORK EXPERIENCE

[01/04/2022 – 01/09/2023]

Research Collaborator

Holger Bocher-TUM

City: Munich | **Country:** Germany

Theoretical reseach in the area of Quantum Communication, specifically in the problem of Remote State Preparation.

CONFERENCES AND SEMINARS

[04/11/2024 – 08/11/2024] **7th International Conference for Young Quantum Information Scientists (YQIS24)**
Paris

Contributed with the poster:

- E. Diamanti, A. B. Grilo, A. Innocenzi, P. Lefebvre, V. Yacoub, Á. Yánguez "A Practical Protocol for Quantum Oblivious Transfer from One-Way Functions"

[02/09/2024 – 06/09/2024] **14th international conference on quantum cryptography (QCRYPT2024)** Vigo

Contributed with two posters:

- E. Diamanti, A. B. Grilo, A. Innocenzi, P. Lefebvre, V. Yacoub, Á. Yánguez "A Practical Protocol for Quantum Oblivious Transfer from One-Way Functions"

- A. Innocenzi, V. Yacoub, Á. Yánguez, P. Lefebvre, A. B. Grilo,E. Diamanti, "Experimental implementation of Simulation secure Quantum Oblivious Transfer"

INVITED SEMINARS

[05/01/2025] **"A Practical Protocol for Quantum Oblivious Transfer from One-Way Functions" TUM, Munich**

[29/01/2025] **"On the role of pseudo-entanglement in cryptography" Jiq epiq 2025, Paris**

[18/06/2024] **"A Practical Protocol for Quantum Oblivious Transfer from One-Way Functions" QURIOSITY, Telecom Paris**

[17/05/2024] **"A Practical Protocol for Quantum Oblivious Transfer from One-Way Functions" QuSoft Seminar, Amsterdam**

SCHOOLS

[11/03/2024 – 15/03/2024] **Srping School on Post-Quantum Cryptography, O Porto.**

Organised by Kathrin Hövelmanns, Andreas Hülsing and Alexander May.

Link: https://pqc-spring-school.nl/

[29/01/2024 – 02/02/2024] **Winter School on Quantum Cryptography, Padova.**

Selected Speakers: Giuseppe Vallone, Paolo Villoresi, Mohsen Razavi, and Peter Brown.

Link: https://quantum-safeinternet.com/conferencias/school-on-quantum-cryptograghy-sqc-padova/

[01/09/2020 – 10/09/2020] **Summer School on Quantum Computing: Software for Near Term Quantum Devices**

organised by Diego Porras (CSIC) in the UIMP in 2020.

[06/08/2016 – 17/08/2016] **Scientific campus about energy organised by FECYT and the Spanish Ministry of Science and Innovation : « Energía: pasado, presente y futuro ».**

Universidad Rovira i Virgili

PUBLICATIONS

[1] E. Diamanti, A. B. Grilo, A. Innocenzi, P. Lefebvre, V. Yacoub, Á. Yángüez "A Practical Protocol for Quantum Oblivious Transfer from One-Way Functions" arXiv preprint arXiv:2406.09110, 2024

VISITS

[06/05/2024 – 27/05/2024] **Christian Schaffner and Stacey Jefferey - QuSoft, CWI, Amsterdam**

HONOURS AND AWARDS

[10/09/2021] **IBM Quantum Excellence certificate on 2021 Qiskit Global Summer School on Quantum Machine Learning**
Awarding institution: IBM

[18/05/2017] **Second prize in the National Prize of Initiation on Technological Investigation Awarding institution:** UAITIE

[14/05/2019] **Best director award in the XXIII Certamen de Teatro Universitario Awarding institution:** Universidad Complutense de Madrid

LANGUAGE SKILLS

Mother tongue(s): Spanish

Other language(s):

English
LISTENING C1 **READING** C1 **WRITING** C1
SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

German
LISTENING A2 **READING** A2 **WRITING** A2
SPOKEN PRODUCTION A2 **SPOKEN INTERACTION** A2

French
LISTENING A2 **READING** A2 **WRITING** A2
SPOKEN PRODUCTION A2 **SPOKEN INTERACTION** A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HOBBIES AND INTERESTS

Theatre director

Besides my academical experience, I have

been the director of the El Barracón theatre

company for four years.