

FRANCESCO HOCH

EDUCATION

SEPTEMBER 2009 – AUGUST 2014

ELECTROTECHNICAL EXPERT DIPLOMA

Istituto IIS Pascal, Manerbio (BS)

Final Grade: 100/100

SEPTEMBER 2014 – SEPTEMBER 2017

BACHELOR'S DEGREE IN PHYSICS

Università di Pisa (Italy), Physics Department

Supervisor: Alberto Di Lieto

Title: Revelation of optical tunnel effect with microwave

Final Grade: 110/110 with honours

SEPTEMBER 2017 - OCTOBER 2019

MASTER DEGREE IN MATTER PHYSICS

Università di Pisa (Italy), Physics Department

Supervisor: Fabio Sciarrino (Università la Sapienza, Roma (Italy))

Title: Characterization of photonics technology for quantum information

Final Grade: 110/110

SEPTEMBER 2014 – FEBRUARY 2021

DIPLOMA AT THE SCUOLA NORMALE SUPERIORE DI PISA

Scuola Normale Superiore, Pisa (Italy)

Supervisor: Vittorio Giovannetti

Title: Experimental proposal of a quantum-to-quantum Bernoulli factory

Final Grade: 100/100 with honours

NOVEMBER 2019 - ONGOING

PHD PROGRAM IN PHYSICS

Università la Sapienza, Roma (Italy)

Supervisor: Fabio Sciarrino

Title: Integrated optics for quantum information and quantum computation

SCIENTIFIC PUBLICATIONS

Witnesses of coherence and dimension from multiphoton indistinguishability tests

Taira Giordani, Chiara Esposito, Francesco Hoch, Gonzalo Carvacho, Daniel J. Brod, Ernesto F. Galvão, Nicolò Spagnolo, and Fabio Sciarrino, Phys. Rev. Research 3, 023031 – Published 9 April 2021

Reconfigurable continuously-coupled 3D photonic circuit for Boson Sampling experiments

Francesco Hoch, Simone Piacentini, Taira Giordani, Zhen-Nan Tian, Mariagrazia Iuliano, Chiara Esposito, Anita Camillini, Gonzalo Carvacho, Francesco Ceccarelli, Nicolò Spagnolo, Andrea Crespi, Fabio Sciarrino, Roberto Osellame, npj Quantum Information volume 8, Article number: 55 (2022)

Characterization of multimode linear optical networks

Francesco Hoch, Taira Giordani, Nicolò Spagnolo, Andrea Crespi, Roberto Osellame, Fabio Sciarrino. Adv. Photon. Nexus 2(1), 016007 (2023)

COMPUTER SKILLS

OPERATING SYSTEMS

Windows, Linux

PROGRAMMING LANGUAGES

C/C++, Python

LIBRARIES

Numerical Libraries (Numpy, Scipy, etc); Machine Learning Frameworks (Tensorflow, Keras)

GRAPHIC SOFTWARE

Inkscape

OTHERS

Latex, Matlab, LabView, Microsoft Office Package, OpenOffice package

LANGUAGES

MOTHER TONGUE LANGUAGE

Italian

OTHER LANGUAGE

English

CONFERENCE AND PRESENTATION

APS March Meeting 2021 15-19 March 2021 **Poster contributions:** Witnesses of coherence and dimension from multiphoton indistinguishability tests.

Cargese School of Quantum information and Quantum technology 21-25 June 2021 **Poster contributions:** Witnesses of coherence and dimension from multiphoton indistinguishability tests.