



Emanuele Dri

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📅 Date of birth: 19/05/1997 🇮🇹 Nationality: Italian

WORK EXPERIENCE

[2024]

Adjunct Professor - Quantum Communication and Computing

Politecnico di Torino

Specialising Master's Programmes and Lifelong Learning School (SCMAST)

[2022 – 2024]

Adjunct Professor - Computer Sciences

Politecnico di Torino

Department of Control and Computer Engineering

• 2023 students' satisfaction: **tasso soddisfazione CPD: 95.5 %** (2023)

[01/02/2024 – 30/04/2024]

Erasmus+ Traineeship

Unité de Mathématiques Appliquées (UMA), ENSTA ParisTech

EDUCATION AND TRAINING

[2021 – 2024]

Ph.D. in Computer And Control Engineering

Politecnico di Torino

[2023]

IBM Certified Associate Developer - Quantum Computation using Qiskit v0.2X

IBM

Qiskit Global Summer School

IBM

Link: https://www.credly.com/badges/dc1001ce-f55b-413d-835b-07b785efb9d0/public_url

Completed both the 2022 and 2023 editions with the Quantum Excellence certificate

[2022]

High Performance Computing and Quantum Computing – Fifth Edition, attendance

CINECA

City: Casalecchio

Country: Italy

[2020 – 2021]

Master's Degree in Data Science And Engineering

Politecnico di Torino

[2016 – 2020]

Bachelor's Degree in Physical Engineering

Politecnico di Torino

PROJECTS

[2021 – 2024] **Eagle Project**

Collaboration with Intesa Sanpaolo and IBM consulting Italia, aiming at novel solutions for approaching quantitative finance problems using quantum computers. Among the results, several of the publications listed below.

[2023 – Current] **QUBIP Project**

QUBIP project leads the integration of Post-Quantum algorithms into protocols, networks and systems we use today. Co-funded by the European Union under the Horizon Europe framework programme under grant agreement No. 101119746

[2023 – Current] **EQUO Project**

European project aiming at leveraging Quantum Communications for cybersecurity and resilience in Europe. Partially funded by the Digital Europe Programme (DIGITAL) under grant agreement No. 101091561

PUBLICATIONS

[2024]

[Understanding Logical-Shift Error Propagation in Quantum Neural Networks](#)

Reference: Vallero, M.; Dri, E.; Giusto, E.; Montrucchio, B.; Rech, P.
IEEE Transactions on Quantum Engineering

[2024] [Quantum Computing in Finance: The Intesa Sanpaolo Experience](#)

Reference: Sotelo, R.; Corbelleto, D.; Dri, E.; Giusto, E.; Montrucchio, B.
IEEE Engineering Management Review

[2023]

[Towards An End-To-End Approach For Quantum Principal Component Analysis](#)

Reference: Dri, E.; Aita, A.; Fioravanti, T.; Franco, G.; Giusto, E.; Ranieri, G.; Corbelleto, D.; Montrucchio, B.
2023 IEEE International Conference on Quantum Computing and Engineering (QCE)

[2023]

[Understanding the Effect of Transpilation in the Reliability of Quantum Circuits](#)

Reference: Dilillo, N.; Giusto, E.; Dri, E.; Baheri, B.; Guan, Q.; Montrucchio, B.; Rech, P.
2023 IEEE International Conference on Quantum Computing and Engineering (QCE)

[2023] [Quantum Computing Reliability: Problems, Tools, and Potential Solutions](#)

Reference: Giusto, E.; Dri, E.; Montrucchio, B.; Baheri, B.; Guan, Q.; Tiwari, D.; Rech, P.
2023 53rd Annual IEEE/IFIP International Conference on Dependable Systems and Networks - Supplemental Volume (DSN-S)

[2023] [A More General Quantum Credit Risk Analysis Framework](#)

Reference: Dri E.; Aita, A.; Giusto, E.; Ricossa, D.; Corbelleto, D.; Montrucchio, B.; Ugocioni, R.
Entropy 25, no. 4: 593. Special Issue: Advances in Quantum Computing

[2022] [Towards practical Quantum Credit Risk Analysis](#)

Reference: Dri E.; Giusto E.; Aita A.; Montrucchio, B.

2022 National Physical Laboratory Joint Symposium on Quantum Technologies

[2022]

[Qufi: a quantum fault injector to measure the reliability of qubits and quantum circuits](#)

Reference: Oliveira, D.; Giusto, E.; Dri, E.; Casciola, N.; Baheri, B.; Guan, Q.; Montrucchio, B.; Rech, P.;

2022 52nd Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)

[2022]

[Understanding the Impact of Cutting in Quantum Circuits Reliability to Transient Faults](#)

Reference: Casciola, N.; Giusto, E.; Dri, E.; Oliveira, D.; Rech, P.; Montrucchio, B.

2022 IEEE 28th International Symposium on On-Line Testing and Robust System Design, IOLTS

REVIEWER FOR

Emanuele Dri has been reviewer for:

- Quantum Information & Computation, Rinton Press
- SN Computer Science, Springer Link
- 41st IEEE International Conference on Consumer Electronics (ICCE 2023)

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C2 READING C2 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

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