ROBERTO DI CANDIA
Curriculum Vitae

Part I – General Information

Full Name	Roberto Di Candia
Current Affiliation	Aalto University, Espoo (Finland)
Spoken Languages	Italian, English, Spanish

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
Ph.D.	2015	UPV/EHU (Bilbao, Spain)	Quantum Technology and Science
Master degree	2011	Università di Pisa	Scienze Fisiche, indirizzo teorico
Bachelor degree	2008	Università di Pisa	Fisica

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
08.2022	---	Aalto University (Finland)	Academy of Finland Research Fellow
03.2022	07.2022	Chalmers University (Sweden)	Researcher
03.2020	02.2022	Aalto University (Finland)	Marie Curie Individual Fellow
07.2019	02.2020	Aalto University (Finland)	Postdoctoral Researcher
05.2017	04.2019	Freie Universität Berlin (Germany)	Humboldt Postdoctoral Fellow
05.2016	04.2017	Freie Universität Berlin (Germany)	Postdoctoral Fellow
09.2014	08.2015	UPV/EHU (Spain)	Ph.D. Researcher
08.2011	08.2014	UPV/EHU (Spain)	Marie Curie ESR Fellow

IIIB – Other Appointments (Visiting and secondments)

Start	End	Institution	Position
01.2023	12.2024	Università di Pavia	Visiting Researcher
09.2021	11.2021	Walther Meißner Institute (Germany)	Humboldt Fellow (Renewal Stay)
05.2021	07.2021	IFN-CNR (Rome)	MSCA secondment
10.2015	12.2015	Walther Meißner Institute (Germany)	Visiting Ph.D. Researcher

Part IV– Participation/Coordination of National and International Research groups

Coordination of a research group:

Since August 2022, I have been managing a 5-years personal grant of approximately €850k from the Academy of Finland (see Funding Information), which includes the recruitment of a Ph.D. student.

Participation to the activity of the following international research groups:

- *QUiT Research group*, Università di Pavia, 2023-2024, Visiting Researcher, Host: Prof. Lorenzo Maccone
- *Göran Johansson group*, Chalmers University (Sweden), Researcher, 03.2022-07.2022
- *Riku Jäntti group*, Aalto University (Finland), Marie-Curie Fellow, 07.2019-02.2022
- *Jens Eisert group*, Freie Universität Berlin (Germany), Postdoctoral Researcher, 05.2016-04.2019
- *Enrique Solano group*, UPV/EHU (Spain), Marie Curie Ph.D. Researcher 08.2011-09.2015

Part V - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
2025	Critical quantum sensing for microwave IoT [**PI**, Selected for funding, offer declined]	Young Researchers 2024 (MUR)	~€300k
2025	Quantum communication and sensing with low-powered devices in the microwave regime [**PI**]	Research costs of Academy of Finland Research Fellowship	~€160k
2022	Quantum communication and sensing with low-powered devices in the microwave regime [**PI**]	Research costs of Academy of Finland Research Fellowship	~€240k
2022	Quantum communication and sensing with low-powered devices in the microwave regime [**PI**]	Academy of Finland Research Fellowship	~€450k
2021	Research visit at Walther Meißner Institute [**I**]	Humboldt Renewal Stay	~€13k
2020	Low-powered microwave quantum-enhanced communication [**PI**]	Marie Curie Individual Fellowship	~€190k
2017	Robust Analogue Quantum Simulators [**I**]	Humboldt Postdoctoral Fellowship	~€80K

Part VI – Teaching and Supervision experience

Courses

Year	Institution	Lecture/Course
2022	Aalto University	Lecture: *Quantum Teleportation and Superdense Coding*, in *Introduction to Quantum Technology*, 1st year Bachelor
2017/2018	Freie Universität Berlin (Germany)	*Advanced Quantum Mechanics* (Tutor)
2017	Freie Universität Berlin (Germany)	Lecture: *Scattering Theory*, in *Advanced Quantum Mechanics*, Master
2016/2017	Freie Universität Berlin (Germany)	*Advanced Quantum Mechanics* (Tutor)

Supervised Students and Postdocs

- *Dr. Wojciech Gorecki,* University of Pavia, Postdoc (2023-2024), supervised in the context of Publications 1,6,40.
- *Uesli Alushi*, Aalto University, Espoo (Finland), Ph.D. student (2022-ongoing), supervisor of doctoral studies [see Publications 5,6,8,38,39,41].
- *Maximilian Reichert*, UPV/EHU, Bilbao (Spain), Ph.D. student (2023), supervised in the context of Publication 9
- *Robert Jonsson*, Chalmers University, Götebörg (Sweden), Ph.D. student (2021) supervised in the context of Publication 12.
- *Malik Saneea*, Aalto University, Espoo (Finland), M.Sc. student (2021), co-supervision with Prof. R. Jäntti [see Publication 42].
- *Philip Zienkiewicz*, Freie Universität Berlin (Germany), B.Sc. student (2018), co-supervision with Prof. J. Eisert.

Note: Publication numbers refer to the list provided in the Publications list (part IX)

Part VII - Society memberships, Awards and Honors

Year	Title
2025	Senior ordinary member of Società Italiana di Scienze e Tecnologie Quantistiche (SISTEQ),
2024	Member of the Editorial Board of Communications Physics (Springer Nature), 3 years appointment
2022	Academy of Finland Fellow, 5 years appointment
2021	Abilitazione Scientifica Nazionale, II Fascia, Fisica Teorica della Materia, Italy
2020	Marie Curie Fellow, 2 years appointment
2017	Humboldt Fellow*, lifetime membership award

*Humboldt Fellow have access to dedicated funding schemes through all their research career.

Part VIII – Research Activities

Microwave quantum communication

I have been a key contributor to the development of continuous-variable (CV) quantum protocols based on superconducting microwave circuits. I introduced **interferometric techniques** for the **quantum tomography** of CV microwave signals [26], and designed a **quantum teleportation protocol** specifically tailored to this platform [22]. These methods have enabled several **milestone experiments** at the **Walther Meißner Institute** (Garching, Germany), including: (i) the first observation of **path-entanglement** with microwave signals [30], (ii) the characterization of the **squeezing properties** of **Josephson parametric amplifiers** [27], (iii) the first implementation of a **controlled displacement operation** [20], (iv) the measurement of **two-time correlation functions** [15], and (v) the **first proof-of-principle demonstration of microwave quantum teleportation** [13]. More recently, I have carried out an in-depth study of **analog quantum teleportation protocols** [41], which are particularly well-suited for implementation in superconducting microwave platforms. I have also explored how **two-photon interactions** can enhance **waveguide QED**, showing how to overcome known no-go theorems and designing a **deterministic controlled-phase gate** [8].

Quantum metrology

I proposed quantum sensing protocols based on a single **Kerr resonator** operating near criticality for high-precision **frequency estimation**, with applications to **quantum magnetometry** [10] and **qubit readout** [43]. I analyzed the **ultimate precision limits** of this approach within a general theoretical framework [6], investigated its **robustness to noise**, and extended the protocol to networks of multiple resonators [5]. These ideas led to the **first experimental demonstration** of **critical quantum sensing with superconducting devices**, where the scaling of sensitivity with quantum resources can be directly observed [2], as well as to the **first observation of a driven-dissipative second-order phase transition** in such systems [4]. I also contributed to the rigorous generalization of these methods to arbitrary bosonic parameters [1]. Furthermore, I contributed to the development of a protocol for **axion dark matter detection** based on non-degenerate parametric resonators, by analyzing a realistic model of the axion field [3]. Finally, I contributed to identifying a **connection between quantum metrology and quantum optics** by using fundamental bounds on parameter estimation to derive limits on the characteristic decay time of the second-order coherence function $g^{(2)}$ [40].

Remote quantum sensing and communication

I identified the **ultimate precision limits of quantum illumination** in the presence of generic background noise [12,14,17,34]. I proposed **novel, experimentally feasible, optimal receivers** for quantum illumination and investigated the role of **sequential strategies** [9,16]. I also developed **quantum-enhanced protocols** for **range and velocity estimation** [11]. Furthermore, I contributed to the development of the concept of **"quantum backscatter communication"** [35,36] and analyzed aspects of its unconditional security in terms of **covertness** [7,14], supporting the possibility of **low-power, secure communication** and **enhanced privacy** in future **quantum networks** [39].

Quantum simulations

I introduced the concept of **"embedding quantum simulator"** [37], a technique that enables the simulation of **non-trivial quantities** in a quantum simulator. I have developed methods for computing **entanglement monotones** [24,28], **multi-time correlation functions** [25], and for simulating both **Markovian** [23] and **semi-Markovian** [18] quantum dynamics in a quantum simulator. The principle underlying these approaches has been **experimentally demonstrated** [21].

Note: Publication numbers refer to the list provided in the Publications list (part IX)

Part IX–List of Publications (See my Scholar profile)

Journal Articles

1- W. Gorecki, F. Albarelli, S. Felicetti, **R. Di Candia**, L. Maccone, Interplay between time and energy in bosonic noisy quantum metrology, *PRX Quantum* **6**, 020351 (2025).

2- G. Beaulieu, F. Minganti, S. Frasca, M. Scigliuzzo, S. Felicetti, **R. Di Candia**, P. Scarlino, Criticality-enhanced quantum sensing with a parametric superconducting resonator, *PRX Quantum* **6**, 020301 (2025).
Press Release: [https://actu.epfl.ch/news/a-new-level-of-precision-in-quantum-sensing-3]

3- H. Shi, A.J. Brady, W. Gorecki, L. Maccone, **R. Di Candia**, Q. Zhuang, Quantum-enhanced dark matter detection with in-cavity control: mitigating the Raylegh curse, *npj Quantum Information* **11**, 48 (2025).

4- G. Beaulieu, F. Minganti, S. Frasca, V. Savona, S. Felicetti, **R. Di Candia**, P. Scarlino, Observation of first- and second-order dissipative phase transitions in a two-photon driven Kerr resonator, *Nature Communications* **16**, 1954 (2025).
Press Release: [https://www.isc.cnr.it/news/observation-of-dissipative-phase-transitions-on-nature-communications],
[https://www.eurekalert.org/news-releases/1076284],
[https://actu.epfl.ch/news/unlocking-the-secrets-of-phase-transitions-in-quan]

5- U. Alushi, A. Coppo, V. Brosco, **R. Di Candia***, S. Felicetti, Collective quantum enhancement in critical quantum sensing, *Communications Physics* **8**, 74 (2025).

6- U. Alushi, W. Gorecki, S. Felicetti, **R. Di Candia***, Optimality and noise resilience of critical quantum sensing, *Physical Review Letters* **133**, 040801 (2024).

7- Y. Zhang, **R. Di Candia**, H. Yigitler, R. Jäntti, Z. Yan, Covert backscatter communication in the presence of multi-antenna eavesdropper, *IEEE Communications Letters* **28**, 1770-1774 (2024).

8- U. Alushi, T. Ramos, J.J. Garcia-Ripoll, **R. Di Candia***, S. Felicetti, Waveguide QED with quadratic light-matter interaction, *PRX Quantum* **4**, 030326 (2023).

9- M. Reichert, Q. Zhuang, J.H. Shapiro, **R. Di Candia***, Quantum illumination with a hetero-homodyne receiver and sequential detection, *Physical Review Applied* **20**, 014030 (2023).

10- **R. Di Candia***, F. Minganti, K.V. Petrovnin, G.S. Paraoanu, S. Felicetti, Critical parametric quantum sensing, *npj Quantum Information* **9**, 23 (2023).

11- M. Reichert, **R. Di Candia**, M.Z. Win, M. Sanz, Quantum-enhanced Doppler lidar, *npj Quantum Information* **8**, 147 (2022).

12- R. Jonsson, **R. Di Candia**, Gaussian quantum estimation of the loss parameter in a thermal environment, *Journal of Physics A: Mathematical and Theoretical* **55**, 385301 (2022).

13- K.G. Fedorov, M. Renger, S. Pogorzalek, **R. Di Candia**, Q. Chen, Y. Nojiri, K. Inomata, Y. Nakamura, M. Partanen, A. Marx, R. Gross, F. Deppe, Experimental quantum teleportation of propagating microwaves, *Science Advances* **7**, eabk0861 (2021).
Press Release: [https://phys.org/news/2022-01-experimental-quantum-teleportation-propagating-microwaves.html]

14- **R. Di Candia***, H. Yigitler, G.S. Paraoanu, R. Jäntti, Two-way covert quantum communication in the microwave regime, *PRX Quantum* **2**, 020316 (2021).

15- K.G. Fedorov S. Pogorzalek, U. Las Heras, M. Sanz, P. Yard, P. Eder, M. Fischer, L. Goetz, E. Xie, K. Inomata, Y. Nakamura, **R. Di Candia**, E. Solano, A. Marx, F. Deppe, R. Gross, Finite-time quantum entanglement in propagating squeezed microwaves, *Scientific Reports* **8**, 6416 (2018).

16- U. Las Heras, **R. Di Candia**, K.G. Fedorov, F. Deppe, M. Sanz, E. Solano, Quantum illumination reveals phase-shift inducing cloaking, *Scientific Reports* **7**, 9333 (2017).

17- M. Sanz, U. Las Heras, J.J. Garcia-Ripoll, E. Solano, **R. Di Candia**, Quantum estimation methods for quantum illumination, *Physical Review Letters* **118**, 070803 (2017).

18- U. Alvarez-Rodriguez, **R. Di Candia**, J. Casanova, M. Sanz, E. Solano, Algorithmic quantum simulation of memory effects, *Physical Review A* **95**, 020301(R) (2017).

19- M. Sanz, I.L. Egusquiza, **R. Di Candia**, H. Saberi, L. Lamata, E. Solano, Entanglement classification with matrix product states, *Scientific Reports* **6,** 30188 (2016).

20- K.G. Fedorov, L. Zhong, S. Pogorzalek, P. Eder, M. Fischer, J. Goetz, E. Xie, F. Wulschner, K. Inomata, T. Yamamoto, Y. Nakamura, **R. Di Candia**, U. Las Heras, M. Sanz, E. Solano, E.P. Menzel, F. Deppe, A. Marx, R. Gross, Displacement of propagating squeezed microwave states, *Physical Review Letters* **117**, 020502 (2016).

21- J.C. Loredo, M.P. Almeida, **R. Di Candia**, J.S. Pedernales, J. Casanova, E. Solano, A.G. White, Measuring entanglement in a photonic embedding quantum simulator, *Physical Review Letters* **116**, 070503 (2016).

22- **R. Di Candia***, K.G. Fedorov, L. Zhong, S. Felicetti, E.P. Menzel, M. Sanz, F. Deppe, A. Marx, R. Gross, E. Solano, Quantum teleportation of propagating quantum microwaves, *EPJ Quantum Technology* **2**, 1-17 (2015).

23- **R. Di Candia***, J.S. Pedernales, A. Del Campo, E. Solano, J. Casanova, Quantum simulation of dissipative processes without reservoir engineering, *Scientific Reports* **5**, 9981 (2015).

24- J.S. Pedernales, **R. Di Candia**, P. Schindler, T. Monz, M. Hennrich, J. Casanova, E. Solano, Entanglement measures in ion-trap quantum simulators without full tomography, *Physical Review A* **90**, 012327 (2014).

25- J.S. Pedernales, **R. Di Candia**, I.L. Egusquiza, J. Casanova, E. Solano, Efficient quantum algorithm for computing n-time correlation functions, *Physical Review Letters* **113**, 020505 (2014).

26- **R. Di Candia***, E.P. Menzel, L. Zhong, F. Deppe, A. Marx, R. Gross, E. Solano, Dual-path methods for propagating quantum microwaves, *New Journal of Physics* **16**, 015001 (2014).

27- L. Zhong, E.P. Menzel, **R. Di Candia**, P. Eder, M. Ihmig, A. Baust, M. Haeberlein, E. Hoffmann, K. Inomata, T. Yamamoto, Y. Nakamura, E. Solano, F. Deppe, A. Marx, R. Gross, Squeezing with a flux-driven Josephson parametric amplifier, *New Journal of Physics* **15**, 240502 (2013).

28- **R. Di Candia***, B. Mejia, H. Castillo, J.S. Pedernales, J. Casanova, E. Solano, Embedding quantum simulators for quantum computation of entanglement, *Physical Review Letters* **111**, 240502 (2013).

29- J.S. Pedernales, **R. Di Candia**, D. Ballester, E. Solano, Quantum simulations of relativistic quantum physics in circuit QED, *New Journal of Physics* **15**, 055008 (2013).

30- E.P. Menzel, **R. Di Candia**, F. Deppe, P. Eder, L. Zhong, M. Ihmig, M. Haeberlein, A. Baust, E. Hoffmann, D. Ballester, K. Inomata, T. Yamamoto, Y. Nakamura, E. Solano, A. Marx, E. Gross, Path entanglement of continuous-variable quantum microwaves, *Physical Review Letters* **109**, 250502 (2012).

Editorial Material

31- **R. Di Candia***, M. Reichert, Q. Zhuang, J.H. Shapiro, Comment on J.N. Blakely, "Quantum illumination with a parametrically amplified idler" [Phys. Lett. A 400 (2021) 127319], *Physics Letters A* **487**, 129116 (2023)

Conference Proceedings

32- **R. Di Candia***, Easing the experimental requirements of quantum illumination, SPIE Quantum Technologies for Defence and Security 13202, 42-46 (2024).

33- U. Alushi, W. Gorecki, S. Felicetti, **R. Di Candia***, Optimality and noise-resilience of critical quantum sensing, Optica Sensing Congress 2024 (AIS, LACSEA, Sensors, QSM), Technical Digest Series (Optica Publishing Group, 2024), paper QW3G.4.

34- R. Jonsson, **R. Di Candia**, M. Ankel, A. Ström, G. Johansson, A comparison between quantum and classical noise radar sources, 2020 IEEE Radar Conference (RadarConf20), 1-6.

35- **R. Di Candia***, R. Jäntti, R. Duan, J. Lietxen, H. Khalifa, K. Ruttik, Quantum backscatter communication: A new paradigm, 2018 15th International Symposium on Wireless Communication Systems (ISWCS), 1-6.

36- R. Jäntti, **R. Di Candia**, R. Duan, K. Ruttik, Multiantenna quantum backscatter communications, 2017 IEEEGlobecom Workshop (GC Wkshps), 1-6.

Ph.D. Thesis

37- **R. Di Candia**, Embedding Quantum Simulators, University of the Basque Country (UPV/EHU), 2015.

Pre-prints

38- G. Mihailescu, U. Alushi, **R. Di Candia**, S. Felicetti, and K. Gietka, Critical Quantum Sensing: a tutorial on parameter estimation near quantum phase transitions, *arXiv*:2510.02035 (2025).

39- U. Alushi and **R. Di Candia***, Privacy in Distributed Quantum Sensing with Gaussian Quantum Networks, *arXiv*:2509.22103 (2025).

40- W. Gorecki, S. Felicetti, L. Maccone, **R. Di Candia***, Time correlations from steady-state expectation values, *arXiv*:2507.08661 (2025).

41- U. Alushi, S. Felicetti, **R. Di Candia***, Analog quantum teleportation, *arXiv*:2502.1053 (2025).

42- **R. Di Candia***, S. Malik, H. Yigitler, R. Jäntti, Covert backscatter communication with directional MIMO, *arXiv*:2202.03899 (2022).

43- E. Rinaldi, **R. Di Candia**, S. Felicetti, F. Minganti, Dispersive qubit readout with machine learning, *arXiv*:2112:05332, Workshop at the 35th Conference of Neural Information and Processing Systems (NeurIPS): Machine Learning and the Physical Sciences, poster presentation

***Corresponding Author**

Part XII– Main Conference Contributions

1- **FISMAT 2025,** Venice (Italy), *Analog quantum teleportation*, contributed talk (07.2025)

2- **CEWQO29**, Vilnius (Lithuania), *Critical quantum sensing with Kerr resonators*, contributed talk (06.2025)

3- **SPIE Remote Sensing Conference**, Edinburgh (Scotland), *Easing the experimental requirements of quantum illumination*, invited talk (09.2024)

4- **CEWQO27**, Milan (Italy), *Quantum illumination with a hetero-homodyne receiver and sequential detection*, contributed talk (07.2023)

5- **ICE-8**, Santiago de Compostela (Spain), *Quantum illumination with a hetero-homodyne receiver and sequential detection*, contributed talk (05.2023)

6- **QuantuMatter 2023**, Madrid (Spain), *Critical parametric quantum sensing*, contributed talk (05.2023)

7- **IQIS2022,** Palermo (Italy), *Remote quantum sensing, quantum illumination and quantum-enhanced doppler lidar*, contributed talk (09.2022)

8- **NeurIPS2021,** Online, *Dispersive qubit reaoout with machine learning*, poster presentation (12.2021)

9- **2020 IEEE Radar Conference**, *A comparison between quantum and classical noise radar sources*, expert discussion & proceeding (09.2020)

10- **DPG-Quantum optics**, Erlangen (Germany), *Quantum backscatter communication*, contributed talk (03.2018)

11- **IQIS2017**, Florence (Italy), *Quantum backscatter communication*, contributed talk (09.2017)

12- **CCQED Final Meeting**, Aarhus (Denmark), *Embedding quantum simulators*, contributed talk (10.2014)

13- **ICE-1, Zaragoza (Spain**), *Embedding quantum simulators*, contributed talk (06.2014)

14- **CCQED YES Meeting**, Landeck (Austria), *Embedding quantum simulators*, invited talk (03.2014)

15- **APS March Meeting**, Denver (USA), *Embedding quantum simulators*, contributed talk (03.2014)

16- **Quantum simulations and quantum walks**, Pisa (Italy), *Embedding quantum simulators*, contributed talk (11.2013)

17- **International Conference on Resonator QED**, Munich (Germany), *Embedding quantum simulators*, contributed talk (09.2013)

18- **CEWQO19**, Sinaia (Romania), *Dual-path methods for quantum tomography*, contributed talk (07.2012)

Part XIII– Invited Seminars

1- **University of Pavia (Italy),** *Quantum sensing and communication in the microwave regime*, Host: Prof. Lorenzo Maccone (01.2023)

2- **Walther Meißner Institute,** Garching (Germany), *Quantum radar* (online seminar), Host: Dr. Frank Deppe (07.2021)

3- **Walther Meißner Institute,** Garching (Germany), *Fundamental limits of quantum illumination*, Host: Dr. Frank Deppe (09.2020)

4- **Chalmers University**, Göteborg (Sweden), *Fundamental limits of quantum illumination*, Host: Prof. Göran Johansson (02.2020)

5- **Aalto University**, Espoo (Finland), *Quantum estimation methods for quantum illumination*, Host: Prof. Riku Jäntti (02.2017)

6- **Princeton University (USA**), *Embedding quantum simulators*, Host: Prof. Andrew Houck (03.2014)

7- **University of Tokyo (Japan**), *Dual-path methods for propagating quantum microwaves and path-entanglement detection*, Host: Prof. Yasunobu Nakamura (03.2013)

8- **RIKEN**, Tokyo (Japan), *Dual-path methods for propagating quantum microwaves and path-entanglement detection*, Host: Prof. Franco Nori (03.2013)

Part XIV– Conference Organization

- Criticality and Continuous Measurements in Quantum Sensing, From Theory to Experiments, Normale di Pisa (Italy), 04.2025, **Workshop organized together with Dr. Francesco Albarelli (Normale, Pisa) and Dr. Simone Felicetti (ISC-CNR, Rome)** [https://indico.sns.it/event/81]

- Quantum metrology in many-body and open quantum systems, Wien (Austria), 02.2026, **Workshop organized together with Dr. Giuseppe Vitagliano (Wien), Dr. Francesco Albarelli (Normale, Pisa), Dr. Simone Felicetti (ISC-CNR, Rome), Dr, Mohammad Mehboudi (Wien), Dr, Matteo Fadel (Zurich).**

Part XV– Editorial and Reviewing Activities

1- **Member of Editorial Board of Communications Physics (Nature/Springer) [IF=5.4]**
3 years appointment (04.2024-03.2027), **handled 25 manuscripts as Editor as of December 2025** [https://www.nature.com/commsphys/editorial-board]

2- **Referee of International Journals**
IEEE J-SAC (IF=17.2), Nature Communications (IF=15.7), IEEE Transactions on Wireless Communications (IF=10.7), Physical Review Letters (IF=9), npj Quantum Information (IF=8.3), Quantum (IF=5.4), Quantum Science and Technology (IF=5), Physical Review Applied (IF=4.4), Physical Review Research (IF=4.2), Optics Express (IF=3.3), Physical Review A (IF=2.9), New Journal of Physics (IF=2.8), Journal of Physics A: Mathematical and Theoretical (IF=2.1), among others

3- **Innovation Expert for European Union**
Evaluation of medium/high TRL projects at the selection and reporting stages (2023-ongoing): **As of Decembet 2025, assessed 2 consortia through mid- and final-term reports, and participated in 5 selection procedures in the HORIZON EUROPE Programme**

4- **Member of Ph.D. commissions**
- *Robert Schulz*, Freie Universität Berlin (Germany), 11.2018
- *Federico Guerra*, Freie Universität Berlin (Germany), 03.2018
- *Stefan Milenkovic*, Freie Universität Berlin (Germany), 11.2017

5- **Reviewer of Ph.D. Thesis**
Giovanni Di Fresco, Università degli Studi di Palermo, 02.2025