

Curriculum vitae



Sara Satanassi

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CURRENT POSITION

Research fellow – Department of Physics and Astronomy, University of Bologna (UNIBO)

TRAINING

2019 – today: PhD in physics (35th cycle) at the Department of Physics and Astronomy, University of Bologna

2016 – 2018: Master's Degree in Physics LM-17, Bologna (Italy) Alma Mater Studiorum, University of Bologna. Curriculum: Applied Physics. Thesis: Quantum computers for high school students: design of activities for a teaching module within the I SEE project Supervisor: Prof. Olivia Levrini.
110 out of 110 cum laude

2011 – 2016: Bachelor's Degree in Physics L-30 Alma Mater Studiorum, University of Bologna. Teranostica: diagnosi e cura attraverso nanoparticelle. Relatore: prof.ssa Paola Fantazzini.

VISITING PERIOD:

2024 – visiting researcher, University of Oxford, Oxford (UK).
Scientific advisor: Sibel Erduran. (17/09/24 – 17/12/24)

2022 – visiting young researcher, Tufts University Medford/Somerville, Massachusetts (US).
Advisors: Professor Peter Love and David Hammer (5/01/22 – 10/05/22)

2022- visiting young researcher, Department of Primary Education University of Crete Campus (GR). Advisor: Professor Dimitris Stavrou (07/09/22-06/11/22)

POSITION

Member of ESERA (European Science Education Research Association) local team 2019.
Member of ESERA Sig8 conference (February 27th– March 1st, 2025, Bologna) – local team.

RESEARCH ACTIVITIES

The research activity is within the research field of Education and History of Physics (SSD FIS / 08). The research work mainly concerns the following research topics:

- Educational reconstruction of modern and contemporary physics themes (quantum physics and quantum technologies);
- Educational reconstruction and design of approaches and modules for teaching quantum technologies at different degrees (from secondary school to university);
- Interdisciplinarity between physics, mathematics, and computer science, focusing both on curricular topics and STEM topics.
- The role of epistemology of science for teaching and learning science
- Qualitative methodologies for data analysis.
- Openschooling: co-design, co-teaching, and co-learning as new forms of innovation

The development of research topics involves designing and implementing innovative teaching materials and conducting pilot teaching activities at different school levels and in teacher training contexts.

AWARDS:

REVIEWER OF EXCELLENCE, Science & Education, 2025

REVIEWER OF EXCELLENCE, Science & Education, 2024

Best communications, 109th SIF National Congress 2023, 11 - 15 September 2023, Salerno - Italy: Ricostruzione didattica della Seconda Rivoluzione Quantistica da una prospettiva culturale: sviluppo di un percorso per studenti di scuola secondaria superiore.

Best communications, 105th SIF National Congress 2019, 23 - 27 September 2019, Aquila - Italy: Quantum computing for secondary school: design of activities for a teaching module in the I SEE project.

EDUCATIONAL ACTIVITIES

Teaching module for the course L'INSEGNAMENTO DELLA FISICA: ASPETTI TEORICI E ASPETTI SPERIMENTALI (FIS08, Professor Olivia Levrini and Sara Satanassi), academic year 2023/2024

Tutoring for the course L'INSEGNAMENTO DELLA FISICA: ASPETTI TEORICI E ASPETTI SPERIMENTALI (FIS08, Professor Olivia Levrini), academic year 2021/2022

Tutoring for the course L'INSEGNAMENTO DELLA FISICA: ASPETTI TEORICI E ASPETTI SPERIMENTALI (FIS08, Professor Olivia Levrini), academic year 2020/2021

Tutoring for the course L'INSEGNAMENTO DELLA FISICA: ASPETTI TEORICI E ASPETTI SPERIMENTALI (FIS08, Professor Olivia Levrini), academic year 2019/2020

Tutoring for the course LABORATORIO DI DIDATTICA DELLA FISICA (FIS08, professors: Barbara Pecori, Eugenio Bertozzi, Giulia Tasquier), academic year 2019/2020

Integrative educational activities:

Quadrelli, N. (2026) Le forme brevi nella comunicazione della fisica. [Laurea magistrale], Corso di Studio in [Physics \[LM-DM270\]](#), Alma Mater Studiorum—University of Bologna. Supervisor: Olivia Levrini, Co-supervisor: Sara Satanassi

Belardinelli, G. (2026) Modelli di spiegazione tra fisica classica e quantistica: un modulo didattico sulle disuguaglianze di Bell. [Laurea magistrale], Corso di Studio in [Physics \[LM-DM270\]](#), Alma Mater Studiorum—University of Bologna. Supervisor: Olivia Levrini, Co-supervisor: Sara Satanassi

Zambotto, S. (2025) Elementi di natura della scienza nel caso studio del cannocchiale di galileo galilei: un percorso per la formazione docenti. [Laurea magistrale], Corso di Studio in [Physics \[LM-DM270\]](#), Alma Mater Studiorum—University of Bologna. Supervisor: Olivia Levrini, Co-supervisor: Sara Satanassi, Marta Carli, Stefania Lipiello.

Fontana, R. (2025) Profili di eccellenza e brillantezza in fisica: un'indagine qualitativa sulle capacità ritenute fondamentali per il successo formativo e professionale. [Laurea magistrale], Corso di Studio in [Physics \[LM-DM270\]](#), Alma Mater Studiorum—University of Bologna. Supervisor: Olivia Levrini, Co-supervisor: Sara Satanassi.

Sacco, E. (2025) *Il rapporto tra i DSA e la fisica: indagine sul libro di testo di fisica quale strumento didattico per l'intervento su studenti con DSA*. [Laurea magistrale], Corso di Studio in [Physics \[LM-DM270\]](#), Alma Mater Studiorum—University of Bologna. Supervisor: Olivia Levrini, Co-supervisor: Sara Satanassi.

Cannata, M. (2024), La didattica dei sistemi complessi: esplorazione delle simulazioni in prospettiva ontologica. Bachelor thesis in Physics, Alma Mater Studiorum—University of Bologna. Supervisor: Olivia Levrini; Co-supervisor: Sara Satanassi.

Gaspari, S. (2024), La legge dei gas perfetti e il primo principio della termodinamica in una classe iii di liceo scientifico: uno studio sulle difficoltà degli studenti. Bachelor's thesis in Physics, Alma Mater Studiorum—University of Bologna. Supervisor: Olivia Levrini; Co-supervisor: Sara Satanassi, Tiziana Minarelli.

Colombo, D. (2024), La percezione della fisica nei licei umanistici: sfide e strategie emerse da un'analisi quantitativa e qualitativa. Master thesis in Physics, Alma Mater Studiorum—University of Bologna. Advisor: Olivia Levrini; co-advisor: Sara Satanassi, Italo Testa.

Medici, D. (2024), Analisi linguistica ed epistemologica di testi riguardanti la relatività della simultaneità alla luce delle competenze indicate nel Science Framework del PISA 2025. Master thesis in Physics, Alma Mater Studiorum—University of Bologna. Advisor: Olivia Levrini; co-advisor: Sara Satanassi.

Gaspari, S. (2024), La legge dei gas perfetti e il primo principio della termodinamica in una classe iii di liceo scientifico: uno studio sulle difficoltà degli studenti. Bachelor thesis in Physics, Alma Mater Studiorum—University of Bologna. Advisor: Olivia Levrini; co-advisor: Sara Satanassi.

Fabris, M. (2024), Il gioco di Dell: aspetti concettuali e didattici. Master thesis in Physics, Alma Mater Studiorum—University of Bologna. Advisor: Vincenzo Fano; co-advisor: Sara Satanassi.

Tassinari, G. (2024), Epistemologie degli studenti e seconda rivoluzione quantistica: da un'indagine empirica alla progettazione di una attività didattica. Master thesis in Physics. Advisor: Olivia Levrini; co-advisor: Sara Satanassi.

Pierpaoli, P., (2023), Exploring the potential of the multiple representations environment to learn quantum physics: the case of the Second Quantum Revolution. Master thesis in Physics, Alma Mater Studiorum—University of Bologna. Advisor: Olivia Levrini; co-advisor: Sara Satanassi.

Molinari, I., (2023), Analysis of an Interdisciplinary Approach for Teaching Artificial Intelligence in Secondary Schools through Co-planning and Co-teaching Methodologies: A Proposal for the Open Schooling Model of the FEDORA Project. Master thesis in Physics, Alma Mater Studiorum—University of Bologna. Advisor: Olivia Levrini; co-advisor: Sara Satanassi.

Casarotto, R. (2022) "The "FRA wheel" as a teaching tool to elaborate on the identity aspects of physics and mathematics as disciplines in interdisciplinary contexts", master's thesis in Physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

Polverini, G. (2022) Exploring interdisciplinarity between physics and mathematics: the design of a linguistic and an epistemological tool for analysing texts about the parabolic motion, master's thesis in physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi and Veronica Bagaglino.

Rosi, E. F., (2022). La figura del demone in fisica: dal determinismo classico al random walk quantistico. Esperimenti mentali per preparare al futuro. Master's thesis in Physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

Monaco, M. (2021) "Appropriazione e identità in ambito STEM: riflessioni per un approccio ecologico", master's thesis in physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

De Zuani Cassina, F. (2021) "Identity development in physics classes: from community of practice towards nexus of multi-membership", master's thesis in physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

Casali, D. (2020). An interdisciplinary approach to classical and quantum random walk: an activity with secondary school students, bachelor's thesis in physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

Gombi, A., "The foundational case of the parabolic motion: design of an interdisciplinary activity for the IDENTITIES project", master's thesis in physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

Quadrelli, N. (2019) "Un approccio interdisciplinare alla parabola per riflettere sulla nascita della fisica moderna: risultati da uno studio con studenti di classe terza di Liceo Scientifico", bachelor's thesis in physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

Spada, R. (2019). The second quantum revolution: designing a teaching-learning activity on the quantum manifesto to futurize science education, bachelor's thesis in physics, Alma Mater Studiorum—University of Bologna, advisor: Olivia Levrini, co-advisor: Sara Satanassi.

Educational activities with upper-secondary school students:

2025- PLS Laboratory: The two quantum revolutions. Six meetings from 28/01 to 3/03, University of Bologna. (A.A. 2024/2025)

2023 – PLS Laboratory: The Second Quantum Revolution. Six meetings from 16/01 to 20/02, University of Bologna. (A.A. 2022/2023).

2022 – PLS Laboratory: The Second Quantum Revolution. Six meetings from 31/01 to 16/02, in remote modality, University of Bologna. (A.A. 2021/2022).

2021 – PLS Laboratory: quantum computers. Six meetings from 06/10 to 22/10, at Liceo E. Einstein, Rimini (A.A. 2021/2022).

2021 – “Late Summer School: Introduction to Quantum Computing”. 7 – 10 September 2021, Department of Science and High Technology, University of Insubria, Como.

2021 – “Spring school: Quantum Technologies”. 6 – 9 April 2021, Department of Science and High Technology, University of Insubria, Como.

2020 – “Late Summer School: Introduction to Quantum Computing”. 8 – 11 September 2020, Department of Science and High Technology, University of Insubria, Como.

2020 – PLS Laboratory: quantum computers. 23/01 - 27/02, Department of Physics and Astronomy, University of Bologna (A.Y. 2019/2020).

2019 – PLS Laboratory: quantum computers. 05/02 - 12/03, Department of Physics and Astronomy, University of Bologna (A.Y. 2019/2020).

Teacher education and teaching training:

2026 – “The two quantum revolutions. 5 meetings (15 hours) from 26/02 to 25/03, University of Bologna. (A.A. 2025/2026)

2025 – “The two quantum revolution” - course for in-service teachers (10 hours, March/May 2025)

2024 – “The two quantum revolution” - course for pre- and in-service teachers (20 hours, April/May 2024)

2023 – 3 hours course organized by A.I.F. Prima e seconda rivoluzione quantistica a confronto tra modelli di oggetto e interazione (29/11, Pavia)

2021 – IDENTITIES Summer School for pre-service teacher (40h, from 28/06/2021 to 02/07/2021)

2021 – Winter school “Tecnologie quantistiche: una nuova sfida per la didattica” – course for pre- and in-service teachers (20 hours, from 10/02/2021 to 19/02/2021).

2020 – Modern Physics for Licei - Course “Prospettive e percorsi per apprendimento e insegnamento inclusivo” (07/10/2020).

PARTICIPATION TO NATIONAL AND INTERNATIONAL PROJECTS

FEDORAS: Teacher Academy for a Future-oriented steam EDucation FOR A Sustainable world: ERASMUS-EDU-2024-PEX-TEACH-ACA — Grant Agreement n° 101196137

Climademy: Climate change teacher's academy (ERASMUS-EDU-2021-PEX-TEACH-ACA, Programme: ERASMUS2027, Project ID: 101056066, EUROPEAN EDUCATION AND CULTURE EXECUTIVE AGENCY (EACEA))

FEDORA: Future-oriented Science EDucation to enhance Responsibility and engagement in the society of Acceleration and uncertainty (Horizon 2020, Science With And For Society, GRANT AGREEMENT NUMBER 872841, Settembre 2020-Agosto 2023, coordinator: Olivia Levrini)

IDENTITIES: Integrate Disciplines to Elaborate Novel Teaching approaches to InTerdisciplinarity and Innovate pre-service teacher EDucation for STEM challenges (ERASMUS +, KA2, 2019-1-IT02-KA203-063184, 01/09/2019 - 31/08/2022, coordinator: Olivia Levrini)

SEAS: Science Education for Action and Sustainability (Horizon 2020, SwafS-01-2018-2019-2020, Project No. 824522, coordinator: Erik Knain, Università di Oslo)

RAISE: Raw mAterials Students intErnship. A Wider Society Learning activity of the EIT RawMaterials BP2019, coordinator: Paolo Dambruoso).

I SEE: Inclusive STEM Education to Enhance the capacity to aspire and imagine future careers (ERASMUS+, KA2, 2016-1-IT02-KA201-024373, 01/09/2016 - 31/08/2019, coordinator: Olivia Levrini).

PUBLICATIONS

Satanassi, S., & Levrini, O. (2025). Second quantum revolution: The progressive design of an approach to value its cultural and conceptual scope. *Physical Review Physics Education Research*, 21(1), 010112. <https://doi.org/10.1103/PhysRevPhysEducRes.21.010112>

Satanassi, S., Branchetti, L., Fantini, P., Casarotto, R., Caramaschi, M., Barelli, E., & Levrini, O. (2023). Exploring the boundaries in an interdisciplinary context through the Family Resemblance Approach: The Dialogue Between Physics and Mathematics. *Science & Education*, 1-34.

Satanassi, S., Ercolessi, E., & Levrini, O. (2022). Designing and implementing materials on quantum computing for secondary school students: The case of teleportation. *Physical Review Physics Education Research*, 18(1), 010122.

Bondani, M., Chiofalo, M. L., Ercolessi, E., Macchiavello, C., Malgieri, M., Michelini, M., Mishima, O., Onorato, P., Pallotta, F., Satanassi, S., Stefanel, A., Sutrin, C., Testa, I., & Zuccarini, G. (2022). Introducing Quantum Technologies at Secondary School Level: Challenges and Potential Impact of an Online Extracurricular Course. *Physics*, 4(4), 1150-1167.

Barelli, E., Tasquier, G., Caramaschi, M., Satanassi, S., Fantini, P., Branchetti, L., & Levrini, O. (2022, September). Making sense of youth futures narratives: Recognition of emerging tensions in students' imagination of the future. In *Frontiers in Education* (Vol. 7, p. 911052). Frontiers.

Barelli, E., Barquero, B., Romero, O., Aguada, M.R., Giménez, J., Pipitone, C., Sala-Sebastià, G., Nipyraakis, A., Kokolaki, A., Metaxas, I., Michailidi, E., Stavrou, D., Bartzia, I., Lodi, M., Sbaraglia, M., Modeste, S., Martini, S., Durand-Guerrier, V., Bagaglini, V., Satanassi, S., Fantini, P., Kapon, S., Branchetti, L., & Levrini, O. (2022). Disciplinary identities in interdisciplinary topics: challenges and opportunities for teacher education. *ESERA 2021: Fostering scientific citizenship in an uncertain world*, 934-943.

Levrini, O., Fantini, P., Barelli, E., Branchetti, L., Satanassi, S., & Tasquier, G. (2021). The Present Shock and Time Re-appropriation in the Pandemic Era. *Science & Education*, 1-31.

Satanassi, S., Fantini, P., Spada, R., & Levrini, O. (2021, May). Quantum Computing for high school: an approach to interdisciplinary in STEM for teaching. In *Journal of Physics: Conference Series* (Vol. 1929, No. 1, p. 012053). IOP Publishing.

Bagaglini, V., Branchetti, L., Gombi, A., Levrini, O., Satanassi, S., & Viale, M. (2021). Il ruolo del testo nell'interdisciplinarietà tra matematica, fisica ed educazione linguistica: il tema del moto parabolico tra testi storici e manuali di fisica per la scuola secondaria di secondo grado. *Italiano a scuola*, 3, 133-184.

Satanassi, S. (2020) *The challenge of Quantum Manifesto for science education: Designing a teaching module on quantum computers for secondary school students*. *Il nuovo cimento C*, 43 (4-5). pp. 1-11. ISSN 1826-9885

Satanassi, S., & Levrini, O. (2023). Reflecting on the discipline's epistemologies: The ontological status of probability in the quantum random walk case. In E. Barbin, K. Bjarnadóttir, & G. Jankvist (Eds.), *Proceedings of the 9th European Summer University on the History and Epistemology in Mathematics Education (ESU-9)* (pp. 490-495). Edizioni Nuova Cultura.

Satanassi, S., Ercolessi, E., & Levrini, O. (2024, April). An approach to the Second Quantum Revolution for secondary school students: the case of the random walk algorithm. In *Journal of Physics: Conference Series* (Vol. 2750, No. 1, p. 012024). IOP Publishing.

Satanassi S., Ercolessi, E., and Levrini, O. (2024). A comparison between the First and the Second Quantum Revolutions: development of a teaching course for secondary school students. *Nuovo Cimento C*. DOI: [10.1393/ncc/i2024-24341-3](https://doi.org/10.1393/ncc/i2024-24341-3).

Satanassi, S., Fantini, P., & Levrini, O. (2023). Quantum Atelier Project: Results from an Interdisciplinary Experience between Art and Science. *Proceedings Book Series-III*, 112.

Nipyraakis, A., Pipitone, C., Bitsaki, C., Satanassi, S., Branchetti, L., Barquero, B., ... & Levrini, O. (2023). Balancing disciplinary and interdisciplinary competences: Design of modules for pre-service teacher education. *Proceedings Book Series-III*, 66.

Satanassi, S., & Levrini, O., (submitted). Personally-Inflected Sense-Making in learning physics with multiple external representations. *JRST*

Satanassi, S., Branchetti, L., Fantini, P., Levrini, O., (*under review*). Crossing boundaries between physics and mathematics and creating the opportunity for interdisciplinary experiences: the case of parabola and parabolic motion.

Doctoral thesis:

Satanassi, S. (2023). Investigating the learning potential of the Second Quantum Revolution: development of an approach for secondary school students.

Scientific talks to congresses and conferences

International Congress Proceedings:

Satanassi Sara and Levrini Olivia (2025). A conceptual-epistemological account for a “Quantum Culture”. Oral presentation at Towards a Quantum Culture: The Different Interpretations of Quantum Mechanics, 9th-11th December, Barcelona.

Satanassi Sara and Levrini Olivia (2025). Comparing the two quantum revolutions: development of a teaching approach to value their cultural scope. Oral presentation at Quantum Education Summit, 3rd-5th December, Barcelona.

Satanassi Sara and Levrini Olivia (2025). The progressive construction of personally-inflected sense-making. Oral presentation at NARST conference, 23rd – 26th March, Washington.

Satanassi Sara and Levrini Olivia (2024). Investigating the cultural potential of the two quantum revolutions. Oral presentation at 17th biennial International History, Philosophy and Science Teaching (IHPST) Conference, from 2nd September to 6th September 2024, Buenos Aires, Argentina.

Satanassi Sara and Levrini Olivia (2024). Comparing the two quantum revolutions: development of a teaching module to value their cultural and conceptual scope. Oral presentation at 4th World Conference on Physics Education 2024, Kraków, Poland, from August 26th to 30th August, 2023, Krakov.

Satanassi Sara, Paola Fantini, Levrini Olivia (2023). Quantum Atelier Project: Results from an interdisciplinary experience between art and science. Oral presentation at 15th Conference of the European Science Education Research Association (ESERA), from August 28th to September 1st, 2023, Cappadocia.

Satanassi Sara, Branchetti Laura, Fantini Paola, Casarotto Rachele, Caramaschi Martina, Barelli, Eleonora, Levrini Olivia, (2023). Shaping new boundaries between physics and mathematics: interdisciplinarity in the case of parabola and parabolic motion. Symposium accepted to 15th Conference of the European Science Education Research Association (ESERA), from August 28th to September 1st, 2023, Cappadocia.

Satanassi Sara, Ercolessi Elisa, Levrini Olivia (2022). An approach to the Second Quantum Revolution: the case of the random walk algorithm. Oral presentation at GIREP-ICPE-EPEC-MPTL 2022, 4th – 8th July 2022, Ljubljana - Slovenia.

Satanassi Sara, Olivia Levrini (2022). An interdisciplinary approach to quantum technologies for educating to probabilistic thinking. Oral presentation at 9th European Summer University on the

History and Epistemology in Mathematics Education 2022, 18th – 22th July, Salerno – Italy.

Branchetti Laura, Cattabriga Alessia, Levrini Olivia, Satanassi Sara (2022). Continuity and rupture between argumentation and proof in historical texts and physics textbooks on parabolic motion. Talk to Twelfth Congress of the European Society for Research in Mathematics Education (CERME12), 2nd – 6th February 2022, Bolzano, Italy. (Held online)

Satanassi Sara, Ercolessi Elisa, Levrini Olivia (2021). An approach to quantum technologies: educating for the Second Quantum Revolution. Scientific talk to 2nd European Quantum Technologies Virtual Conference (EQTC), from 29.11 to 02.12 2021, Ireland.

Satanassi Sara, Levrini Olivia, Fantini Paola, Branchetti Laura (2021). PARABOLA AND PARABOLIC MOTION: CROSSING BOUNDARIES BETWEEN PHYSICS AND MATHEMATICS. Symposium accepted to 14th Conference of the European Science Education Research Association (ESERA), from August 30th to September 3rd, 2021, Braga, Portugal.

Pallotta Filippo, Satanassi Sara, Sutrin Claudio, Ercolessi Elisa, Benenti Giuliano, Parola Alberto, Levrini Olivia, Macchiavello Chiara, Bondani Maria (2021). Interdisciplinary approach to Quantum Technologies: a teaching - learning experience for high school students. Scientific talk to World Conference on Physics Education (WCPE). 3-17 December 2021, Hanoi, Vietnam.

Ravaioli Giovanni, Branchetti Laura, Barelli Eleonora, Lodi Michael, Satanassi Sara, Levrini Olivia (2019). Epistemological activators to value S-T-E-M concepts for education. Oral presentation to the 13th Conference of the European Science Education Research Association (ESERA), 26th – 30th August 2019, Bologna – Italy.

Satanassi Sara, Ravaioli Giovanni, Spada Roberta, Levrini Olivia (2019). Quantum Computing for high school: an example of an interdisciplinary STEM teaching module. Oral presentation at GIREP-ICPE-EPEC-MPTL 2019, 1st-5th July 2019, Budapest – Hungary.

Ravaioli Giovanni, Ercolessi Elisa, Satanassi Sara, Levrini Olivia (2019). ISEE ERASMUS+ project and Quantum Computing: a STEM approach to engage with the logic and the social impact of Quantum Physics. Poster to European Quantum Technologies Conference (EQTC19), 18th -22nd February 2019, Grenoble – France.

Branchetti Laura, Levrini Olivia, Barelli Eleonora, Lodi Michael, Ravaioli Giovanni, Rigotti Laura, Satanassi Sara, Tasquier Giulia (2019). STEM analysis of a module on Artificial Intelligence for high school students designed within the I SEE Erasmus+ Project. Poster accepted to Eleventh Congress of the European Society for Research in Mathematics Education (CERME11), 6th – 10th February 2019, Utrecht – Netherlands.

National Congress:

Satanassi Sara, Levrini Olivia (2025). L'entanglement e la seconda rivoluzione quantistica. 111° Congresso Nazionale SIF 2025, 22 – 26 Settembre 2025, Palermo

Branchetti Laura, Olivia Levrini, Sara Satanassi (2025). Assessing interdisciplinary and future-oriented skills: the FEDORAS contribution. 111° Congresso Nazionale SIF 2025, 22 – 26 Settembre 2025, Palermo.

Levrini Olivia e Satanassi Sara (2025). La seconda rivoluzione quantistica: future thinking e svolte culturali. 111° Congresso Nazionale SIF 2025, 22 – 26 Settembre 2025, Palermo.

Satanassi Sara, Sibel Erduran, Levrini Olivia (2024). Invited talk “Investigating how the new technological landscape is reshaping science and science education”. 110° Congresso Nazionale SIF 2024, 9 – 13 Settembre 2024, Bologna.

Satanassi Sara, Ercolessi Elisa, Levrini Olivia (2023), Ricostruzione didattica della Seconda Rivoluzione Quantistica da una prospettiva culturale: sviluppo di un percorso per studenti di scuola secondaria superiore. 109° Congresso Nazionale SIF 2023, 11 – 15 Settembre 2023, Salerno.

Sara Satanassi, Elisa Ercolessi, Paola Fantini, Olivia Levrini (2021), Un approccio interdisciplinare alle tecnologie quantistiche: un modulo per studenti di scuola secondaria. 107° Congresso Nazionale SIF 2021, 13 – 17 settembre 2021, via telematica.

Bondani M., Chiofalo M.L., Ercolessi E., Levrini O., Macchiavello C., Malgieri M., Michelini M., Mishina O., Onorato P., Pallotta F. (8), Santi L., Satanassi S., Stefanel A., Suttrini C., Testa I., Zuccarini G. (2021), The Second Quantum Revolution at school: teaching Quantum Physics in the context of Quantum Technologies. 107° Congresso Nazionale SIF 2021, 13 – 17 settembre 2021, via telematica.

Sara Satanassi, Elisa Ercolessi, Olivia Levrini (2020), Un approccio interdisciplinare alle tecnologie quantistiche: un modulo per studenti di scuola secondaria. 106° Congresso Nazionale SIF 2020, 14 – 18 settembre 2020, via telematica.

Maria Bondani, Alessandro Tucci Bronzuoli, Filippo Pallotta, Claudio Suttrini, Sara Satanassi, Giuliano Benenti (2020), Playing quantum games to learn quantum physics. 106° Congresso Nazionale SIF 2020, 14 – 18 settembre 2020, via telematica.

Sara Satanassi, Giovanni Ravaioli, Elisa Ercolessi, Olivia Levrini (2019), Quantum computing per scuola secondaria: progettazione di attività per un modulo di insegnamento nel progetto I SEE. 105° Congresso Nazionale SIF 2019, 23 – 27 Settembre 2019, Aquila – Italia.

NATIONAL AND INTERNATIONAL TALK

11/12/2025 invited to “Tavola rotonda sugli approcci didattici alla meccanica quantistica”. Speakers: M.Bondani, M. Chiofalo, M. Giliberti, M. Malgieri, M. Michelini, S. Satanassi.

5/09/2025 invited talk entitled “Un approccio didattico alla seconda Rivoluzione Quantistica” at the teacher training school “Frontiere Quantistiche a scuola”, 4 and 5 September 2025.

22/02/2025 invited speaker at Convegno Nazionale ITP CERN 2025, Pauda.

4/09/2024 invited talk entitled “Un approccio didattico alla seconda Rivoluzione Quantistica” at the teacher training school “Frontiere Quantistiche a scuola”, 3 and 4 September 2024.

15/10/2024 seminar “a research approach to FRA to NOS” in the NOS master’s course (coordinator Ebru Kaya) of Boğaziçi University, Turkey.

26/04/2024 invited talk at International Modern Physics & Research in Education Seminar Series ([IMPRESS](#)).

29/11/2023 invited talk by A.I.F. Prima e seconda rivoluzione quantistica a confronto tra modelli di oggetto e interazione (Pavia)

05/11/2020 invited speaker at the meeting "LA SECONDA RIVOLUZIONE QUANTISTICA: PRESENTE E FUTURO DELLE TECNOLOGIE QUANTISTICHE", Italian event of the educational session of the European Quantum Week (EQW).

26/04/2021 lecture to the cycle of PCTO meetings – in-depth meetings on quantum technologies, CSA project.

19/04/2021 lecture to the cycle of PCTO meetings – in-depth meetings on quantum technologies, CSA project.

COMMUNICATION, DISSEMINATION and GUIDANCE ACTIVITIES

Science person for a children's theatrical show about climate change, entitled "Re del mondo". I collaborated with Trame - Teatro e Musica, a cultural association that won a project funded by "Youz, officina della regione". The show is part of a bigger project called "Giovani oltre il sipario".

Invited talk:

14/05/2024 Invited speaker at Pint of Science 2024.

24/11/2020 lecture at the event "STAGE EUROPEI DI RAISE: RISULTATI, PROSPETTIVE DEL I° ANNO NELLE SCUOLE" festival of technical culture.

Communication and Outreach activities:

- Organization of the Earth Day 2024 in Sarsina, Italy
- Organization of the Italian Quantum Weeks events (2022, 2023, 2024) at University of Bologna
- Member of BeQuantum association (2023-now)
- Member of the Pint of Science team (2019-2021)
- Active member (from 2015 to 2017) and vice-president (2018-2019) of Bologna local committee of the Italian Association of Physics Students (AISF). Organization and planning of various events including:
 - School day (November 2018): IAPS (International Association of Physics Students) organized an international day in which secondary school students met university physics students and young researchers in order to in order to literate students and guide them for future choices.
 - Series of conferences at "l'Accademia delle scienze" in collaboration with the Società Italiana di Fisica (SIF): year 2018 (nobel prizes for physics 2015/2016); year 2019 (interpretations of quantum physics).
- Design and implementation of an activity for the "School Day" event organized by IAPS (International Association of Physics Students) on the topic: cosmic rays. Design and

implementation of a frontal lesson (1.30h) introducing cosmic rays and an experience in the laboratory (2.30h) at the Physics and Astronomy department (UNIBO).

Bologna, 27/03/2026

In fede, Sara Satanassi

A handwritten signature in black ink, appearing to read 'Sara Satanassi', written in a cursive style.