CURRICULUM VITAE of Leonardo Colletti as of June 2025

PERSONAL DATA	*First name:* Leonardo *Last name:* Colletti
EDUCATION and PROFESSIONAL QUALIFICATION	
From 11.06.2024	**Italian National Scientific Qualification, level I ("Full Professor")** Macrosector 02/D1 "Applied physics, history of physics and physics education" Scientific-disciplinary field FIS/08 "History of physics and physics education"
from 09.12.2018	**Italian National Scientific Qualification, level II ("Associate Professor")** Macrosector 02/D1 "Applied physics, history of physics and physics education" Scientific-disciplinary field FIS/08 "History of physics and physics education"
03.25.2015	**Master's Degree in Philosophy and Languages of Modernity** Università degli Studi di Trento, I, grade: 110/110 cum laude
6.18.2001-8.23.2003	**Post-Doc in Theoretical Physics,** Lawrence Livermore National Laboratory University of California and DOE, Livermore, California, USA
05.02.2001	**Ph. D. in Physics** (theoretical condensed matter) Università degli Studi di Trento, I, grade: very good
06.28.2000	**National (Italian) higher secondary Teaching Qualification** in Mathematics and Physics; Physics; Mathematics.
11.10.1998	**One-year Postgraduate Diploma in Physics Education** Department of Physics, Università degli Studi di Trento, I

11.26.1996	**Master Degree in Physics** Faculty of Sciences, Università degli Studi di Trento, I, grade: 110/110 cum laude
07.06.1991	**Scientific High School** – Liceo Statale "E. Torricelli", Bolzano. I; grade: 60/60
SUMMER SCHOOLS	
8.07 – 13.2005	***International Summer School on Philosophy, Probability and Physics*** University of Konstanz, Konstanz (GER)
06.05 – 09.2000	***Mini-school on Computational Physics*** Department of Physics, Università degli Studi di Trento, I
09.06-18.1999	***Condensed Matter Theory Summer School*** EPSRC – Institute of Physics, Coleg Harleg (GB)
09.21 – 10.02.1998	***Scuola Nazionale di Fisica della Materia*** Istituto Nazionale Fisica della Materia, ISI Foundation, Torino, I
09.14 – 18.1998	***Scuola Estiva di Filosofia della Scienza*** Società Italiana di Logica e Filosofia delle Scienze, Centro San Biagio, Cesena, I
VISITED INSTITUTIONS (host)	
07.04– 15.2016	***Karl-Popper Library*****,** Alpen-Adria Universität, Klagenfurt (AUT) (Dr. N. Sager)
06.15.2015	***Center for History of Physics*** American Institute of Physics, College Park (USA) (Dr. G. Good)
01.15 – 16.2015	***Kavli Institute for Theoretical Physics*** University of California, Santa Barbara (USA) (Dr. J. P. Hebert)
06.28– 07.14.2013	***Institut Wiener Kreis***

	Universität Wien, Vienna (AUT) (Prof. F. Stadler)
07.06 – 08.2010	***Central Teaching Hub*** University of Liverpool, Liverpool (GB) (Prof. G. Dickinson)
07.19 – 29.2005	***Physics Division,*** Lawrence Livermore National Laboratory, Livermore, California (USA) (Prof. M.H. Kalos)
07.15 – 09.2000	***Department of Physics*****, Sophia University**, Tokyo (JPN) (Prof. K. Takayanagi)
05.15 – 27.2000	***Department of Physics*****, Cornell University** (USA) (Dr. C. Umrigar)
02.01 – 04.02.1999	***Classe di Scienze*****, Scuola Normale Superiore**, Pisa, I (Prof. M.P. Tosi)
01.22– 29.1999, 02.02 – 08.2008	***Department de Estruct. de la Materia*****, Universitat de Barcelona** (SPA) (Prof. M. Barranco)
CURRENT POSITION	
since 09.01.2000 *(with leaves and sabbaticals)*	**Secondary School Teacher of Mathematics and Physics** Liceo Classico "G. Carducci" Bolzano, I
since a.y. 2003-2004	**Adjunct professor** for various mathematics and physics courses at the Free University of Bozen-Bolzano, I and at the University of Trento (both highly ranked institutions in Italy); currently teaching *Physics Education* at the course for the certification of teachers, Faculty of Education of the Free University of Bozen-Bolzano, and *Physics* at the Faculty of Engineering, same university.
PROFESSIONAL EXPERIENCE	
04.01-08.31.2023	**Research appointment** in *Physics Education,* Faculty of Education of the Free University of Bozen-Bolzano, I
from 7.1.2021 to 12.31.2022	**Research Fellow** in *Physics Education*, Faculty of Education of the Free University of Bozen-Bolzano, I – Research in the field of primary education (project *At-Ne-St* on

	sensors and complexity), elementary school teacher training (Erasmus+ project *VidNut* on the use of multimedia technologies in science teaching), metaphorical use of language and inclusion in science education and particularly in physics.
since 09.01.2000	**Teaching activities** in mathematics and physics for pupils aged 13-19 in the classical and linguistic branches of upper secondary school, with emphasis on meaningful teaching, aimed at effective, human understanding and open to an interdisciplinary horizon; - Teacher for excellence with in-depth courses; - Teacher for remedial courses; - Reference teacher for special training needs; - Coordinator of activities for compensation and integration; - Class coordinator; - Disciplinary group coordinator (math and physics department); - President and Commissioner at the State Examinations; - Production of physics educational short films; - Design/realization of demonstrations, experiments and small teaching apparatuses such as burning mirrors, inclined planes, angular momentum wheels, magnetic oscillators with every-day materials; - Lecturer in ESOL physics in the "trilingual" pilot project and in glotto-didactic deepening activities through teaching in English, from a.y. 2004-05 to a.y. 2010-11; - Responsible for the "Science and Technology" project a.y. 2000-2001 and a.y. 2004-2005 and 2005-2006; - Responsible for the Mathematics Olympiad; - Advising on the writing of high school term papers; - School Board member; - School's library board member; - Speaker, organizer and director of continuing education courses; - Accompanying person on numerous educational trips and language stays in various European countries; - Substitute for the school director for short periods of time; - Preparation of class and individual work plans based on the detection of the student's difficulties and needs, such as the *Personalized Education Plan* and the *Individualized Education Plan*; - Tutor for students abroad (advising on coursework/courses; translating grades and preparing grade conversion tables); - Writing cover letters for Italian and foreign universities; - In-depth and refresher activities on remedial and compensatory activities for students

	with special educational needs, such as learning disorders and migration background, addictions, assessment, first aid, occupational safety, use of film in education, legal aspects and responsibilities of the teaching function; - Assignment (2016) by the Italian Ministry of Foreign Affairs of the tenure of the chair of Mathematics and Physics at the Italian High School in Istanbul (Turkey) following a state public competition (2011). Declined.
from 2003 to 2016	**Collaborator of the Department of Physics, Università degli Studi di Trento, I** In particular: - from Oct. 1, 2003 to Dec. 31, 2009 scientific association assignment at the *National Institute of Nuclear Physics* within Group 4, at the Padova Facility, Trento Connected Group: research in the group of Prof. F. Pederiva (theoretical physics, many-body systems) on electron confined systems and the sign problem in the Monte Carlo method; production of 5 papers in international journals; 5 presentations at international conferences, 2 invited seminars; - from a.y. 2009-10 to a.y. 2015-16: adjunct lecturer; studies in history, didactics and philosophy of physics, collaboration with the Physical Sciences Communication Laboratory (Prof. S. Oss) in teaching (History of Physics) and popular activities (speaker at various events). Production of: 1 book; 13 journal articles (6 international, 7 national); 4 conference presentations (3 international, 1 national); 8 invited seminars/public lectures (2 international, 6 national); organization of 1 international conference.
January-February 2020	**Collaborator of Prof. Federico Corni (Free University of Bozen-Bolzano, Faculty of Education)** as an expert in elementary school classes to conduct the Erasmus+ project *FCHgo! - Discover the Energy of Hydrogen*, for the promotion of the hydrogen fuel cell through the dissemination in schools of innovative materials and methodologies (18 hours).
a.y. 2019-20	**Organizer and Director of Teacher Refresher Course "*Narrating science*"** held at Liceo "G. Carducci", Bolzano, I (9 hours).
a. y. 2018 – 19	**Research activities on teaching kinematics with kinaesthetic approach** in the elementary school setting. Direct experimentation with fourth- and fifth-year elementary school classes of the Marcelline Institute in Bolzano (8 hours).

a.y. 2017-18	**Co-organizer of the Project "*The Harmonic Law. Kepler's Third Law*"** (with P. Maraner, L. Bertolini, B. Ricci) at the Liceo "G. Carducci", Bolzano, I. Lectures, exhibition with tours, interviews, video production, educational initiatives.
1.1.2018-12.31.2018	**Contributor to the Department of Education, University of Rome III** (group coordinated by Prof. Ana Millan Gasca): "*Children's initiation into scientific thinking*." Speaker at the refresher course for primary and secondary school teachers.
a. s. 2016 – 17	**Speaker for the Italian-language School District, Bolzano, I** as part of the "Narrating Science" initiative in collaboration with *suBZero - Stories of Science.*
October-November 2013	**Organizer and Director of Teacher Refresher Course** *"Physics and Chemistry Laboratory with Simple Materials*" Held at the "G. Carducci" high school, Bolzano (6 hours).
May 2012	**Collaboration contract with the Italian-language School District, Bolzano, I** Speaker as part of the "*Philosophy Workshop*" of the Workshop Development Plan, recognized as a refresher for teachers, on "*The Theory of Relativity*" (3 hours).
3.3.2012	**Invitation from the Department of Culture, Municipality of Correggio, I** Speaker for the annual "Darwin Day": "Conjectures and Figurations" Conference room, Princes Palace, Correggio, I.
March 2011	**Collaboration with the Italian-language School District, Bolzano, I** Speaker at conference for high school students: "*Quantum mechanics: what it is and why it matters to us*." High School of Science "E. Torricelli", Bolzano, I (3 hours).
March 2011	**Collaboration with the Italian-language School District, Bolzano, I** Speaker on "*Quantum theory and its philosophical consequences*" as part of the course on

	"Science and Philosophy" of the Provincial Teacher Refresher Plan (5 hours).
February 2010	**Assignment from the Tridentine Museum of Natural Sciences, Trento, I** Preparation of the texts introducing the history of astronomy and the script (6 fictional interviews with famous astronomers) for the exhibition "*Space! Astronomy on display*."
March 2005	**Collaboration with the Italian-language School District, Bolzano, I** Speaker on "*Physics in Leonardo da Vinci's Codex Atlanticus*" as part of the course on "*Leonardo da Vinci's Codex Atlanticus" of* the Provincial Refresher Plan for Primary and Secondary School Teachers (4 hours); preparation of teaching materials (published in *Leonardo da Vinci Curious Genius*. Teaching materials prepared by the Ist. Ped. Di Bolzano, Anthelios Editions, 2005)
10.01.2003 – 09.30.2004	**Participating Guest, AX Division, Defense and Nuclear Technologies** **Lawrence Livermore National Laboratory, Livermore (CA, United States)** Continued collaboration with Prof. Kalos in theoretical condensed matter physics research (sign problem in Quantum Monte Carlo).
06.18.2001 – 08.23.2003	**Post-Doctoral Research Staff Member** **Center for Applied Scientific Computing, Lawrence Livermore National Laboratory** (University of California and U.S. Department of Energy), Livermore, California (USA) Research in theoretical and computational physics of matter, particularly with the Quantum Monte Carlo method applied to fermionic systems. Development of new concepts and methodologies and their mathematical and computational implementation. Development of systems of parallel computing algorithms. Composition of scientific publications, presentation of results in seminars and congresses of national and international stature. Supervisor: Prof. M. H. Kalos.
07.15 – 09.14.2000	**REES 2000: Research Experience for European Students** Scholarship Winner. Selection on national and European basis for research period at Japanese Cultural Institutions operated by *Japan International Science and Technology Exchange Center*; spent stay at Department of Physics, Sophia University (Tokyo), research

	group of Prof. K. Takayanagi. Use of Hartree-Fock computational methods for homogeneous and two-dimensional electron system.
02.02 – 04.01.1999	**Research internship funded by the National Institute of the Physics of Matter (selection winner)** *"Study of correlation properties of reduced-dimensional electronic systems"* at the Scuola Normale Superiore in Pisa. Supervisor: Prof. M. P. Tosi.
February-April 1998	**Guide for school groups (elementary, middle, high school)** for the exhibition "*Toys and Science"* at the Natural Science Museum in Bolzano, I
from 1.1997 to 2.1998	**Various substitute teaching assignments in science, mathematics, physics, computer science** in middle schools, technical colleges, teacher training colleges and vocational schools in Bolzano, I.
09.05 – 11.1996	**Internship at IBM Italy, residential seminar (national selection winner)** IBM Center, Novedrate, Como, I.
March-April 1996	**Guide for school groups (elementary, middle, high school) and visitors** for the exhibition "*100 Years of X-rays"* at the Department of Physics, Università degli Studi di Trento, I.
a. y. 1994-95 and 1993-94	**Student orientator for the science faculties of the University of Trento** at Opera Universitaria, Università degli Studi di Trento, I. (more than 30 local schools visited).
ACADEMIC TEACHING	
a. y. 2024 – 25	**Adjunct professor of *Physics Education*** Free University of Bozen-Bolzano, Faculty of Education - 16 hours (in Italian) **Adjunct professor of *Physics*** Free University of Bozen-Bolzano, Faculty of Engineering - 50 hours (in English)

a. y. 2023 – 24	**Adjunct professor of *Physics Education*** Free University of Bozen-Bolzano, Faculty of Education - 30 hours (in German)
a. y. 2022 – 23	**Adjunct professor of *Physics Education*** Free University of Bozen-Bolzano, Faculty of Education - 60 hours (in German)
a. y. 2021 – 22	**Adjunct professor of *Physics Education*** Free University of Bozen-Bolzano, Faculty of Education - 60 hours (in German)
a. y. 2020 – 21	**Adjunct professor of *Physics Education – Laboratory*** Free University of Bozen-Bolzano, Faculty of Education – 140 hours (in German)
a. y. 2019 – 20	**Adjunct professor of *Physics Education – Laboratory*** Free University of Bozen-Bolzano, Faculty of Education - 20-hour course (in German) **Adjunct professor of *Physics Education – Laboratory*** Free University of Bozen-Bolzano, Faculty of Education - 20-hour course (in Italian) **Adjunct professor of *Physics II*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 60-hour course (in English)
a. y. 2018 – 19	**Adjunct professor of *Physics II*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 60-hour course (in German) **Adjunct professor of *Physics Education – Laboratory*** Free University of Bolzano, Faculty of Education - 20-hour course (in German)

a. y. 2017 – 18	**Adjunct professor of *History of Science***
	Università di Trento, Department of Humanities and Philosophy - 30-hour course (in Italian)
a. y. 2016 – 17	**Adjunct professor of *History of Physics***
	Università di Trento, Department of Physics - 48-hour course (in Italian)
a. y. 2015 – 16	**Adjunct professor of *History of Physics***
	University of Trento, Department of Physics - 48-hour course (in Italian)
a. y. 2014 – 15	**Adjunct professor of *History of Physics***
	University of Trento, Department of Physics - 18-hour course (in Italian)
	Active Formative Internship - PAS for aspiring secondary school teachers.
	Adjunct professor of *History of Physics*
	University of Trento, Department of Physics - 48-hour course (in Italian)
a. y. 2013 – 14	**Adjunct professor of *Physics II***
	Free University of Bozen-Bolzano, Faculty of Science and Technology - 30-hour course (in English)
a. y. 2012 – 13	**Adjunct professor of *History of Physics***
	Università di Trento, Department of Physics - 48-hour course (in Italian)
	Adjunct professor of *History of Physics*
	Università di Trento, Department of Physics - 18-hour course (in Italian)
	Active Formative Internship - PAS for aspiring secondary school teachers.
	Adjunct lecturer of *Physics II*
	Free University of Bozen-Bolzano, Faculty of Science and Technology - 60-hour course (in

	English)
a. y. 2011 – 12	**Adjunct professor of *History of Physics*** Università di Trento, Department of Physics - 48-hour course (in Italian) **Adjunct Lecturer of *Mathematical Methods for Experimental Science*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English)
a. y. 2010 – 11	**Adjunct Lecturer of *Physics*** Free University of Bolzano, Faculty of Science and Technology - 30-hour course (in English) **Adjunct professor of *History of Physics*** University of Trento, Department of Physics - 48-hour course (in Italian)
a. y. 2009 – 10	**Adjunct Lecturer in *Mathematical Methods for Physics*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English) **Adjunct professor of *History of Physics*** University of Trento, Department of Physics - 48-hour course (in Italian)
a. y. 2008 – 09	**Adjunct Lecturer of *Mathematical Methods for Physics*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English)
a. y. 2007 – 08	**Adjunct Lecturer of *Mathematical Methods for Physics*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English)

a. y. 2006 – 07	**Adjunct lecturer of *Mathematics Support*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English) **Adjunct Lecturer of *Mathematical Methods for Physics*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English)
a. y. 2005 – 06	**Adjunct lecturer of *Mathematics Support*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English) **Adjunct Lecturer of *Mathematical Methods for Physics*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English)
a. y. 2004 – 05	**Adjunct lecturer of *Mathematics Support*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 20-hour course (in English) **Adjunct Lecturer of *Mathematical Methods for Physics*** Free University of Bozen-Bolzano, Faculty of Science and Technology - 36-hour course (in English)
a. y.. 2003 – 04	**Adjunct Lecturer of *Mathematics for Economists*** Free University of Bozen-Bolzano, Faculty of Economics and Management - 60-hour course (in English) **Adjunct Lecturer of *Introduction to Physics***

	Free University of Bozen-Bolzano, Faculty of Science and Technology - 16-hour course (in English)
a. y. 2001 – 2002	**Adjunct Professor *Physics II B*** Las Positas College, Livermore, California (USA) - 100-hour course (in English)
FURTHER ACADEMIC EXPERTISE	
11-13.11.2022	**Participation at "*Mille e una Scienza*"** Children's Outreach Activities: *Environment and Energy in the Multilab*; *Hydraulic and electrical circuits* (with F. Corni) Free University of Bozen-Bolzano
7.7.2022	**Chairperson, Session "Early Science Learning"** GIREP Conference 2022 Teaching-Learning Contemporary Physics, Ljubljana (SLO).
6.2022	**Member of the Organizing Committee** *Complexity and Narrative-Integrating Sciences and Humanities for Science Education* International Exploratory Workshop for founding an Integrated Primary Science Education (IPSE) project at UNIBZ. Faculty of Education, Free University of Bozen-Bolzano, Brixen 27-29/6 2022
1.1.2021- 31.12.2023	**Member of the *Historic Sites Committee*** American Physical Society, College Park, Maryland (USA). Participation in the work of the committee (3-6 members) responsible for evaluating and selecting international locations annually nominated for "Historic Site" recognition in the history of physics (particularly in North America). Authored the inscription text for the APS Historic Site plaque placed at Mayer Hall, University of California, San Diego.

6. 2021	**Jury member of the European competition – Erasmus+ Project "FCHgo!"** For primary and lower and upper secondary schools - Italian section
3.7.2019	**Chairperson, Session "Early Science Learning"** GIREP-ICPE-ECPE-MPTL-2019 Teaching-Learning Contemporary Physics Budapest (HUN).
2.7.2019	**GIREP-ICPE-ECPE-MPTL-2019 Teaching-Learning Contemporary Physics Budapest (HUN).** Founding member of the GIREP Community on Teaching/Learning Quantum Physics. Group Leader, Discussion Workshop on Teaching/Learning Quantum Physics.
2019	**Member of the Organizing Committee** International Workshop *"1937, Palermo: The discovery of Technetium"* Department of Physics and Chemistry, University of Palermo (2/18/2019)
2019	**Member of the Scientific Committee** International Workshop *"1937, Palermo: The discovery of Technetium"* Department of Physics and Chemistry, University of Palermo (2/18/2019)
2017	**Creator and drafter of the Nomination of the Department of Physics and Chemistry of the University of Palermo as a "Historic Site"** The Nomination was accepted by the European Physical Society in 2017. "The EPS Historic Sites Award commemorates places in Europe important for the development and the history of physics."
1.1.2014-12.31.2016	**Member of the *Committee on Informing the Public*** American Physical Society, College Park, Maryland (USA). Advisory activities in the committee (9 members) that evaluates and distributes funding

	for science outreach and early education projects in the United States and the rest of the world.
a.y. 2014-15	**Creator and co-organizer of the first PI-Day in South Tyrol** Faculty of Science and Technology, Free University of Bozen-Bolzano Conceptualization, contacts with press and speakers, involvement activities of co-organizing institutions: Free University of Bozen-Bolzano, Italian and German School Boards. Creator of the motto "Mathematics unites cultures - Mathematik verbindet die Kulturen."
2.22.2011	**Chairperson, Focus Session "*New ways of communicating physics*"** American Physical Society's March Meeting, Dallas, Texas (USA)
a. y. 2010 – 2011	**Creator (winner of a "call") and co-organizer of the Focus Session "*New ways of communicating physics*,"** American Physical Society's March Meeting, Dallas, Texas (USA)
2006	**Official translator into Italian of the *Force Concept Inventory* (FCI) and *Mechanics Baseline Test* (MBT) filed at http://modeling.asu.edu/R&E/Research.html** FCI and MBT are two of the world's best known mechanics basic skills assessment questionnaires (D. Hestenes, M. Wells, A Mechanics Baseline Test, The Physics Teacher, 30, 159 (1992); D. Hestenes et al, The Force Concept Inventory, The Physics Teacher, 30, 141 (1992)).
2003	**Juror for the Intel International Science and Engineering Fair, California Section,** Walnut Creek (March 2003) (primary and secondary students)
MEMBERSHIPS	
since 2016	Ordinary member of the European Physical Society (EPS)
from 2016 to 2022	Ordinary member of GIREP - Group International de Recherche sur l'Enseignement de la

	Physique
from 2014 to 2019	Ordinary member of the Italian Association for the Teaching of Physics (AIF);
from 2003 to 2016	Affiliated member of the Department of Physics, University of Trento;
from 2003 to 2009	Affiliated with the National Institute of Nuclear Physics, Padua Section, Trento Group (INFN);
since 2002	Member of the American Physical Society: - member of the Condensed Matter Section (2001 to 2009) - member of the Forum on History of Science (since 2001) - member of the Forum on Education (since 2001) - member of the Forum on Physics and Society (since 2001)
from 1998 to 2001	Member of the National Institute of the Physics of Matter (INFM);
from 1999 to 2022	Full member of the Italian Society for Logic and Philosophy of Science (SILFS).
RESEARCH and SCIENTIFIC ACTIVITIES	My research in the teaching, history, and philosophy of physics—fields that have always been central to my academic interests—has become my primary focus since 2009. This work combines both theoretical investigation and action-research in the classroom, aimed at refining the ways in which physics is presented and understood. I have consistently explored how to reveal the deeper conceptual essence of physical ideas, their effectiveness in communication, and their connections to everyday language and broader cultural contexts. Alongside my publications in these areas—both in physics education and physics-education philosophy—I have also witnessed firsthand the success of this approach through the strong and lasting appreciation expressed by students and their families. My work seeks to bridge the so-called 'two cultures'—scientific and humanistic—by using metaphor, analogy, and imagery to

	expand the range and resonance of scientific models, particularly for students with no technical background. More recent, specifically since 2018, is the focus on science teaching in the early educational age, with attention always on language (including body language, and thus kinaesthetic learning). Points to highlight: publication of a novel on the history of physics with original links to the broader cultural scenario; publication of a book on the history and philosophy of physics explained through art, which was also translated into Korean; speaker at the Karl Popper Centenary Congress; creator and organizer of a Focus Session on effective physics communication at the March Meeting in 2011; appointment as a member (the only European) of the Committee on Informing the Public of the American Physical Society for the three-year period 2014-2016. I am currently collaborating with Prof. Corni (Free University of Bozen/Bolzano) on the metaphorical approach in primary science teaching, on the production of teaching materials on the subject of sensors and complexity in primary and kindergarten (AT-NE-ST project), and on the design and production of videos for teacher training (Erasmus+ project "VidNut"). I am also working on a book (under contract with CRC Press - Routledge) with the working title of "Making Physics Education Inclusive" concerning the inclusive teaching of physics (due in Sept. 2025). Research in theoretical condensed matter physics. It mainly covered the period 1995-2009 and focused on the study of low-dimensional electronic systems, such as quantum dots and rings. For the solution of the Schroedinger equation in the specific case, computational techniques such as Hartree-Fock, Density Functional in the local density approximation and especially quantum Monte Carlo were used and developed. The main collaborators were Enrico Lipparini and Francesco Pederiva (Trento), M. Barranco and M. Pi (Barcelona), Cyrus Umrigar (Cornell U.) and Malvin Kalos (Livermore). The main results obtained concern the accurate calculation of energy levels, with particular reference to Hund's rule in artificial atoms, and the fundamental energy of the homogeneous helium-3 system with a technique that represents one of the best attempts to circumvent the "sign problem." Points to highlight: researcher at Lawrence Livermore National Laboratory (Livermore, California) from 2001 to 2003; oral contribution selected for the international conference *Recent Progress in Many-Body Theory*, Barcelona 2007;

	National award from the journal *Le Scienze* for young scholars under 35.
PUBLICATIONS	
	BOOKS: L.C., *Onde di Materia. Louis de Broglie, la meccanica quantistica e noi*. (“Matter Waves: Louis de Broglie, Quantum Mechanics, and Us”). Edizioni Dedalo, Bari, I, p. 120 (will be published September 2025) L.C.*, Il testamento di Joseph Mariotti* (Science novel, in Italian) Lindau, Torino, I, p. 576, 2022. ISBN: 9788833537993 Acknowledgements: 2nd at the *Casentino 2023 International Literary Prize*; 1st at the *City of Sestri Levante International Prize*; *Argentario International Prize* Finalist; Special Jury Prize at the *City of Latina International Prize*. L.C., *Quadri di un’esposizione. Le grandi idee della fisica attraverso 32 capolavori della pittura.* (“Pictures of an exhibition. The great ideas of physics through 32 masterpieces of painting.”) Lindau, Torino, I, p. 272, 2011. ISBN: 9788871809274 New expanded edition: August 2019, *Quadri di un’esposizione. Le grandi idee della fisica attraverso 33 capolavori della pittura,* with Preface by Stefano Oss. ISBN: 9788833530673 Korean edition: **레오나르도 콜레티 지음,** 명화로 보는 32가지 물리이야기 Little Seed Publishing, Seul, p. 360, 2014. ISBN: 978-89-6423-171-5 **BOOK CHAPTERS:** Colletti, L., Krik, S., Lugli, P., Corni, F. (2024). *Addressing Complexity in Primary School Through Basic Physics and Metaphorical Narrative: Learning Circuits*. In:

Faletič, S., Pavlin, J. (eds) Teaching and Learning Physics Effectively in Challenging Times. Challenges in Physics Education. Springer, Cham. https://doi.org/10.1007/978-3-031-72541-8_16

L. C., *Meeting Husserl's Crisis of the European Sciences: developing a richer science and richer humanity from cross-fertilization of physics with literature*
In: *Physics and Literature. Concepts – Transfer – Aestheticization*
Ed. By Heydenreich, A/Mecke, K.
De Gruyter Series on the Erlangen Center for Literature and Natural Science Studies, pp. 203-218, July 2017.
ISBN: 978-3-11-048111-2

L. C., *Science concepts as semantic-increment generators*
Actas del VIII Congreso de la Sociedad de Logica, Metodologia y Filosofia de la Ciencia en España, pp. 367-368 (2015)
ISBN: 978-84-606-9303-1

L. C., F. Pederiva, E. Lipparini and C. J. Umrigar
Polarizability in Quantum Dots via Correlated Quantum Monte Carlo
in: *Recent Progress in Many-Body Theories*
Series of Advances in Quantum Many-Body Theory, World Scientific, Vol.11, pp. 213-216 (2008)
ISBN: 978-981-277-987-8 DOI: 10.1142/9789812779885_0028

F. Pederiva, F. Reboredo, D. Bressanini, D. Guclu, L. C., C. J. Umrigar, M. H. Kalos
The Fixed Hypernode Method for the Solution of the Many Body Schrödinger Equation
In: *Advances in Quantum Monte Carlo*, Chapter 7, 81-92; Editors: J.B. Anderson e S: M. Rothstein, Oxford University Press (2007)
ISBN13: 9780841274167 DOI: 10.1021/bk-2007-0953.ch007

ARTICLES in REVIEW:

F. Corni, A. Pahl, L. Colletti, H. U. Fuchs
First education in the fundamentals of figurative thinking in physics
Il Nuovo Cimento **46 C**, 197 (2023)

	L.C., *A Philosophical Minimum for Physics Teachers?* The Physics Educator, **5**(3), 2350010 (2023) L.C., S. Krik, P. Lugli, F. Corni *Teaching and investigating on modelling through analogy in primary school* Education Sciences, **13**(9), 872 (2023) L. C., *An Inclusive Approach to Teaching Quantum Mechanics in Secondary School* Education Sciences, **13**(2), 168 (2023) L.C., *Making Physics Teaching Inclusive Through a Humanistic Approach* The Physics Educator, **4**(3), 2250016 (2022) F. Corni, M. Michelini and L.C. *Training prospective primary and kindergarten teachers on electric circuits by using conceptual metaphors.* Education Sciences, **12** (7), 457 (2022) L.C., *The Italian secondary-school graduation exam: connecting physics with the humanities* Physics Education, **56,** 015016 (2021) ISSN: 0031-9120 L. C., P. Pellegrini *Merleau-Ponty's Phenomenology as a Hermeneutic Framework for Quantum Mechanics* Axiomathes, **30**, 49-68 (2020) ISSN: 1122-115 DOI 10.1007/s10516-019-09433-2 L. C., *Rotations in the primary school: see, move, think* Primary Science, **155**, 13-15 (2018) ISSN: 0269-2465 L. C., *Teaching the nature of science through art: a new art of teaching* Physics Education, **53** 015004 (2018) ISSN: 0031-9120 L. C., *L'insegnamento umanistico della fisica*

	La Fisica nella Scuola, XLIX, 2 Supplemento pp. 72-75 (2016) ISSN: 1120-6527 L. C., *Dualities Worth Knowing in the History of Physics* (invited) AIP History Newsletter, Vol. 47, No. 2, p. 2 (2015) ISSN: 1048-1338 L. C., *Overturning Dilthey's View on Natural Sciences* Epistemologia, XXXVII (2), pp. 202-216 (2014) ISSN: 0392-9760; DOI 10.3280/EPIS2014-002002 L. C., *Dare significato alla fisica* La Fisica nella Scuola, XLVII, 1, pp. 17-27 (2014) ISSN: 1120-6527 L. C., *Il 'lamento di Schrödinger' e il ruolo della soggettività nelle scienze fisiche* Atti Acc. Rov. Agiati, a. 261, ser. IX, vol. I, B: pp. 21-41 (2011) ISSN: 1123-8038 L. C., *Bridging the two cultures* (invited) Physics World, 24, (6), p. 16 (2011) ISSN: 0953-8585 L. C., *Dalla pila alla radio: una storia stilizzata dell'elettromagnetismo e relativa epistemologia* Fillide, 2 (2011) ISSN: 2281-5007 L. C., *Una breve aneddotica al servizio dell'epistemologia della fisica* Fillide, 1 (2010) ISSN: 2281-5007 ISSN: 2281-5007 L. C., *On dragons and turkeys: physics for future citizens* School Science Review 91, pp. 337-339 (2010) ISSN: 0036-6811 L. C., *Dimenticare il destino e controllare il caso: una svolta nella fisica moderna* Pagine Per, VII, Bologna: Assessorato alla Cultura, pp. 43-55 (2010)

	L. C., F. Malet, M. Pi, F. Pederiva *Quantum Monte Carlo study of few-electron concentric double quantum rings* Physical Review B, 79, 125315 (2009) ISSN: 2469-9969 DOI: https://doi.org/10.1103/PhysRevB.79.125315 L. C. et al. *Mermin habitually answers opinions, real and abstract* Physics Today, 62, 9, p. 10 (2009) ISSN: 0031-9228 DOI: 10.1063/1.3226701 *L. C.*, F. Pederiva, E. Lipparini, C. J. Umrigar *Spin- and Charge Density Excitation in Quantum Dots via Quantum Monte Carlo simulation* Physica Status Solidi B, 244, pp. 2317-2321 (2007) ISSN: 1521-3951 DOI: 10.1002/pssb.200674605 M.H. Kalos, *L. C.*, F. Pederiva *Fermion Monte Carlo calculations on liquid-^{3}He* Journal of Low Temperature Physics, 38, ¾, pp. 747-752 (2005) ISSN: 0022-2291 DOI:10.1007/s10909-005-2297-9 L. C. *Una proposta per l'educazione scientifica in Italia* Didattica delle Scienze e Informatica nella Scuola, 237, 58-60 (2005) ISSN: 1593-537X L. C. *Valore e attualità dell'insegnamento della fisica* La Fisica nella Scuola, XXXVII, 2, pp. 70-74 (2004) ISSN: 1120-6527 L. C., F. Pederiva, E. Lipparini, C.J. Umrigar *Investigation of excitation energies and Hund's rule in open shell quantum dots by Diffusion Monte Carlo simulations* European Physical Journal B, 27, 385 (2002) ISSN: 1434-6036 M. Barranco, L. C., A. Emperador, E. Lipparini, M. Pi, Ll. Serra

W*ave-vector dependence of spin and density multipole excitations in quantum dots*
Physical Review B, 61, 8289 (2000)
ISSN: 2469-9950

N. Barraza, L. C., M.P. Tosi
Vacancies in quantal Wigner crystals near melting
Solid State Communications, 112, 261 (1999)
ISSN: 0038-1098

L. C.
Atomi Artificiali
Le Scienze, 374, 78 (1999)
anche in Nuovi Materiali, Le Scienze Quaderni, 115 (2000) e in Nanotecnologie, Le Scienze Dossier, 10 (2002)
ISSN: 0036-8083

E. Lipparini, *L. C.*, G. Orlandini, Ll. Serra.
Collective spin states in the electron gas in different dimensions and geometries
Czechoslovach Journal of Physics, 48, 5 (1998)
ISSN: 0011-4626

THESES:

"Diffusione di elettroni da metalli alcalini e modi collettivi di spin"
Tesi di laurea in Fisica, Università degli Studi di Trento, 1996.
Relatori: E. Lipparini, G. Orlandini.
(condensed matter theory/nuclear physics)
Published in: E. Lipparini, *L. C.*, G. Orlandini, Ll. Serra, *Collective spin states in the electron gas in different dimensions and geometries* Czechoslovach Journal of Physics, 48, 5 (1998)

"Modern Metaphysics"
Tesina di laurea in Fisica, Università degli Studi di Trento, 1996.
Relatore: L. Vanzo.
(history and philosophy of physics)
"Ma gli atomi esistono davvero? Artificio e realtà nelle proposizioni scientifiche"
Tesi di Perfezionamento in Didattica della Fisica, Università degli Studi di Trento,

1998. Relatore: F. Dalfovo.

"LD – and Quantum Monte Carlo Approaches to two-dimensional Quantum Dots"
PhD thesis in physics, Università degli Studi di Trento, 2001.
Relatore: E. Lipparini.
((condensed matter theory)
Published in: *L. C.*, F. Pederiva, E. Lipparini, C.J. Umrigar, *Investigation of excitation energies and Hund's rule in open shell quantum dots by Diffusion Monte Carlo simulations,* European Physical Journal B, 27, 385 (2002); *M. Barranco*, L. C., A. Emperador, E. Lipparini, M. Pi, Ll. Serra, W*ave-vector dependence of spin and density multipole excitations in quantum dots,* Physical Review B, 61, 8289 (2000); L. C., *Atomi Artificiali,* Le Scienze, 374, 78 (1999).

"Le scienze come generatrici di incrementi semantici"
The sciences as generators of semantic increments.
Master's Thesis in Philosophy and Languages of Modernity, Università degli Studi di Trento, 2015.
Relatori: S. Zucal, M. Nobile, P. Giacomoni.
(theoretical philosophy, history, science education and communication)

BOOK REVIEWS

L. C.
Giorgio Israel, *Meccanicismo. Trionfi e miserie della visione meccanica del mondo*. Bologna, Zanichelli, 2015
La Fisica nella Scuola, L, 3 (2017), 144-145

POPULAR SCIENCE ARTICLES FOR LOCAL NEWSPAPERS:

L.C., *Se la scuola rema contro l'istruzione*, Alto Adige, Bolzano, 9/6/2017

L. C., *Intervista a Lucio Russo*, Alto Adige, Bolzano, 12/3/2015
(colloquium on the meaning of mathematics in today's)

L. C., *Ma la vera invasione è quella degli spot***,** Alto Adige, Bolzano, 21/1/2008
(epistemology and science in everyday life)

	L. C., *Omeopatia, fra scienza e democrazia***,** Alto Adige, Bolzano, 20/6/2007 (Critical thinking and physics) L. C., *Il dio della fisica è ancora qui*, Alto Adige, Bolzano, 19/4/2005 (centennial celebration of Einstein's annus mirabilis) L. C., *Omeopatia e informazione. Le opinioni a confronto*, Il Corriere dell'Alto Adige, 3.8.2004 (science and science communication) L. C., *I maghi paghino le tasse e non prendano contributi*, Il Corriere dell'Alto Adige, 15.1.2004 (science and superstition) L. C*., L'attualità di Popper***,** L'Adige *e* Il Mattino – Trento, Bolzano*,* 28/7/2002 (extensive remembrance for the centenary of K. Popper's birth)) L. C*., Fermi, la morale e la guerra*, Il Mattino – Bolzano, 19/10/2001 (long remembrance for the centenary of E. Fermi's birth)
CONFERENCES, TALKS and SEMINARS	
11.10.2024	*Una piccola storia quantistica.* (transl.: *A short quantum story)* Conference at the Science Festival "Mille e una scienza", Bolzano
04.03.2024	*Il caso non a caso.* (transl.: *Chance not by chance.)* Opening conference for the Exhibition on Chance and Probability Volta High School, Trieste, I.
11.11.2023	*Tra Scienza e Filosofia.* (transl.: *Between Science and Philosophy)* (public lecture at the invitation of the Giorgio La Pira Association) Kursaal, Kurhaus, Merano – Meran, I
06.02.2023	*Autorenlesung "Il testamento di Joseph Mariotti".* (public lecture at the invitation of Associazione il Ponte, Marburg, GER) Saal des Fachbereichs Physik, Universität Marbug, GER

12.02.2022	*Studiare la complessità dell'ambiente con l'utilizzo di un modello e di sensori per la scuola secondaria di primo grado* *(*transl.: *Studying the complexity of the environment with the use of a model and sensors for secondary school)* (selected oral contribution) Convegno "Educazione Territori Natura – Utopia, impegno e cura per trasformare il futuro", Libera Università di Bolzano, Bressanone
11.19.2022	*Perché divulgare perché? (*transl.: *Why popularizing whys?)* (invited contribution) Convegno "Get curious! Design, Education and Science" Libera Università di Bolzano, Bolzano
10.01.2022	*Stimolare il ragionamento analogico nella scuola primaria attraverso l'esperienza scientifica* (transl.: *Stimulating analogical reasoning in elementary school through scientific experience)* (selected oral contribution) Convegno Ettore Orlandini "Lo sviluppo professionale degli insegnanti in didattica della fisica", Università degli Studi di Udine, Udine
09.12.2022	*Il percorso di formazione in fisica per insegnanti di scuola materna e primaria alla Libera Università di Bolzano: Presupposti teorici e aspetti pratici.* (transl.: *The physics training course for kindergarten and elementary school teachers at the Free University of Bozen-Bolzano: Theoretical assumptions and practical aspects*.) (invited contribution) 108° Congresso della Società Italiana di Fisica, Università degli Studi di Milano, Milano, Sezione di Storia e Didattica della Fisica
07.07.2022	*Addressing complexity in primary school through basic physics and metaphorical narrative* (selected oral contribution) GIREP Conference 2022 "Effective Learning in Physics: from Contemporary Physics to Remote Settings", Lubiana (Slovenia)
04.18.2021	*Must physics teacher know philosophy? If yes, which one?* (selected oral contribution)

	APS April Meeting 2021, Online & Everywhere Session H17: Tools, Techniques and Strategies for Physics Education
03.15.2021	*Making Physics Inclusive* (selected oral contribution) APS March Meeting 2021, Online & Everywhere Session C15: Physics Education at All Stages
01. 17.2020	*Il grande oceano della verità. Fisica per umanisti.* *(*transl.: *The great ocean of truth. Physics for humanists)* Conference-monologue for the "Italian National Night of the Classical High School", 2020 edition Liceo "G. Carducci", Bolzano
07. 04.2019	*Quantum mechanics as a source of hermeneutical tools* (selected oral contribution) GIREP-ICPE-EPEC-MPTL 2019 Conference "Teaching-Learning Contemporary Physics", Budapest (7.1- 5.2019)
07.02.2019	*Kinematics via kinaesthetics in the primary school* (selected oral contribution) GIREP-ICPE-EPEC-MPTL 2019 CONFERENCE "Teaching-Learning Contemporary Physics" Budapest (7.1-5.2019)
02.18.2019	*Emilio Segrè and physics* (invited) International Workshop „1937, Palermo: The discovery of Technetium" Dipartimento di Fisica e Chimica, Università di Palermo, Palermo
01.11.2019	*Popper, Darwin e il metodo Monte Carlo* V Notte Nazionale del Liceo Classico Liceo "G. Carducci", Bolzano
11.08.2017	*Raccontare la fisica con le immagini* (transl.: *Telling physics with images*) (invited seminar) Dipartimento di Scienze della Formazione, Università Roma III
09.15.2016	*Exploiting physics concepts on the cultural level: how to making more of physics*.

	A proposal for the CIP. CIP Meeting, APS, Washington DC (videoconferenza)
09.05.2016	*Exploiting physics concepts on the cultural level: how to making more of physics*. (selected oral contribution) 2nd International Conference on the History of Physics Ecophysics, Pöllau (Austria) (5-7.9.2016)
----	*Making physics humanistic. A conceptual-laboratory proposal*. (selected oral contribution) GIREP Conference 2016 Institute of Physics, Jagellonian University, Krakow (30.8-3.9.2016) (participation declined for lack of funds)
10.22.2015	*L'insegnamento umanistico della fisica* *(*transl.: *The humanistic teaching of physics)* (selected oral contribution) 54° Congresso Nazionale dell'Associazione per l'Insegnamento della Fisica, MuSe, Trento (21-24.10.2015)
07.09.2015	*Science concepts as semantic-increment generators* (selected oral contribution) VIII Congress of the Spanish Society for Logic, Methodology and Philosophy of Science, Facultat de Filosofia, Universitat de Barcelona, Barcellona (7-10.7.2015)
06.15.2015	*Dualities Worth Knowing in the History of Physics* (invited seminar) Center for the History of Physics, American Institute of Physics, College Park, Maryland (USA)
02.09.2015	*Il dibattito storico ed epistemologico sulla fisica dei quanti* (Invited by IPRASE, Trento) Liceo Classico "G. Prati", Trento
06.01.2014	*Meeting Husserl's* Crisis of the European Sciences*: developing a richer science – and richer humanity – from cross-fertilization of physics with literature* (selected oral contribution)

	Inaugural Conference of ELINAS: Erlangen Center for Literature and Natural Sciences*;* Friedrich-Alexander Universität Erlangen-Nürnberg
05.14.2014	*Slow Science* (with C. Bonomi e O. Jousson) (invited) MuSe Fuori Orario, Museo delle Scienze, Trento
02.20.2013	*Galileo, il suo mondo e altri scienziati suoi contemporanei* *(*transl.: *Galileo, his world, and other scientists of his contemporaries)* (conference, invited by *AriaTeatro)* Museo Tridentino di Scienze Naturali, Trento
10.16.2012	*Pennellate di fisica. Ricercare per immagini – ricercare per formule.* *(*transl.: *Brushstrokes of physics. Searching by images-searching by formulas).* (conference, invited by *Scienza dietro le quinte,* LabCosFi, Dip. Di Fisica, Trento) Facoltà di Lettere e Filosofia, Università degli Studi di Trento
11.17.2011	*Un incontro tra le due culture: i concetti della fisica e i capolavori della pittura* (transl: *An encounter between the two cultures: the concepts of physics and the masterpieces of painting)* (conferenza su invito dell'Accademia degli Agiati e Fondazione Comel, Rovereto) Museo Civico di Rovereto, Rovereto (TN)
03.23.2011	*Back to the old questions: physics as culture* (selected oral contribution) American Physical Society March Meeting 2011 Focus Session on "New ways of communicating physics" Dallas, Texas, USA (21-25.3.2011)
03.19.2009	*Quantum Monte Carlo study of few-electron concentric double quantum rings* (selected oral contribution) American Physical Society *March Meeting* 2009, Pittsburgh (USA) (16-20.3.2009)
02.06.2008	*Quantum Monte Carlo for Electronic Nanostructures: some results* (invited seminar) Departament de Estructura i Constituents de la Materia Universitat de Barcelona, Barcellona (SPA)
07.16.2007	*Polarizability in Quantum Dots via Correlated Quantum Monte Carlo*

	(selected oral contribution) RPMBT14 Recent Progress in Many-Body Theory 14 Technical University of Catalonia, Barcellona (SPA) (16-20.7.2007)
05.12.2007	*Quantum Monte Carlo in a philosophical perspective* (invited seminar) Malvin Kalos: 40 Years of Green's Function Monte Carlo Courant Institute of Mathematical Sciences New York University, New York (NY, USA) (11-12.5.2007)
march 2007	*Linear Response in Quantum Dots with the Diffusion Monte Carlo approach* (invited seminar) Dipartimento di Fisica, Università di Trento, Trento-Povo
09.12.2006	*Linear Response and Collective Excitations in Quantum Dots: a Quantum Monte Carlo Study* (selected oral contribution) XXX International Conference of Theoretical Physics Ustron, Polonia (9-14.9.2006)
08.12.2005	*Order from disorder: how to get accurate answers from randomness* (selected oral contribution) 4th International Summer School – Philosophy, Probability and Physics University of Konstanz, Costanza (GER) (7-13.8.2005)
01.30.2004	*Fermion Monte Carlo calculations for liquid Helium-3* (invited seminar) Institut für Experimentalphysik der Universität Wien, Vienna (AUT)
03.03.2003	*Fermion Monte Carlo calculations on large systems* (selected oral contribution) American Physical Society March Meeting 2003 Austin, Texas, USA (3-7.3.2003)
November 2002	*Supercomputer e metodi Monte Carlo in alcuni casi di studio* *(*transl.: *Supercomputers and Monte Carlo methods in some case studies)* (invited contribution, in videoconferenza) CAPI2002 – Workshop sul Calcolo ad Alte Prestazioni

	Politecnico di Milano, Milano
October 2002	*Towards Fermion Monte Carlo* (selected poster) Bay Area Scientific Computing Day Sandia National Laboratories, Livermore, California (USA)
07.05.2002	*A computational physicist's view of Popper's conjectures and refutations* (selected oral contribution) Karl Popper Centenary Congress Rathaus & Universität Wien, Vienna, Austria (3-7.7.2002)
07.02.2000	*Wave-vector dependence of spin- and charge density multipole modes in quantum dots* (selected poster) Mesospin Euroconference Cortona, I (28.6-2.7.2000)
05.19.2000	*Testing Hund's rule in quantum dots with Diffusion Monte Carlo: a preview* (selected poster) Electronic Structure 2000, Georgia Institute of Technology, Atlanta (GA, USA) (19-22.5.2000)
06.15.1999	*Vacancies in quantal Wigner crystals in different dimensions* (invited poster) Congresso Nazionale INFMeeting 1999 Le Ciminiere, Catania (14-18.6.1999)
06.15.1999	*Wave-vector dependent response in large quantum dots* (selected poster) Congresso Nazionale INFMeeting 1999 Le Ciminiere, Catania (14-18.6.1999)
06.16.1999	*Funny slopes for electrons* (selected poster) Congresso Nazionale INFMeeting 1999 Le Ciminiere, Catania (14-18.6.1999)
PEER	

REVIEWING	C. Sandifer and E. Brewe, eds., *Recruting and Educating Future Physics Teachers: Case Studies and Effective Practices* American Physical Society, College Park, MD, 2015 ISBN: 978-0-9848110-5-2 *Science & Education* Springer ISSN: 0926-7220 *physica status solidi* Wiley ISSN:1521-3951 *Fillide* rivista online riconosciuta dall'ANVUR per l'area 11-Scienze storiche, filosofiche, pedagogiche, psicologiche; ISSN:2281-5007 *Journal of Physics and Chemistry of Solids* Elsevier ISSN: 0022-3697 *Eurasia Journal of Mathematics, Science and Technology Education* Modestum ISSN: 1305-8215 *The Physics Teacher* AIP Publishing ISSN: 0031-921X *Rosmini Studies* Rivista online del Centro Studi e Ricerche "Antonio Rosmini" ISSN 2385-216X *Education Sciences* MDPI EISSN 2227-7102

AWARDS	
March 2021	American Physical Society – Group Physics Education Research GPER Mini-Grant for the participation at the 2021 April Meeting.
July 2019	Individual Member Travel Grant – European Physical Society for the participation at the GIREP-ICPE-EPEC-MPTL 2019 Conference "Teaching-Learning Contemporary Physics".
Summer 2000	Fellowship (Italian/European selection) from JISTEC- Japanese Institute for Science and Technology Exchange Center.
September 1999	*"Young Scholars Award"*, *Le Scienze* (Italian edition of di *Scientific American*) (national award for under 35 researchers engaged in science popularization). Jury: Carlo Bernardini, Edoardo Boncinelli, Bruno Curti, Tullio Regge, Enrico Bellone.
Spring 1999	INFM supplementary grant for research activity at the Scuola Normale, Pisa (prof. M. P. Tosi).
1997-2000	Doctoral Fellowship of the Ministry of University and Scientific Research.
1996	IBM Grant for undergraduates.
1991	South Tyrol's Province President's Award for the best high school graduates in the province.
LANGUAGES	
	Italian: level C2 *English*: level C1, Certificate in Advanced English – University of Cambridge ESOL Certification (2010); Free University of Bozen-Bolzano Certification (2022) *German*: level C1, Bilingualism Certificate of the Autonomous Province of Bolzano (2004)

INFORMATICS	Elements of Spanish and French (especially reading), Japanese. Levels according to the *Common European Framework of Reference for Languages*. Uso of *MacOS, Unix, Linux, Windows operating systems*. All commonly used programs such as Word, Excel, PowerPoint, Canva, OneDrive, Outlook, etc.; prolonged experience with integrated digital teaching suites such as Google Classroom and Teams; test and exam administration with OWL and Google Forms; Web page programming; programming with Fortran language, programming and many years' experience on large parallel computing systems (IBM Blue, Frost, and others); simulations and modeling with Insight Maker and Mathematica; text composition with LaTeX.

Bolzano-Bozen, Italy

June, 2025 Leonardo Colletti