EUROPEAN CURRICULUM VITAE

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PERSONAL INFORMATION

Name	**EUGENIO BERTOZZI**
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Nationality	Italian
Date of birth	/

TITLES

2017	Habilitation as Associate Professor for the Didactic and the History of Physics for the Italian University (02/D1)
2010	PhD in Physics, University of Bologna
2006	Habilitation for the teaching of physics and mathematics in the Italian secondary-school (A038/A049)
2004	Master Degree in Physics (Laurea vecchio ordinamento), University of Bologna
2001	Master Degree in Violin (Diploma), Conservatorio "G.Rossini", Pesaro

WORK EXPERIENCE

• Dates (from – to)	**01.08.2016 – 30.06.2017**
• Name and address of employer	Research Institute for the History of Science and Technology, Deutsches Museum, Museum Island 1, Munich, Germany
• Type of business or sector	Research on the history of instruments belonging to museum collection
• Occupation or position held	Scholar in Residence
• Main activities and responsibilities	By focusing on instruments and objects belonging to the collection of the Deutsches Museum (exhibited and not) and using the resources of the Museum Archive and Library, I developed a research on the history of particle physics experiments during the twentieth Century and on the role played by these experiments in the teaching and communication of physics.

Results have been published in international peer-reviewed journals, presented in international congresses and seminars for students. Details are reported below.

a) Peer-review journals

2017

"Toward a history of explanation in science communication: the case of Madame Wu experiment on parity-violation", Journal of Science Communication, Special Issue: "History of Science Communication", JCOM, 16 (03), A10, 1 -13

b) Presentations at research meetings and International Congresses

2016
Bubble chamber experiments as crossroad of interrelations between the handling of Big Data and the formulation of the theory during the 20th Century, Oberseminar, Deutsches Museum, Munich (H. Trischler, U. Hasagen, coordinators)

2016
Visualizing radioactive emission and particle interactions: instruments from the collection of the Deutsches Museum, AK-Forschung, Deutsches Museum, Munich (coordinator: C. Sicka, coordinator)

2016
Computing bubbles: a new era for data-handling in particle physics experiment. Deutsche Gesellschaft für Geschichte der Medizin, Naturwissenschaft und Technik (DGGMNT). Jahrestagung 2016 - Digitalisierung, Big Data und die Aufgabe der Theorie (Lübeck, 16-18 September, 2016)

2017
"Postulating and then sighting": a global perspective on the discovery of the Omega-minus. Deutsche Physicalische Gesellschaft, Annual Meeting, Section: History of Physics (Dresden, March 19th to 24th 2017)

c) Seminar for students of the Copenhagen University

2017
"A full-scale, determined search for this particle called Omega-minus". Course: history of physics (Prof. Ricardo Avelar Sotomaior Karam and Helge Kragh)

• Dates (from – to)	**01.08.2015 – 31.07.2016**
• Name and address of employer	Institute of Mathematics, scientific and technical literacy – Section of physics, its didactics and history, Europa-Universität, Auf dem Campus 1, Flensburg , Germany
• Type of business or sector	Research on the history of physics instruments in research and teaching
• Occupation or position held	Research fellow of the Alexander Von Humboldt Foundation
• Main activities and responsibilities	As an Humboldt Fellow at the University of Flensburg I focused on an a major experimental apparatus of physics – the Wilson cloud chamber introduced in 1911 – and reconstructed the role it played in successive physics research and teaching during the course of the last Century. The research entailed the study of the different types of the instrument which are today collected and conserved in major European museums, their re-enactment for historical research and for the communication of physics.

Results have been published in international peer-reviewed journals, presentations to international congresses and invited talks.

a) Publications

2016
Technology-embedding instrument and performative goals: the case of the fully automatized cloud chamber by the Officine Galileo in Florence, BULLETIN OF THE SCIENTIFIC INSTRUMENT SOCIETY, June Issue N.129, 2016

b) Use of historical instrument and development of formats for physics communication in museums

2016

"The cloud chamber", Florencefst, YouTube channel of the "Fondazione Scienza e Tecnica", Florence, Italy (https://www.youtube.com/watch?v=8xEKXE6gCJs)

c) Presentations at International Congresses and meetings (all single name)

2017

"The biography of the Wilson cloud chamber as an instrument for teaching", Invited talk to the Danish Society for the History of Science, Copenhagen

2016

Science and Technology Objects and Users: the case of the fully-automated cloud chamber by the Officine Galileo in Florence, ARTEFACT Meeting, Science Museum London (1-4 October, 2016)

2016

Biographies of scientific instruments: the transformation of the Wilson cloud chamber from the context of research to the one of physics teaching. 2nd International Conference on the History Physics, Echophysics, Pöllau, Austria (5-7 September, 2016)

2016

Production and circulation of cloud chambers for teaching during the twentieth-century: the example of the fully-automatized cloud chamber by the Officine Galileo in Florence. XXXV Scientific Instrument Commission, Istanbul, Turkey (26-30, September)

2016

Re-tracing the transformation of research instruments for teaching purposes: the circulation of the cloud chamber as a teaching apparatus during the twentieth-century. 1st European Regional Conference International History, Philosophy and Science Teaching Group (IHPST) Flensburg 22 – 25 August, 2016

2016

"Biografie degli oggetti scientifici" ["Biographies of scientific objects"], Intervention at the Round Table "Il Patrimonio Scientifico dei Museu Universitari: l'Anello Mancante tra Ricerca e Divulgazione?" [The Scientific Heritage of University Museums: the missing link between Research and Popularization?], organized by the Museum University System of the University of Bologna, Salone dell'Economia, della Conservazione, delle Tecnologie e della Valorizzazione, Ferrara (07.04.2016)

• Dates (from – to)	**01.09.2014 – 31.07.2015**
• Name and address of employer	Department of Physics and Astronomy, Viale Berti Pichat 6/2, Bologna, Italy
• Type of business or sector	Research on physics education and communication
• Occupation or position held	Research grant within the EU-funded project "The IRRESISTIBLE project in science education: analysis and construction of case studies"
• Main activities and responsibilities	My research grant within the EU-funded IRRESISTIBLE project focused on the development of modules and exhibitions for bringing the topic of Responsible Research and Innovation in school teaching. The task implied the participation to a community of practice made of teachers,

educators, museum folk and scientists. The task implied also the organization of project meetings, classroom interventions and the presentation of the results to international congresses

- Presentations (first name in all)

2015 "The IRRESISTIBLE project in Science Education: How can RRI become a permanent aspect of science teaching?". IOSTE Eurasia Regional Symposium & Brokerage Event Horizon 2020 24-26 April 2015 – Istanbul. Poster presentation

2014 "Responsible Research and Innovation in Science Education: The IRRESISTIBLE Project", SIS-RRI Conference, Rome, 19-21 Nov., 2014. Poster presentation.

2014 "Responsible Research and Innovation in Science Education: The IRRESISTIBLE Project" poster presentation GIREP-MPTL 2014 International Conference, Teaching/Learning Physics: Integrating Research into practice, University of Palermo (22-26 July, 2014)

- Publications

2016 How can RRI become a permanent aspect of science teaching?" ESERA Conference Proceedings series: Science Education Research: Engaging learners for a sustainable future, Jari Lavonen, Kalle Juuti, Jarkko Lampiselkä, Anna Uitto & Kaisa Hahl (eds.) ISBN 978-951-51-1541-6 (with Venturi M. and Pecori, B.)

2015 Responsible Research and Innovation in Science Education: the Irresistible project, Proceedings of the International Conference GIREP/MPTL 2014 (ISBN: 978-88-907460-7-9, pp. 175 - 182)

• Dates (from – to)	01.01.2007 – 31.07.2014
• Name and address of employer	Department of Physics and Astronomy, Viale Berti Pichat 6/2, Bologna, Italy
• Type of business or sector	Physics education at school and university and foundations of physics
• Occupation or position held	Post-Doc student
• Main activities and responsibilities	My PhD and Post-Doc research activity within the Physics Education Research group in Bologna has been focused on how modern physics theories of the XX Centuries and their foundations can educate to scientific thinking and which role can be played by history and epistemology in physics education. Beside the research, I carried out a teaching activity for university students and future teacher (see the dedicated section below), seminars for school students and supervision of students' dissertations.

- PhD dissertation (FIS/08: Physics Education and History of Physics)
  "Reconstructing Quantum Field Theory from an educational perspective" (Supervisors: Prof. Olivia Levrini, Prof. Elisa Ercolessi). [discussed: 04.05.2010]

- Co-supervision of Bachelor and Master Degree dissertations

  Leggi di simmetria nella formulazione del modello standard. Riflessioni per una proposta didattica sulla fisica dei primi anni '60 [Symmetry as normative principle for the Standard Model of Physics. Refelctions for a teaching proposal on Physics in the '60]. Giovanni Ravaioli, Bachelor in Physics (2012/2013)

  Corso-Laboratorio 'L'esperimento più bello'. Analisi di un'esperienza di insegnamento/apprendimento della Fisica Quantistica [The most beautiful experiment: analysis of a teaching/learning experience on Quantum Physics], L. Stefanini, Bachelor-degree in Physics (2012/2013)

  Nikola Tesla, l'orgoglio dei Balcani [Nikola Tesla: the proud of the Balcans], N. Donini, Bachelor-degree in Informatic Engineering (2012/2013)

- Seminar for secondary-school students and teachers

  "Frontiere della fisica quantistica" ["Frontiers of quantum physics"] cycles of seminars within the National Project "Lauree scientifiche" (increasing the interest to scientific career). From 2012 to 2014

  "Simmetrie nella Scienza, simmetrie nella fisica" [Symmetry in the Sciences, symmetry in Physics], seminar for the students of Liceo Scientifico 'A.Serpieri', pilot-study (2010)

  "Frontiere della fisica quantistica: Qual è l'impatto sociale e applicativo di una teoria apparentemente tanto lontana dalla quotidianità? " [Frontiers of quantum physics: what's the impact and possible implications of a theory which looks so far from every-day life and common sense?] within the teacher training course "Insegnare e capire la fisica quantistica con l'Esperimento più bello della Fisica". Liceo "Righi", Bologna (2014).

- Publications (all first name)

2016 Recasting particle physics by entangling physics, history and philosophy, Il Nuovo Cimento C38, n.3, 88. DOI:10.1393/ncc/i2015-15088-y (with Olivia Levrini)

2014 Symmetry as Conceptual Core of the Standard Model of Physics: actions for Science Education, SYMMETRY: CULTURE AND SCIENCE, Vol. 25, No.3, 279-287, ISSN 0865-4824 (printed) ISSN 2226-1877 (electronic version) (with Olivia Levrini)

2014 Symmetry as core-idea for introducing secondary school students to contemporary particle physics, Procedia - Social and Behavioral Sciences, Volume 116, pp. 679-685, doi: 10.1016/j.sbspro.2014.01.279, ISSN: 1877-0428 (with Levrini, O. and Rodriguez, M.)

2014 An alternative approach to canonical quantization for introducing quantum field theory: the double-slit experiment re-examined. SPRINGER PROCEEDINGS IN PHYSICS, Vol. 145, pp. 445-452 (Burra Sidharth, Michelini Marisa, Santi Lorenzo eds.) ISSN: 0930-8989. MILANO: Springer-Verlag Italia, ISBN: 978-3-319-00296-5, DOI: 10.1007/978-3-319-00297-2 (with Olivia Levrini)

2014 Contemporary Physics: challenges and bets for teaching and communication of Science, Proceedings of GIREP - ICPE-MPTL Conference, (Kaminski Michelini eds.), LithoStampa Udine. ISBN 978-88-97311-32-4 (with Ercolessi E. and Levrini O.)

2013 Words and formulas in quantum field theory: Disentangling and reassembling the basic concepts for teaching . PHYSICS ESSAYS, vol. 26, p. 371-379, ISSN: 0836-1398, doi: 10.4006/0836-1398-26.3.372 (with Olivia Levrini and Elisa Ercolessi)

2013 Simmetria come chiave di accesso alla fisica del XX e XXI secolo: una mostra per il MOdE [Symmetry as a key to the physics of the twentieth and twenty-first century: an exhibition for the MOdE]. In: Il museo come officina di esperienze con il patrimonio: l'esempio del MOdE (Chiara Panciroli, Francesca Pizzigoni, Eds.). VERONA:QuiEdit, ISBN: 9788864642109

2013 What is what we call 'quantum field'? Answering from a teaching perspective by taking foundations into account. EUROPEAN JOURNAL OF PHYSICS, vol. 34, p. 603-611, ISSN: 0143-0807, doi:10.1088/0143-0807/34/3/603

2010 Hunting the ghosts of a 'strictly quantum field': the Klein-Gordon equation. EUROPEAN JOURNAL OF PHYSICS, vol. 31, p. 1499-1515, ISSN: 0143-0807, doi: 10.1088/0143-0807/31/6/015

2009 Quantum Field Theory: a perspective for analyzing the relation between continuum and discrete. In: Physics Curriculum Design, Development and Validation, Proceedings GIREP 2008 INTERNATIONAL CONFERENCE Cyprus, 18-22, August, 2008. Published in Conference CD and website (http://lsg.ucy.ac.cy/girep2008/)

2009 Looking at the physics curriculum in terms of framing ideas. In: Physics Curriculum Design, Development and Validation, Proceedings GIREP 2008 INTERNATIONAL CONFERENCE Cyprus, 18-22, August, 2008. Published in Conference CD and website (http://lsg.ucy.ac.cy/girep2008/) (with Olivia Levrini et al.)

2008 Looking at Quantum Field Theory with upper secondary students in mind. In: GIREP - EPEC Conference. Frontiers of Physics Education (Rajka Jurdana-Sepic, Velimir Labinac, Marta Zuvic-Butorac, Ana Susac, Eds.), p. 325-330, RIJEKA: Zlatni rez, ISBN: 978-953-55066-1-4 (With Fantini, P., Grimellini, N., Levrini, O.)

- Presentations

2014 "Recasting particle physics by entangling physics, history and philosophy" oral presentation to the GIREP-MPTL 2014 International, Conference, Teaching/Learning Physics: Integrating Research into practise, University of Palermo (22-26 July, 2014)

2014 “Simmetria come principio normativo: criteri di progettazione di proposte per l'insegnamento della fisica del XX e XXI secolo” invited talk at 100° National Congress of the Italian Physical Society (Pisa, 22-26 September 2014)

2013 “Symmetry as conceptual core of the Standard Model of Physics: actions for scientific education”, invited talk at the Symmetry Festival 2013, Delft, The Netherlands 2-7 August

2013 “Symmetry as core-idea for introducing secondary school students to contemporary particle physics” oral presentation at 5th World Conference on Educational Sciences, Roma 05-08 Febbraio 2013.

2013 “Simmetria come chiave di accesso alla fisica del XX e XXI secolo: un progetto di mostra per il Museo Officina dell’Educazione dell’Università di Bologna”, talk at “Un'esperienza con il patromonio è educativa quando...progetti, linguaggi e strumenti a confronto”. Dipartimento Scienze dell’Educazione “Giovanni Maria Bertin” e Istituto Beni Culturali della Regione Emilia Romagna, Bologna 14 Febbraio 2013.

2012 “Cultural Content Knowledge: providing big picture of physics to Italian school students gifted in Science” oral presentation at Excellence in Education 2012, Jerusalem (Israel), July 9-12, 2012 (given by Igal Galili)

2011 “An alternative approach to canonical quantization for introducing Quantum Field Theory: The double-slit experiment re-examined”, submitted for proceedings at TWELFTH INTERNATIONAL SYMPOSIUM Frontiers of Fundamental Physics (FFP12), November 21-23, Udine, Italy.

2010 “La fisica comunicata: il museo giovane” invited talk at the Congress ComunicareFisica2010. National Laboratory of Frascati, INFN, 12-16 Aprile 2010

2010 “Fisica Contemporanea: quali sfide per la comunicazione e l'insegnamento della Scienza” invited talk at XCVI National Congress of the Italian Physical Society (Bologna, 20 – 24 Settembre, 2010)

2010 “Contemporary Physics: challenges and bets for teaching and communication of Science” , ICPE, GIREP- ICPE-MPTL Conference, August 22-27, 2010, Reims, France.

• Dates (from – to)	01.04.2009 – 30.06.2009
• Name and address of employer	University of Bologna
• Type of business or sector	Research Fellowship at Hebrew University of Jerusalem
• Occupation or position held	MARCO POLO research fellow
• Main activities and responsibilities	During my Phd, I obtained a three-months fellowship to be spent at the “Amos de Schalit

teaching Center" of the Hebrew University of Jerusalem to work with Prof. Igal Galili. The fellowship provided me the opportunity of tuning my research on modern physics with the "Discipline Culture framework" for physics education developed by Prof. Galili. Results have been published in international journals and presented in international congresses.

- Presentations

2010 The discipline - culture model and conceptual analysis in science education: the case of teaching quantum field theory, in: Contemporary science education research: international perspectives (M. F. TAŞAR & G. ÇAKMAKCI, eds), p. 135-144, Ankara, Turkey: Pegem Akademi, ISBN: 978-605-364-031-8 (with Galili, I. and Levrini, O.)

- Publications

2014 Meeting the discipline-culture framework of physics knowledge: an experiment in Italian secondary school, SCIENCE & EDUCATION, Volume 23, Issue 9, pp 1701-1731, DOI 10.1007/s11191-014-9692-z (with Olivia Levrini et al.)

2009 "The Discipline-Culture Model and Conceptual Analysis in Science Education: the case of teaching Quantum Field Theory", ESERA 2009 CONFERENCE, August 31st - September 4th, The Grand Cevahir Hotel and Conference Centre, Istanbul, Turkey

• Dates (from – to)	**01.03.2004 – 31.12.2011**
• Name and address of employer	Fondazione "Villa del Bali'", Via San Martino 1, Saltara (Pesaro-Urbino)
• Type of business or sector	Science Center
• Occupation or position held	Collaborator (2004 – 2009) and Scientific Director (2009 - 2011)
• Main activities and responsibilities	My activity as collaborator, and then Scientific Director of an Italian Science Center – 'Museo del Balì', science center with hands-on exhibits, planetarium and astronomical observatory (www.museodelbali.it) – allowed me to go through the various roles of the museum life: - museum explainer and planetarium; - planning and delivering of learning activities on physics and science to student and public and establishment of partnership with local schools; - fundraising (Italian and European calls, creation, maintenance, improvement of the partnership with territorial stakeholders); - networking with other scientific centers and pilot training; - organizations of events and celebrations during scientific years.

In the following, the main experiences are listed from a) to g).

a) Educational programs for different target groups

As a scientific director I focused on the establishment of partnership between the Museum and the Italian schools of different levels, from kindergarten to the secondary-school. The task required the planning of 40 laboratory activities which span from disciplinary to interdisciplinary subjects and which today belong to the current educational proposal of the Museum
http://www.museodelbali.it/en/laboratories
http://www.museodelbali.it/en/seasonal-modules
http://www.museodelbali.it/en/activities-school

b) Funding recruitment
In 2012 the Museum obtained a renewal of the three funding schema by The Italian Ministry of the University and Research on the base of the positive evaluation of the last three years of activity in which I acted as a scientific responsible (Tabellazione Triennale, according to the law 6/2000, Titolo 3, D.D. n. 369/2012).

Besides, I have been the scientific responsible of 3 annual projects funded by the Italian the Ministry of University and Research (MIUR, law 6/2000, annual projects) in collaboration with the University of "RomaTre".

- 'Scuola di eccellenza finalizzata all'incremento delle vocazioni scientifiche nell'ambito delle Scienze Fisiche' ['School of Excellence aimed at increasing scientific vocations in the Physical Sciences], 2007

- 'Scuola di Eccellenza di Fisica per maturandi e Aggiornamento Didattico degli Insegnanti di Matematica Fisica e Scienze' [School of Excellence for upper secondary school students and teachers training in Maths, Physics and Science'], 2008

- 'Laboratorio Residenziale di Fisica al Museo del Balì indirizzato agli studenti della scuola superiore e finalizzato alla valorizzazione dei talenti ed al recupero della motivazione' [Residential Laboratory of Physics at the Museo del Balì addressed to high school students and aimed at the enhancement of talent and the recovery of motivation], 2010

c) Special projects in "science years"

I have been the scientific responsible of two projects aimed at promoting the scientific contribution of two Italian scientists - born in the Museum area - which played a role in the global history of physics and science. These activities have been developed on the occasions of special science years, such as the International Year of Astronomy in 2009. A brief description is reported below.

2007
On the centenary of the birth of the Italian physicists Giuseppe Occhialini, the project aimed at making schools and public aware of his scientific contribution on the study of cosmic radiation. It included:

- A temporary exhibition with catalogue developed on the base of an original research (itinerancy to Science Festival Genova, Pisa, University of Milan and Sao Paulo). National Institute of Physics and Astrophysics and the National Space Agency (ASI) and the European Space Agency (ESA) which provided historical instruments and models

- Special training course for teachers with laboratory activities

- Award (previous selections) for students on the base of an original research

- Presentations to meetings and Congresses

  "Giuseppe Occhialini e i raggi cosmici. Un progetto in corso" [Giuseppe Occhialini and the cosmic rays. A work in-progess], Teacher association "ScienzeScuola", Ufficio Scolastico Regionale Marche, Montelparo (Ascoli-Piceno), 30 Novembre – 1 Dicembre 2006
  "Giuseppe Occhialini, lo scienziato e il mondo dei raggi cosmici" [Giuseppe Occhialini, the scientist and the world of the cosmic rays. Presentation of the project], public talk at the Museo del Balì, Saltara (Pesaro-Urbino), 23.02.2007.
  Giuseppe Occhialini, the scientific contribution to cosmic rays physics. Talk given at the XCIII National Congress of the Italian Physical Society, Pisa 24-29 Settembre 2007

In the previous project, I carried out the historical research, curated the exhibition plus a number of organizational duties.

For all these reasons I received a Prize from the Italian Physical Society:

Prize for 'Activities in the field of Physics Education and contributions to the history of physics' by the Italian Physical Society for the research work and exhibition on the Italian physicists Giuseppe Occhialini and his scientific contributions to the cosmic rays physics. XCIII National Conference, Pisa, September, 24-29, 2007

2009
On the International Year of Astronomy – and four-centennial from the death of the Aristotelian

scientist and Galileo's patron, Guidobaldo del Monte - the project aimed at making schools and public aware of the historical scientific dispute between the 2 scientists. The project tested a new kind of activities for the Museum, aimed at stimulating a critical approach to science by means of historical material. The two principal have been:

a) "The Sky by Dante". Thematic Planetarium reconstructing the Aristotelian sky as described by the poet Dante Alighieri in the "Divine Comedy": the poet's journey across the three kingdoms of the afterlife was retraced focusing only in the astronomical passages of the opera.

b) "Logos: building ideas for a process". Role-play reconstructing the Galileo process where scientist's famous scientific claims and observations on mechanics and astronomy had to be supported or criticized by the students on the basis of original historical material.

- Results of the project has been presented to meetings and congresses

"Galileo Galilei e Guidobaldo del Monte: attività su una disputa storica al Museo del Balì", Galileo and the Renaissance Scientific Discourse, First Roma Workshop on Past and Present Perceptions of Science, Roma 6 Maggio 2009, Biblioteca Casanatense e Liceo E.Q. Visconti

"Galileo Galilei e Guidobaldo del Monte attività su una disputa storica al Museo del Balì", XCIV National Congress of the Italian Physical Society Genova, 22-27 , Settembre 2008

"Galileo Galilei e Guidobaldo del Monte", teacher training course in Physics Education 'Il ruolo dell'astrofisica nella didattica interdisciplinare delle Scienze' University of RomaTre, Progetto Lauree Scientifiche, 17 Marzo 2009 (A.A. 2008– 09)

"Galileo Galilei e Guidobaldo del Monte, attualità delle due voci di una disputa" [Galileo Galilei e Guidobaldo del Monte, two voices in a scientific debate], III Summer school of Astronomy for secondary school teachers (Italian Astronomical Society, National Institute of Astrophysics e Fondazione Museo del Balì). Museo del Balì. Saltara (PU) 15-18 Luglio 2008

"Galileo Galilei e Guidobaldo del Monte: attività su una disputa storica" [Galileo Galilei e Guidobaldo del Monte: an activity on an historical debate]. Convention "ScienzeScuola" Ufficio Scolastico Regionale Marche, Saltara (PU), 10 – 11 Marzo 2009.

"La nascita del pensiero scientifico moderno: il caso della disputa fra Galileo Galilei e Guidobaldo del Monte" [The birth of modern scientific thought: the case of the dispute between Galileo Galilei e Guidobaldo del Monte], teacher the training course '1609-2009: E pur si muove', Galileo e la nascita della scienza moderna, Ministero dell'Istruzione dell'Università e della Ricerca, Ufficio Scolastico Regionale per le Marche. Saltara (PU) 06 Dicembre 2008

"Galileo Galilei e Guidobaldo del Monte: attività su una disputa storica". Le attività Scuola – Museo e le possibilità di sperimentazione' Convention 'ScienzeScuola' Ufficio Scolastico Regionale Marche, Saltara (PU), 10 – 11 Marzo 2009.

- Publications

La disputa fra Galileo Galilei e Guidobaldo del Monte in una attività di divulgazione scientifica [The dispute between Galileo and Guidobaldo del Monte in an activity of scientific dissemination]. GIORNALE DI FISICA DELLA SOCIETÀ ITALIANA DI FISICA, vol. LI, Issue 4, p. 283-293, ISSN:

0017-0283, doi: 10.1393/gdf/i2010-10127-3

The dispute between Galileo Galilei e Guidobaldo del Monte: a learning-by-doing project at the Museo del Balì. In: Galileo and the Renaissance Scientific Discourse, (Aldo Altamore, Giovanni Antonini, Luca Dell'Anna, Fabio Cesarini, Francesca Paolucci, eds.) p. 176-180, Roma: Edizioni Nuova Cultura, ISBN: 9788861344914 (with Tomassini B. and Caselli, A.)

La nascita del pensiero scientifico moderno: Il caso della disputa fra Galileo Galilei e Guidobaldo del Monte [The birth of modern scientific thought: The case of the dispute between Galileo and Guidobaldo del Monte]. GIORNALE DI ASTRONOMIA, vol. 35, p. 2-9, ISSN: 0390-1106

Il Museo del Balì: una risorsa del territorio per la diffusione della cultura scientifica' [The Museo del Balì: a local resource for the dissemination of scientific culture], Il laboratorio Fuori dalla Scuola, Istituto dell'Enciclopedia Treccani (http://www.treccani.it/scuola/lezioni/in_aula/fisica/Laboratorio_fuori_scuola/bertozzi_tomassini.html) (with Tomassini, B.)

In the previous project, I planned the two pilot activities together with two members of the staff, presented the project and the results, prepared and signed the publications.

d) Seminars for secondary-school students at the Museum

"La Scienza come sviluppo critico, luogo di dibattiti e di conflitti" [Science as a complex enterprise, place of debates and conflicts], cycle of seminars for the in-residence students at the Museo del Balì (from 2008 to 2010)

e) Co-supervision of Bachelor and Master Degree Dissertation on the Museum activities

2008 Un esperimento di interazione tra scuola e museo scientifico nell'anno dell'Astronomia: progettazione, monitoraggio, risultati [An experiment of interaction between school and museum in the Year of Astronomy], Elisa Bandecchi, Master Degree in Physics (Supervisor: Barbara Pecori)

2009 Analisi delle attività del Museo del Balì dal punto di vista dell'insegnamento [The laboratories and demonstrations of the Museo del Balì from the perspective of physics education], Silvia De Stefano, Bachelor Degree in Physics (Supervisor: Barbara Pecori)

f) Network with other Museums and Institutions

The first years of the Museum (funded in 2004 and coinciding with the start of my activity) required the creation and maintenance of a number of networks on different levels: with science museums operating on the National level for joint projects on pilot training or exhibition exchanges (Museo della Scienza, Milano; Museo Tridentino di Scienze Naturali, Trento; Immaginario Scientifico, Trieste; Citta' della Scienza Napoli); with local governments for initiatives related to the museum didicatic ("Museo sarai tu", Provincia di Pesaro-Urbino; "Marche – Museo diffuso", Regione Marche); with national academic association for teacher training (an example has been the summer schools on astronomy organized by the Museum with the Italian Astronomical Society from 2005 to 2011)

g) Other Museum presentations and publications

2006 Il Museo del Balì e la fisica hands-on invited talk at XCII National Congress of the Italian Physical Society (Torino, 18-23 September 2006)

2007 Misure della radioattività ambientale: un progetto scolastico invited talk at XCIII Congresso Nazionale of the Italian Physical Society (Pisa, 24-29 Settembre 2007)

2008 Fisica non formale [Non-formal physics]. In: Atti 2° Convegno Comunicare Fisica e altre Scienze (Francesco Longo e Erica Novacco, Eds.). Frascati Physics Series Collana Scienza Aperta, vol. II, p. 180-181, ISBN: 978-88-86409-59-9 (with Bernieri,

E., Altamore, A.)

2009 "Avatar. Una esperienza nel mondo virtuale" presentation at the Regione Marche on the occasion of the exhibition realized by the Museo Tridentino di Scienze Naturali and hosted at the Museo del Balì (19 Dicembre 2009 - 15 Marzo 2010)

2012 La fisica comunicata: il museo giovane [The communicated physics: the young museum]. In: ComunicareFisica2010 Atti 3° Convegno Comunicare Fisica e altre Scienze (Franco L. Fabbri, Piero Patteri, eds). Frascati Physics Series Collana Scienza Aperta, vol. III, p. 75-80, Frascati: Istituto Nazionale di Fisica Nucleare – Laboratori Nazionali di Frascati – Divisione Ricerca – SIS – Ufficio Pubblicazioni, ISBN: 978-88-86409612_

• Dates (from – to)	**2012 – IN PROGRESS**
• Name and address of employer	University of Bologna
• Type of business or sector	University teaching
• Occupation or position held	Adjunct Professor
• Main activities and responsibilities	Contextually to my research I carried out a teaching activity on the history of physics addressed to university students (not only physicists) and future teachers

From 2012 … in-progress

Teaching module "La fisica delle particelle, dai raggi cosmici al Modello Standard" ["The physics of particles, from the cosmic rays to the Standard Model"] for students of the Master Degree (Physics, Maths and Philosophy) within the course: History of Physics (Prof. Olivia Levrini and Giorgio Dragoni), University of Bologna

2013 - 2015

Teaching module 'Didattica e Storia della Fisica' [Didactic and History of Physics] within the post-graduate program for teacher habilitation to secondary-schools [TFA PAS (Tirocinio Formativo Attivo)]

EDUCATION AND TRAINING

• Dates (from – to)	1997 - 2004
• Name and type of organisation providing education and training	Department of Physics, University of Bologna
• Principal subjects/occupational skills covered	Students within the Physics curriculum "Laurea Vecchio Ordinamento"
• Title of qualification awarded	Laurea in Fisica (actual Master Degree level, curriculum: theoretical physics), 12.03.2004
• Level in national classification (if appropriate)	

• Dates (from – to)	2004 - 2006
• Name and type of organisation providing education and training	Department of Physics, University of Bologna
• Principal subjects/occupational skills covered	Students of the school for teacher certification at secondary school (SSIS). Subjects: Physics (A038) and Physics and Mathematics (A039)
• Title of qualification awarded	Certification (Abilitazione) for the teaching of Physics (A038) and Physics and Mathematics (A049), 08.06.2006
• Level in national classification (if appropriate)	

• Dates (from – to)	2007 - 2010
• Name and type of organisation providing education and training	University of Bologna
• Principal subjects/occupational skills covered	PhD student in Physics (curriculum: physics education and history of physics, FIS/08)
• Title of qualification awarded	PhD, 04.05.2010
• Level in national classification (if appropriate)	

• Dates (from – to)	1990 - 2001
• Name and type of organisation providing education and training	Conservatorio di Musica "G.Rossini", Pesaro
• Principal subjects/occupational skills covered	Students of violin
• Title of qualification awarded	"Diploma in violino" (today, master degree), 12.09.2001
• Level in national classification (if appropriate)	

PERSONAL SKILLS AND COMPETENCES

Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.

MOTHER TONGUE — **ITALIAN**

OTHER LANGUAGES

ENGLISH

• Reading skills	excellent
• Writing skills	excellent
• Verbal skills	excellent

OTHER LANGUAGES

GERMAN

• Reading skills	good
• Writing skills	good
• Verbal skills	good

SOCIAL SKILLS AND COMPETENCES

Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.

Beside my work related to Science, I had a professional musical career until my 30s as a violin player in several orchestra of classical music. After that I served for few years in the Orchestra of the University of Bologna: "Collegium Musicum"

ORGANISATIONAL SKILLS

AND COMPETENCES

Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

TECHNICAL SKILLS AND COMPETENCES

With computers, specific kinds of equipment, machinery, etc.

ARTISTIC SKILLS AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS AND COMPETENCES

Competences not mentioned above.

DRIVING LICENCE(S) Regular driving car licence

ADDITIONAL INFORMATION /

ANNEXES