

GIULIA TASQUIER

CURRENT POSITION

2022 to date – *Senior Assistant Professor (RTDb)* in Physics Teaching and History of Physics (FIS/08) at Department of Physics and Astronomy “A. Righi”, Alma Mater Studiorum - University of Bologna.

2021 to date – Member of the doctoral board in PHYSICS (cycle XXXVIII) at Department of Physics and Astronomy “A. Righi”, Alma Mater Studiorum - University of Bologna.

2022 to date – Member of the ESERA Executive Board (elected in February 2022 for 4 years)

2024 to date – Member of the NARST International Committee (nominated March 2024 for 4 years)

ACADEMIC CAREER

2022 to date – *Senior Assistant Professor (RTDb)* in Physics Teaching and History of Physics (FIS/08) at Department of Physics and Astronomy “A. Righi”, Alma Mater Studiorum - University of Bologna.

2020 – *Junior Assistant Professor* in Physics Teaching and History of Physics, Department of Physics and Astronomy “A. Righi”, Alma Mater Studiorum - University of Bologna.

2015 – *Postdoctoral fellow* and *Adjunct Professor* in Physics Teaching and History of Physics, Department of Physics and Astronomy “A. Righi”, Alma Mater Studiorum - University of Bologna.

2013 – *Visiting PhD student* at the Science and Technology Education group, Department of Education and Professional Studies, King’s College London (UK), period: March-June 2013, hosted by Prof. Justin Dillon.

2012 – *Doctoral student* in *Applied Physics*, address in *History and Education of Mathematics, Physics and Chemistry*, curriculum in *Physics Education*, Department of Physics and Chemistry, University of Palermo. Additional title: *Doctor Europaeus with distinction*.

2010 – *Research grant* in Physics Education and History of Physics, supported by Interdepartmental Centre on Educational Research (CIRE), Alma Mater Studiorum - University of Bologna.

OTHER RELEVANT POSITIONS

- PI of National Project PRIN PNRR2022, title “ENgaging and orienting the young in the COMpLExity of climAte change and Sustainability to foster agency and deliberation in Societally relevant choices (ENCOMPASS)” (Code MUR: P2022FNJXK_001; CUP: J53D23016920001)
- Local PI of E+ STAGE project (2021-2-NL01-KA220-HED-000048944).
- Responsible of the Italian Open-Schooling Network for the Horizon2020 SEAS project (GA No. 824522) and FEDORA project (GA No. 872841).
- Conference Manager, member of the Scientific Committee and coordinator of the Local Committee of the 13th ESERA Conference, 26-30 August 2019, Bologna (Italy).
- Co-editor of the Book of selected paper of ESERA 2019 Conference (Springer International Publishing, <https://doi.org/10.1007/978-3-030-74490-8>).

- Co-editor of the eBook Proceedings of the ESERA 2019 Conference (ISBN 978-88-945874-0-1).
- Member of the Local Organizing Committee of the 9th meeting of the Special Interest Group on Conceptual Change of the European Association for Research on Learning and Instruction (EARLI), Bologna, Italy, August 26-29, 2014.
- Mentor for PhD at the “Doctoral school” of the Teaching Department at University of Oslo, 4-7 October 2023, Oslo, Norway
- Mentor for PhD at the “ESERA summer school 2023 for science education PhD students”, 3-8 July 2023, Landau, Germany
- Co-responsible of the International PhD course “Methods and methodological practices in Physics Education Research” held at University of Bologna, March-May 2022, Bologna (Italy).
- Mentor for PhD at the “ESERA summer school 2022 for science education PhD students”, 29 August – 3 September 2022, Utrecht, Netherlands
- Mentor for PhD at the “ESERA summer school 2021 for science education PhD students”, 5-9 July 2021, Poznan, Poland (online).
- Mentor for PhD at the “ESERA summer school 2019 for science education PhD students”, 4-9 June 2019, Crete, Greece.

ACADEMIC QUALIFICATION

- National scientific qualification for the role of Full Professor for the competition sector 02/D1 Applied Physics, sub-sector FIS/08 Physics Education and History of Physics, for the period 2023-2034.
- National scientific qualification for the role of Associate Professor for the competition sector 02/D1 Applied Physics, sub-sector FIS/08 Physics Education and History of Physics, for the period 2018-2027.

EDUCATION

University degrees

- 2015 – PhD in *Applied Physics*, address in *History and Education of Mathematics, Physics and Chemistry*, curriculum in *Physics Education*, University of Palermo, dissertation: ‘Leading secondary school students to face the disciplinary, epistemological and societal challenges of climate change: design and analysis of multi-dimensional teaching/learning experiences’, supervisors: Rosa Maria Sperandeo and Olivia Levrini; additional title: *Doctor Europaeus with distinction*.
- 2009 – Master’s degree in physics, University of Bologna, dissertation: ‘A teaching experiment of thermodynamics in a high secondary school class: analysis of the feasibility of an innovative path’, supervisor: Olivia Levrini.

Certified courses

- 2017 – Training courses on ‘Methods and Laboratories of the Future’, University of Trento.
- 2016 – Teacher training course ‘Laboratory of designing and testing of materials on modern physics at upper secondary school’, University of Bologna.
- 2012 – Specialization course (CP - IDIFO3): ‘Innovation and Orientation in Physics Education’, University of Udine.

Other Certificates

- 2013 – First Certificate in English (FCE) - Level C1, Cambridge English Language Assessment (London).
- 2003 – English certificate – Level B2, University of Bologna (Bologna).

RESEARCH INTEREST AND EXPERTISE

- Educational reconstruction of modern and contemporary physics (e.g., thermodynamics, climate change): design and implementation of innovative teaching materials.
- Qualitative methods of analysis, specifically: *i*) design of instruments for data gathering and tools for data analysis; *ii*) analysis of qualitative data class and analysis of complex learning environments (Appropriation, Orchestration); *iii*) use of specific software for linguistic and argumentative analysis.
- The role of epistemology in teaching/learning physics, in particular the role of epistemological knowledge in models and modelling in physics.
- Science education and socio-scientific issue (SSI): correlation between knowledge and behaviour in climate change.
- Science Education and scientific citizenship.
- Future oriented Science Education: development of strategies, tools and activities for transforming scientific knowledge into transversal skills about future.
- Open schooling innovations as a mean to foster scientific literacy and societal transformation facing the current environmental crisis.

RESEARCH ACTIVITIES

Invited talks, papers and posters.

- 2024 – (*in progress*) Invitation to submit a chapter to the Book of Selected Papers of the ESERA 2023 Conference.
- 2024 – Invited Symposium (sponsored session) at NARST conference, 17-20 March 2024, Denver (Colorado, US)
- 2024 – Invited research talk held for the International Workshop series of the Center for Sustainable Futures at Teachers College, Columbia University, New York, February 2024
- 2023 – Invited research seminar at University of Oslo, COSER event, University of Oslo, October 2023
- 2023 – Invited research seminar at Center for Sustainable Futures at Teachers College, Columbia University, New York, April 2023
- 2022 – Invited lecture IDENTITIES project, University of Milan, 21 and 24 November 2022
- 2022 – Invited talk OSLO, Skole I Verden event, University of Oslo, September 2022
- 2022 – Invited talk mini-conference SIG4, Obergurgl, August 2022
- 2022 – Invited workshop MACCARD project, University of Sassari, June 2022
- 2021 – Invited talk OSLO, COSER event, University of Oslo, December 2021
- 2021 – Invited talk at the CVII Conference of the Italian Society of Physics (SIF), 13-17 September 2021, online.
- 2021 – Invited Plenary Lecture at the ESERA summer school 2021 for science education PhD students, 5-9 July 2021, Poznan, Poland (online).

- 2020 – Invited Plenary talk at the ESERA 25th Anniversary Event, November 10th, online.
- 2020 – Invited workshop “Trust and Climate Change: information for teaching in a digital age”, 3rd March 2020, Department of Education, University of Oxford (UK).
- 2019 – Invited talk at the CV Conference of the Italian Society of Physics (SIF), 23-27 September 2019, L'Aquila, Italy.
- 2019 – Co-chair of the Invited Round Table on Science Education Journals at the 13th ESERA Conference, 26-29 August 2019, Bologna, Italy.
- 2019 – Invited contribution in the H2020 Infoday “Science with and for Society: the draft work programme 2020” organised by the thematic Group on SSH of the University of Bologna, Italy, 5 July 2019.
- 2018 – Invitation to submit a chapter to the Book of Selected Papers of the ESERA 2017 Conference.
- 2017 – Invited contribution in the Panel “Learning and Languages” at the conference “Social Sciences and Humanities for a changing Europe” organised by the thematic Group on SSH of the University of Bologna, Italy.
- 2016 – Invited workshop at the training within the meeting of the project EXPERES, title ‘Inquiry based approach and virtual labs’, 29 November 2016, Murcia, Spain.
- 2016 – Invitation to submit a chapter to the Book of Selected Papers of the ESERA 2015 Conference.
- 2016 – Invitation to submit a chapter to the Book of Selected Papers of the GIREP-MPTL 2014 Conference.
- 2015 – Invited seminar titled ‘Graph and Clima’, within the training course for in-service teachers, within the teacher training activities of Tecnoscienza – Show room Energia e Ambiente, Bologna, 30 September 2015.
- 2015 – Seminar at the Doctoral School in History and Education of Mathematics, Physics and Chemistry at University of Palermo, title: ‘Methodology in STEM education: tools for data collection and analysis’, 26 March 2015, Palermo, Italy.
- 2013 – Seminar to the Science and Technology Education Group at King’s College London, title: ‘Science education and scientific citizenship: the problem of how to deal with climate change in teaching/learning Physics’, 28 March 2013.
- 2013 – Poster at the ESERA Conference in Nicosia (Cyprus), title ‘A multi-disciplinary approach of climate change: description and analysis of a teaching proposal’, September 2013.
- 2012 – Seminar at the Round Table on Climate Change, organized by Dr. Francesca Pongiglione, at the International Centre for the History of Universities and Science (CIS), University of Bologna, title: ‘Environmental Issues: their scientific and social complexity’, January 2012.
- 2012 – Invited publication on the Italian Journal of Physics (Giornale di Fisica), title: ‘Climate change and teaching/learning physics: a teaching proposal’.
- 2011 – Seminar at the Conference of the Inter-departmental Centre of Educational Research (CIRE), University of Bologna, title: ‘For a science education that invests in the future: the challenge of the contemporary world’, December 2011.

Prizes, Award and grants

- 2023 – NARST International Committee award for NARST conference, 17-20 March 2024, Denver (USA)
- 2023 – AERA Science Teaching and Learning SIG122 award for the “Civic Action and Social Engagement Best Paper Award”.

- 2023 – NARST International Committee award for NARST conference, 18-21 April 2023, Chicago (USA)
- 2017 – Mention among the best posters at the 5th Annual Conference of the Italian Society of Climate Sciences (SISC), Bologna, October 26-27, 2017
- 2017 – ESERA fellowship for conference in Ireland.
- 2015 – ESERA fellowship for conference in Finland.
- 2013 – ESERA fellowship for conference in Cyprus.
- 2013 – ESERA travel award for early career researchers.
- 2010 – GRANT in Physics Education supported by Inter-departmental Centre on Educational Research (CIRE) University of Bologna, Title of the project: ‘Environmental Issues: their scientific and social complexity’, Supervisors: Olivia Levrini and Margherita Venturi.

Period abroad

Research activity as visiting PhD students at the Science and Technology Education group, Department of Education and Professional Studies, King’s College London, period: March–June 2013, supervision of Prof. Justin Dillon.

National and International Projects

in progress – “ENCOMPASS – ENgaging and orienting the young in the COMpLexity of climAte change and Sustainability to foster agency and deliberation in Societally relevant choices” (Code MUR: P2022FNJXK_001; CUP: J53D23016920001). PI: Giulia Tasquier, University of Bologna.

in progress – “CLIMADEMY – Climate change teacher academy” (Call: ERASMUS-EDU-2021-PEX-TEACH-ACA, Programme: ERASMUS2027, Project ID: 101056066, EUROPEAN EDUCATION AND CULTURE EXECUTIVE AGENCY – EACEA). PI: Maria Kanakidou, University of Crete (www.climademy.eu). My role: responsible of the Italian HUB from University of Bologna; responsible of tasks in WP5; co-designer of the pedagogical model.

in progress – “STAGE – Scientists and Public Engagement” (project funded by the Erasmus+ Programme of the European Union. GA No. 2021-2-NL01-KA220-HED-000048944). PI: Lucy Avraamidou, University of Groningen. My role: local PI.

in progress – ‘PLS - Piano Lauree Scientifiche’, Italian National Project, local coordinator: Olivia Levrini (<http://www.pls.unibo.it/it/fisica>).

My role: staff support in the coordination, co-coordination in the organisation of the summer schools, design and implementation of lab-course on Global Warming and Climate Change, design and implementation of activities within the courses on Seismic Risk and Artificial Intelligence.

“FEDORA - Future-oriented Science EDucation to enhance Responsibility and engagement in the society of Acceleration and uncertainty” (GRANT AGREEMENT No. 872841, September 2020 – August 2023). PI: Olivia Levrini, University of Bologna (www.fedora-project.eu). My Role: WP4 leader, member of the SMB committee and research fellow within the Bologna unit.

“SEAS - Science Education for Action and engagement towards Sustainability” (GRANT AGREEMENT No. 824522, September 2019 – August 2022). PI: Erik Knain, University of Oslo

(<https://www.seas.uio.no>). My role: Responsible of the Italian Open-Schooling Network, research fellow within the Bologna unit and local member of PMT committee.

“IDENTITIES - Integrate Disciplines to Elaborate Novel Teaching approaches to InTerdisciplinarity and Innovate pre-service teacher Education for STEM challenges” (PROJECT NUMBER 2019-1-IT02-KA203-063184, September 2019 – August 2022). PI: Olivia Levrini, University of Bologna (<https://identitiesproject.eu>). My role: Research fellow within the Bologna unit and member of the steering committee.

I SEE, Inclusive STEM Education to Enhance the capacity to aspire and imagine future careers (PROJECT NUMBER - 2016-1-IT02-KA201-024373, September 2016 – August 2019). PI: Olivia Levrini, University of Bologna (<https://iseeproject.eu>). My role: Research fellow within the Bologna unit, responsible for IO4 and member of the steering committee.

EXPERES, Les Tice Appliquées à L’expérimentation Scientifique (561551-EPP-1-2015-1-ES-EPPKA2-CBHE-SP, October 2015 – September 2018). EU COORDINATOR: University of Murcia; MAROCCAN COORDINATOR: Université IBN TOFAIL, LOCAL COORDINATOR: University of Bologna (<http://196.200.152.145/experes/>). My role: Research fellow in the Bologna unit.

HOPE-Network, Horizons in Physics Education (EU-LLP, 2013-3710_540130-LLP-1-2013-1-FR-ERASMUS-ENW, October 2013 – September 2016). PI: Nadine Witkowski, Université Pierre et Marie Curie – UPMC, Paris, France (<http://www.hope-network.eu/>). My role: participation in WG1-B in the Bologna’s unit; analysis of questionnaire; administration and analysis of interviews.

IRRESISTIBLE, Including Responsible Research and Innovation in Cutting-Edge Science and Inquiry-Based Science Education to Improve Teacher’s Ability of Bridging Learning Environments (EU-LLP, GA 612367, November 2013 - October 2016). PI: Jan Apotheker, University of Groningen, Netherlands. (<http://www.irresistible-project.eu/>). My role: Research fellow in the Bologna unit.

Participation in Project and/or Board Meetings

- FEDORA final event, 25-26 May 2023, Bruxelles (Belgium)
- ESERA board meeting, 9-11 March 2023, Barcelona (Spain)
- IDENTITIES final consortium meeting, 5 November 2022, Bologna (Italy)
- STAGE Kick-off meeting, 12-13 October 2022, Nicosia (Cyprus)
- FEDORA consortium meeting, 1-4 October 2022, Kaunas (Lithuania)
- SEAS final meeting, 22-23 September 2022, Oslo (Norway)
- CLIMADEMY Kick-off meeting, 15-17 September 2022, Crete (Greece)
- ESERA board meeting, 3-4 September 2022, Utrecht (Netherlands)
- IDENTITIES summer school and consortium meeting, 27 June -2 July 2022, Barcelona (Spain)
- MACCARD workshop, 6-10 June 2022, Sassari (Italy)
- SEAS consortium meeting, 3-6 May 2022, Innsbruck, Austria
- SEAS consortium meeting, 13-15 October 2021, Bologna, Italy
- FEDORA consortium meeting, 17-18 June 2021, online
- SEAS-FEDORA joint EU event, 3 June 2021, online
- FEDORA study group, 13 May 2021, online
- FEDORA Technical meeting, 12-18-25 January and 1 February 2021, online
- IDENTITIES consortium meeting, 17-18 December 2020, online
- FEDORA kick-off meeting, 29-30 October 2020, online
- SEAS consortium meeting, 6-7 October 2020, online
- IDENTITIES consortium meeting, 24-25 September 2020, online

- SEAS consortium meeting, 3-4 December 2019, Tallin, Estonia
- IDENTITIES kick-off meeting, 19-20 September 2019, Bologna, Italy
- SEAS kick-off meeting, 2-4 October 2019, Oslo, Norway
- ESERA board meeting, 30-31 August 2019, Bologna, Italy
- ESERA board meeting, 7-8 March 2019, Bologna, Italy
- ESERA restricted board meeting, 22-23 January 2019, Bologna, Italy
- ESERA board meeting, 16-17 March 2018, Rimini, Italy
- ESERA board meeting, 25-26 August 2017, Dublin, Ireland
- PLS coordination meeting, 7 February 2018, Rome, Italy
- I SEE project meeting, 17-18 June 2019, Bologna, Italy
- I SEE project meeting, 6-10 June 2018, Reykjavik, Iceland
- I SEE project meeting, 9-10 June 2017, Bologna, Italy
- I SEE kick off meeting, 12-14 October 2016, Helsinki, Finland
- EXPERES project meeting, 27-28 February 2017, Léon, Spain
- EXPERES project meeting, 28 November – 1 December 2016, Murcia, Spain
- IRRESISTIBLE project meeting, 28 September – 2 October, Kiel, Germany
- IRRESISTIBLE project meeting, 9-10 June, Graz, Austria
- IRRESISTIBLE project meeting, 16-19 March 2016, Targoviste, Romania
- HOPE – WG1 workshop, 11-12 July 2016, Pavia, Italy
- HOPE – WG1 workshop, 18-19 February 2016, Bologna, Italy

Organization of conference, workshop, summer school, training in projects and associations activities

- 2024 – Member of the scientific committee of the IV Summer School titled “Officina di Narrazione della Scienza – ONSCI” organised by the Department of Physics and Astronomy A. Righi, Alma Mater Studiorum – University of Bologna, 17-23 July 2024, Bologna.
- 2023 – Member of the scientific committee of the III Summer School titled “Officina di Narrazione della Scienza – ONSCI” organised by the Department of Physics and Astronomy A. Righi, Alma Mater Studiorum – University of Bologna, 7-13 September 2023, Bologna.
- 2022 – Co-coordinator of the FEDORA-IDENTITIES Policy event held in Bologna, 3-5 November 2022, Bologna (Italy).
- 2022 – Member of the scientific committee of the II Summer School titled “Officina di Narrazione della Scienza – ONSCI” organised by the Department of Physics and Astronomy A. Righi, Alma Mater Studiorum – University of Bologna, 7-14 September 2022, Bologna.
- 2021 – Project manager, member of the scientific committee and coordinator of the local 2017 committee of the ESERA Conference, 26-30 August 2019, Bologna, Italy.
- 2021 – Member of the scientific committee of the I Summer School titled “Officina di Narrazione della Scienza – ONSCI” organised by the Department of Physics and Astronomy A. Righi, Alma Mater Studiorum – University of Bologna, 14-18 September 2021, online.
- 2019 – Member of the local committee for the organization of the final dissemination event of the I SEE project, 26 August 2019, Bologna, Italy.
- 2019 – Member of the local committee for the organization of the international multiplier event of the I SEE project, 9-11 January 2019, Birmingham, UK.
- 2018 – Co-coordinator of the local committee of the PLS Summer School, 13-19 June, Bologna, Italy.
- 2018 – Member of the local committee for the organization of the multiplier event for teachers of the I SEE project, 19-20 April 2018, Bologna, Italy.

- 2017 – Co-coordinator of the local committee of the PLS Summer School, 19-23 June, Bologna, Italy.
- 2017 – Co-coordinator of the local committee of I SEE Summer School, 5-9 June, Bologna, Italy.
- 2017 – Member of the local committee of training meeting within project EXPERES, 8-10 May, Bologna, Italy.
- 2014 – Member of the local committee of the EARLI-SIG3 Conference, 26-29 August 2014, Bologna, Italy.

Participation in National and International Conferences (with papers accepted)

- NARST Conference, 17-20 March 2024, Denver (USA)
- ESERA Conference, 27 August - 1 September 2023, Cappadocia (Turkey)
- ESERA Summer School, 3-8 July 2023, Landau (Germany)
- NARST Conference, 18-21 April 2023, Chicago (USA)
- AERA Conference, 13-16 April 2023, Chicago (USA)
- ESERA Summer School, 29 August – 2 September 2022, Utrecht (Netherlands)
- ESERA SIG4 Conference, 20-23 August 2022, Obergurgl (Austria)
- IDENTITIES Summer School, 27 June – 1 July 2022, Barcelona (Spain)
- NARST Conference, 27-31 March, 2022, Vancouver (Canada)
- ASE conference, 12 January 2022, UK (online)
- ESERA Conference, 30 August – 3 September 2021, Brague, Portugal (online)
- ESERA Summer school, 5-9 July 2021, Poznan, Poland (online)
- NARST Conference, 7-10 April 2021, online
- SISC – Italian Society of Climate Science Conference, 21-23 October 2020, online
- ESERA Virtual Doctoral Network (VDN), 29 June – 2 July 2020, *foreseen to be in Oxford, UK [due to the COVID-19 situation, the conference has been carried out online]*
- ICLS Online Conference, 19-23 June 2020, *foreseen to be in Nashville (TN), USA [due to the COVID-19 situation, the conference has been carried out online]*
- ESERA Conference, 26-30 August 2019, Bologna, Italy
- ESERA Summer School, 4-9 June 2019, Crete, Greece
- ICLS Conference, 24-27 June 2018, London, UK
- II meeting of the Italian Futurists: “The future of work”, 16-17 April, Bologna, Italy
- SISC – Italian Society of Climate Science Conference, 26-27 October 2017, Bologna, Italy
- ESERA Conference, 21-25 August 2017, Dublin, Ireland
- Anticipation, Agency and Complexity Conference, 6-8 April 2017, Trento, Italy
- ECSITE Conference, 9-11 June, Graz, Austria
- Convegno nazionale “Oltre il fare”, 7-8 April, Milan, Italy
- ESERA Conference, 31 August - 4 September 2015, Helsinki, Finland
- EARLI-SIG3 Conference, 26-29 August 2014, Bologna, Italy
- GIREP-MPTL Conference, 7-12 July 2014, Palermo, Sicilia
- National seminar of Mathematics Education, 29-31 January 2014, Rimini, Italy
- Summer school in Philosophy of Science, 16-21 September 2013, Cesena, Italy
- ESERA Conference, 2-7 September 2013, Nicosia, Cyprus
- 5th World Conference on Educational Sciences, 5-8 February 2013, Roma, Italy
- Workshop on ‘Design, Methodology, and Theory’, 24-25 October 2012. Physics and Astronomy Department, University of Bologna.
- ESERA Summer School, 22-27 July 2012, Bad Honnef, Germany
- Conferences of the Italian Physics Society (SIF):
 - CVIII Conference, 12-16 September 2022, Milano

- CVII Online Conference, 13-17 September 2021
- CVI Online Conference, foreseen to be in Milano, 14-18 September 2020
- CV, L’Aquila, 23-27 September 2019
- CI, Roma, 21-25 September 2015
- XCVIII, Napoli, 17-21 September 2012
- XCVII, L’Aquila, 26-30 September 2011
- XCVI, Bologna, 20-24 September 2010

TEACHING EMPLOYMENTS AND ACTIVITIES, SUPERVISION OF STUDENTS THESIS

Teaching employments at university level

- A.Y. 2021/2022 *Teaching module* – to date PhD course “Methods and methodological practices in Physics Education Research” within the PhD programme of the Department of Physics and Astronomy, University of Bologna (open to international participants and happening every two years).
- A.Y. 2020/2021 *Assistant Professor* – to date *(with responsibility of the course)* *Laboratorio di Didattica della Fisica*, within the master’s degree programme of the Department of Physics and Astronomy, University of Bologna.
- A.Y. 2018/2019 *Assistant Professor* – to date *(with responsibility of the course)* *Elementi di Fisica e Didattica della Fisica*, within the Single cycle degree programmes (LMCU) in Primary teacher education of the Education Studies Department, University of Bologna.
- A.Y. 2015/2016 *Adjunct Professor* to 2019/2020 *Laboratorio di Didattica della Fisica*, within the master’s degree programme of the Department of Physics and Astronomy, University of Bologna.
- A.Y. 2017/2018 *Adjunct Professor* to 2018/2019 *Elementi di Fisica e Didattica della Fisica*, within the Single cycle degree programmes (LMCU) in Primary teacher education of the Education Studies Department, University of Bologna.
- A.Y. 2018 – *Teaching module* 2019 *L’insegnamento delle discipline STEM per sviluppare competenze di future: il progetto I SEE*, in-service teachers training targeted to secondary school teachers, within Piano Triennale formazione docenti – Scuola Polo ITT G. Marconi, Ambito territoriale N.7 Forli.
- A.Y. 2016/2017 *Teaching module* *Analysis of texts of the physics of the twentieth century*, in-service teacher training targeted to secondary school teacher, in collaboration with Olivia Levrini and Laura Branchetti, within MASTER PLS-IDIFO, (directed by M. Michelini).
- A.Y. 2016/2017 *Teaching module* *Modern Physics: concepts, experiments and educational tools towards quantum physics*, in-service teacher training targeted to secondary school teachers, within the teacher training area ‘Educare a Educare’ at Fondazione Golinelli,
- A.Y. 2016/2017 *Teaching module* *Training course for in-service teachers on the teaching/learning of quantum physics*, in-service teacher

training within the teacher training programme for the Italian National Project PLS, Department of Physics and Astronomy, University of Bologna.

A.Y. 2015/2016 *Tutor*
to 2016/2017

Fondamenti e Didattica della Fisica, two teaching module within the master's degree programme of the Department of Philosophy, Sociology, Pedagogy and Applied Psychology, University of Padova.

A.Y. 2014/2015 *Adjunct Professor*

Seminario di rielaborazione delle esperienze di tirocinio, within the post-graduate programme for teacher certification TFA (Tirocinio Formativo Attivo) University of Bologna.

Mentoring / supervision of PhD students

- *(In-progress)* Co-supervisor of PhD thesis of Emma D'Orto, University of Bologna (Italy)
- Member of the Doctoral Committee for the PhD dissertation of Sarah Maria Zoehling, University of Vienna (Austria)
- Mentor for PhD at the “ESERA summer school 2023 for science education PhD students”, 3-8 July 2023, Landau, Germany
- Co-responsible of the International PhD course “Methods and methodological practices in Physics Education Research” held at University of Bologna, March-May 2022, Bologna (Italy).
- Mentor for PhD at the “ESERA summer school 2022 for science education PhD students”, 29 August - 2 September 2022, Utrecht, Netherlands.
- Mentor for PhD at the “ESERA summer school 2021 for science education PhD students”, 5-9 July 2021, Poznan, Poland (online).
- Mentor for PhD at the “ESERA summer school 2019 for science education PhD students”, 4-9 June 2019, Crete, Greece.

Supervision of master's and bachelor's degree thesis

in-progress – Supervision of 2 dissertations within the Single cycle degree programmes (LMCU) in Primary teacher education, A.Y. 2021/2022.

in-progress – Co-supervision of 2 master's degree dissertation, Physics and Astronomy Department, University of Bologna, A.Y. 2020/2021.

Supervision of master degree dissertation, title: “Dalla termodinamica ai sistemi complessi: analisi di una proposta didattica sui cambiamenti climatici per sviluppare abilità di pensiero sistemico”, Physics and Astronomy Department, University of Bologna, A.Y. 2020/2021.

Supervision of master degree dissertation, title: “Indagare l'interdisciplinarita' tra Fisica e Matematica tramite la Teoria delle Reti: Analisi di un corso di formazione insegnanti sul tema della parabola”, Physics and Astronomy Department, University of Bologna, A.Y. 2019/2020.

Supervision of the bachelor's degree dissertation, title: "Addressing the complexity of climate change through games", Physics and Astronomy Department, University of Bologna, A.Y. 2018/2019.

Co-supervisor of the Single cycle degree programmes (LMCU) dissertation in Primary teacher education, title: "Experience of Light at Primary School", University of Bologna, A.Y. 2017/2018.

Co-supervision of master's degree dissertation, title: 'Science of complex systems and future-scaffolding skills: a pilot study with secondary school students', Physics and Astronomy Department, University of Bologna, A.Y. 2016/2017.

Co-supervision of bachelor degree dissertation, title: 'Fattori che spingono a iscriversi a fisica e motivi di insoddisfazione: analisi di un'indagine condotta sugli studenti del corso di laurea in fisica nell'anno accademico 2015/2016', Physics and Astronomy Department, University of Bologna, A.Y. 2015/2016.

Co-supervision of master degree dissertation, title: 'Conoscenze scientifiche e competenze di Cittadinanza. Sperimentazione con cittadini adulti sui temi della complessità e del futuro', Physics and Astronomy Department, University of Bologna, A.Y. 2015/2016.

Co-supervision of master degree dissertation, title: 'Formazione iniziale all'insegnamento della fisica quantistica con attività di *cooperative learning*: progettazione e realizzazione di uno studio pilota', Physics and Astronomy Department, University of Bologna, A.Y. 2015/2016.

Co-supervision of master degree dissertation, title: 'Processi di appropriazione nello studio della fisica quantistica: Analisi di una sperimentazione didattica in una quinta liceo scientifico', Physics and Astronomy Department, University of Bologna, A.Y. 2014/2015.

Co-supervision of master degree dissertation, title: 'Cittadinanza scientifica e educazione al futuro: analisi di una sperimentazione didattica sui cambiamenti climatici in una classe quarta di liceo scientifico', Physics and Astronomy Department, University of Bologna, A.Y. 2014/2015.

Co-supervision of master's degree dissertation, title: 'Climate change and epistemological perspective: results from a teaching experiment', Mathematics Department, University of Bologna, A.Y. 2012/2013.

Teaching/research activities with School students

2012 – *to date* Laboratory-course on Climate Change targeted to Secondary School students, module of 20 hours of teaching:

- 2021 – 2012, Italian National Project PLS, University of Bologna
- 2015 – Liceo 'Einstein', Rimini
- 2014 – Liceo Salesiano 'B.V. San Luca', Bologna
- 2013 – Italian National Project PLS, Liceo 'Einstein' Rimini and Liceo 'Galvani' Bologna
- 2013 – Liceo Salesiano 'B.V. San Luca', Bologna
- 2012 – Liceo 'Einstein' Rimini (twice)

- 2018 – Activities carried out within the PLS Laboratory-course on Sismic Risk, January-February 2018, University of Bologna, Italy
- 2018 – Activities carried out at the PLS summer school on artificial intelligence, 13-19 June 2018, Bologna, Italy
- 2017 – Teaching module at the PLS Summer school, 19-23 June 2017, University of Bologna, Italy
- 2017 – Teaching module at the I SEE Summer school, 5-9 June 2017, University of Bologna, Italy
- 2016 – Mathematics teaching in secondary school (A049) at Liceo ‘Einstein’ Rimini, period: June-July 2016
- 2016 – Physics teaching in secondary school (A049) at Liceo ‘A. Volta’ Riccione, period: February-March 2016.
- 2015 – Preparation of pre-university students for the entrance test for the University of Medicine, private University in Republic of S. Marino.
- 2015 – Participation in teaching experiments on Climate Change and Project Cycle Management in a class of scientifically oriented secondary schools (Liceo Einstein, Rimini), period: April-June 2015.
- 2015 – Mathematics teaching in secondary school (A049) at Liceo ‘Einstein’ Rimini, period: June-July 2015
- 2013 – Physics and Mathematics teaching in secondary school (A049) at Liceo ‘Einstein’ Rimini, period: September-November 2013.
- 2012-2008 – Participation in teaching experiments on Thermodynamics in classes of scientifically oriented secondary schools (Liceo Einstein and Liceo Serpieri, Rimini).
- 2006-2011 – Laboratories on environmental education in collaboration with national and international environmental associations (HERA, WWF), target to primary and secondary school.

Editorial activities

- 2020 *to date* – Reviewer for *Frontiers in Science Education*
- 2020 *to date* – Reviewer for *Journal of Research Science in Teaching*
- 2020 *to date* – Reviewer for *Science & Education*
- 2020 *to date* – Reviewer for *Studies in Science Education*
- 2020 *to date* – Reviewer for NARST conference
- 2018 *to date* – Reviewer for *International Journal of Science Education*
- 2018 *to date* – Reviewer for *EURASIA Journal of Mathematics, Science and Technology Education*
- 2017 *to date* – Reviewer for ESERA conference
- 2017 *to date* – Reviewer for *International Conference of the Learning Sciences (ICLS)*
- 2015 *to date* – Reviewer for *Environmental Education Research*
- 2014 – Critical revision of the textbook ‘La fisica dei cambiamenti climatici’ (Claudio Romeni, Zanichelli).
- 2013 – Critical revision of the textbook ‘Il clima che cambia’ (Elvidio Lupia Palmieri e Maurizio Parrotto, Zanichelli).
- 2013 – Research of data for the textbook ‘#Terra’ (Elvidio Lupia Palmieri e Maurizio Parrotto, Zanichelli).

Museums, communicational and outreach activities

- 2022 Co-organisation of an exhibit at the European Researchers' Night for the FEDORA project, September 30th, Bologna, Italy.
- 2022 Co-organisation and speaker of the final exhibition event within the Italian Open schooling network for SEAS project, May 28th, IC Alighieri (Meldola).
- 2022 Co-organisation and speaker of the final exhibition event within the Italian Open schooling network for SEAS project, May 18th, ITAER Baracca (Forli).
- 2021 Co-organisation and speaker of the final exhibition event within the Italian Open schooling network for SEAS project, May 20th, Liceo Einstein (Rimini).
- 2021 Co-organisation and speaker of the final exhibition event within the Italian Open schooling network for SEAS project, May 19th, IC Alighieri (Meldola).
- 2021 Co-organisation and speaker of the outreach event of the SEAS project titled "*Educazione scientifica e sfide contemporanee: Data storytelling e processi partecipativi*", organised with G. Bellentani from Fondazione Golinelli, May 11th.
- 2019 Co-organisation and speaker of the pre-conference workshop titled "Futurizing Science Education: the I SEE project", side event of the ESERA19 conference, August 26th, Bologna, Italy.
- 2017 Organisation of an exhibit at the European Researchers' Night for the I SEE project, September 29th, Bologna, Italy.
- 2016 Organisation of an exhibit at the European Researchers' Night for the IRRESISTIBLE project, September 30th, Kiel, Germany.
- 2016 Member of the evaluation committee for the best exhibit award within the IRRESISTIBLE project, Reggio Emilia (Italy).
- 2016-2017 Collaboration with Science Centre Opificio Golinelli Bologna, design and planning of a physics laboratory on Quantum Physics, in collaboration with G. Ravaioli.
- 2011-2012 Scientific coordinator of "Planetarium Galileo Galilei" and associated museum, Riccione, Italy.

PUBLICATIONS

Paper published on international journals and/or conference proceedings.

Tasquier, G., Jornet, A. (2023). A conversation on the pragmatics of open schooling: Reflections after two European projects. *Education in Science*, 22-23.

Levrini, O., Fantini, P., Tasquier, G., Branchetti, L. (2023). An epistemological approach to align physics teaching with the society of acceleration and uncertainty. *IL NUOVO CIMENTO C* 46 (6), 1-11, DOI 10.1393/ncc/i2023-23203-x.

De Zuani Cassina, F., D'Orto, E., **Tasquier, G.**, Fantini, F., Levrini, O. (2023). Enhancing relevance and authenticity in school science: design of two prototypical activities within the FEDORA project. *Front. Educ.*, 28 September 2023, Sec. STEM Education, Volume 8 - 2023 | <https://doi.org/10.3389/feduc.2023.1085526>.

Barelli, E., **Tasquier, G.**, Caramaschi, M., Satanassi, S., Fantini, P., Branchetti, L., Levrini, O. (2022). Making sense of youth futures narratives: Recognition of emerging tensions in students' imagination of the future. *Front. Educ.*, 06 Sept. 2022. Sec. STEM Education. doi.org/10.3389/feduc.2022.911052

Tasquier, G., Knain, E., Jornet, A. (2022). Scientific Literacies for Change Making: Equipping the Young to Tackle Current Societal Challenges. *Front. Educ.* 7:689329. doi: 10.3389/educ.2022.689329.

Levrini, O., Fantini, P., Barelli, E., Branchetti, L., Satanassi, S., **Tasquier, G.** (2020). The present shock and time re-appropriation: rethinking science education in the pandemic era. *Science & Education*, 30 (1), pp.1–31 (2021). DOI: 10.1007/s11191-020-00159-x.

Levrini, O., **Tasquier, G.**, Barelli, E., Branchetti, L., Laherto, A., Palmgren, E., Wilson, C., Branchetti, L. (2020). Recognition and operationalization of Future-Scaffolding Skills: Results from an empirical study of a teaching-learning module on climate change and futures thinking. *Science Education*, 105(2), pp. 281-308 (2021). DOI: 10.1002/sce.21612.

Tasquier, G., Barelli, E., Palmgren, E. (2020). Can cultural insights be considered a way to trigger the development of future-scaffolding skills? In Gresalfi, M. and Horn, L. (Eds.), *The Interdisciplinarity of the Learning Sciences*, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 2 (pp. 835-836). Nashville, Tennessee: International Society of the Learning Sciences.

Bulgarelli, C., Mantovani, B., Marchini, M., Pecori, B., Plazzi, F., Prada, F., **Tasquier, G.**, Venturi, M. (2020). The design of an innovative scientific interdisciplinary lab for pre-service primary teachers. In Levrini, O. & Tasquier, G. (Eds.) (2020). *Electronic Proceedings of the ESERA 2019 Conference. The Beauty and Pleasure of Understanding: Engaging with Contemporary Challenges Through Science Education*, Bologna: ALMA MATER STUDIORUM – University of Bologna. ISBN 978-88-945874-0-1.

Levrini, O., **Tasquier, G.**, Branchetti, L., & Barelli, E. (2019). Developing future-scaffolding skills through Science Education. *International Journal of Science Education*, 41(18), 2647-2674. DOI: <https://doi.org/10.1080/09500693.2019.1693080>.

Tasquier, G., Branchetti, L., Levrini, O. (2019). Frantic Standstill and Lack of Future: How Can Science Education Take Care of Students' Distopic Perceptions of Time? *Bridging Research and Practice in Science Education*, 205-224, Springer. DOI: 10.1007/978-3-030-17219-0_13.

Malgieri, M., Branchetti, L., De Ambrosis, A., Levrini, O., **Tasquier, G.** (2018). Students' idiosyncratic voices and the learning of quantum physics in secondary school: a case study of appropriation. In Finlayson, O.E., McLoughlin, E., Erduran, S., & Childs, P. (Eds.), *Electronic Proceedings of the ESERA 2017 Conference. Research, Practice and Collaboration in Science Education, Part 2*, co-ed. Tytler R. and Carvalho G.S., pp. 387-400. Dublin, Ireland: Dublin City University. ISBN 978-1-873769-84-3

Levrini, O., Levin, M., Fantini, P., **Tasquier, G.** (2018). Orchestration of classroom discussions that foster appropriation. *Sci Ed.* 2018;1–30. DOI: <https://doi.org/10.1002/sce.21475>

Tasquier, G., Levrini, O., Laherto, A., Palmgren, E., Wilson, C. (2018). The challenge of working with the future within STEM education. In Kay, J. and Luckin, R. (Eds.) *Rethinking Learning in the Digital Age: Making the Learning Sciences Count*, 13th International Conference of the Learning Sciences, vol. III. International Society of the Learning Sciences: London (UK), June 23-27, 2018.

Branchetti, L., Cutler, M., Laherto, A., Levrini, O., Palmgren, E. K., **Tasquier, G.**, Wilson, C. (2018). The I SEE project: An approach to futurize STEM education. *Visions for sustainability*, 9, pp. 10 – 26, Special Issue: Science education futures (invited paper for a Special Issue).

Branchetti, L., **Tasquier, G.** (2018). The Role of Mathematics in Quantum Physics for High School Students: A Case Study. Paper published on Proceedings of the 7th International Conference of New Perspectives in Science education, 23-23 March, 2018, Firenze – Italy.

Barelli, E., Branchetti, L., **Tasquier, G.**, Albertazzi, L., Levrini, O. (2018). Science of Complex Systems and Citizenship Skills: A Pilot Study with Adult Citizens. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(4), pp. 1533 – 154. DOI: <https://doi.org/10.29333/ejmste/84841>.

Tasquier, G., Pongiglione, F. (2017). The Influence of Causal Knowledge on the Willingness to Change Attitude toward Climate Change: Results from an Empirical Study. *International Journal of Science Education*, 39(13), 1846-1868. DOI: <https://doi.org/10.1080/09500693.2017.1355078>.

Tasquier, G., Levrini, O., Dillon, J. (2016). Exploring Students' Epistemological Knowledge of Models and Modelling in Science: Results from a Teaching/Learning Experience on Climate Change. *International Journal of Science education*, 38 (4), 539-563. DOI: <https://doi.org/10.1080/09500693.2016.1148828>.

Tasquier, G. (2016). Leading secondary school students to face the disciplinary, epistemological and societal challenges of climate change. In J. Lavonen, K. Juuti, J. Lampiselkä, A. Uitto & K. Hahl (Eds.), *Electronic Proceedings of the ESERA 2015 Conference. Science education research: Engaging learners for a sustainable future*, Part 9, co-ed. M. Achiam & G. Carvalho, pp. 1251-1262. Helsinki, Finland: University of Helsinki. ISBN 978-951-51-1541-6.

Levrini, O., De Ambrosis, A., Hemmer, S., Laherto, A., Malgieri, M., Pantano, O., & **Tasquier, G.** (2016). Understanding first year students' curiosity and interest about Physics – Lessons learned from the HOPE project. *European Journal of Physics*, 38 (2), 025701.

Levrini, O., Fantini, P., **Tasquier, G.**, Pecori, M., & Levin, M. (2015). Defining and operationalizing appropriation for science learning. *Journal of the Learning Sciences*, 24 (1), 93-136. DOI: <https://doi.org/10.1080/10508406.2014.928215>.

Tasquier, G. (2015). Leading secondary school students to face the disciplinary, epistemological and societal challenges of climate change: design and analysis of multi-dimensional teaching/learning experiences. *Phd Thesis*.

Tasquier, G. (2015). How does epistemological knowledge on modelling influence students' engagement in the issue of climate change? *Il Nuovo Cimento*, 38 C (2015) 112.

Fantini, P., Levin, M., Levrini, O., **Tasquier, G.** (2014). Pulling the rope and letting it go analyzing classroom dynamics that foster appropriation. In C. P. Constantinou, N. Papadouris & A. Hadjigeorgiou (Eds.), *E-Book Proceedings of the ESERA 2013 Conference: Science Education Research for Evidence-based Teaching and Coherence in Learning*. Part 7, co-eds. Evagorou, M., & Iordanou, K., pp. 142-153. Nicosia, Cyprus: European Science Education Research Association (ESERA). ISBN: 978-9963-700-77-6.

Levrini, O., Bertozzi, E., Gagliardi, M., Grimellini-Tomasini, N., Pecori, B., **Tasquier, G.**, & Galili, I. (2014). Meeting the discipline-culture framework of physics knowledge: an experiment in Italian secondary school. *Science & Education*, 23(9), 1701-1731.

Levrini, O., Fantini, P., Pecori, B., **Tasquier, G.** (2014). Forms of productive complexity as criteria for educational reconstruction: the design of a teaching proposal on thermodynamics. *Procedia - Social and Behavioral Sciences*, 116, 1483–1490.

Tasquier, G. (2014). A multi-disciplinary approach to Climate Change. In C. P. Constantinou, N. Papadouris & A. Hadjigeorgiou (Eds.), E-Book Proceedings of the ESERA 2013 Conference: Science Education Research for Evidence-based Teaching and Coherence in Learning. Part 9, co-eds. Garvalho, G. & Mortensen Foss, M., pp. 64-75. Nicosia, Cyprus: European Science Education Research Association. ISBN: 978-9963-700-77-6.

Tasquier, G., Pongiglione, F., Levrini, O. (2014). Climate change: an educational proposal integrating the physical and social sciences. *Procedia - Social and Behavioral Sciences*, 116, 820-825.

Tasquier, G. (2013). Cambiamenti Climatici e Insegnamento/Apprendimento della Fisica: una Proposta Didattica [Climate Change and Teaching/Learning Physics: A Teaching Proposal]. *Giornale di Fisica*, 54(03), 173-193.

Levrini, O., Fantini, P., Gagliardi, M., **Tasquier, G.**, Pecori B. (2012). Toward a theoretical explanation of the interplay between the collective and the individual dynamics in physics learning. In C. Bruguière, A. Tiberghien & P. Clément (Eds.), E-Book Proceedings of the ESERA 2011 Conference: Science learning and Citizenship. Part 3, co-ed. Michelini M. and Duit R., pp.102-108, Lyon, France: European Science Education Research Association. ISBN: 978-9963-700-44-8.

Levrini O., Fantini P., **Tasquier G.**, Pecori B. (2011). From heuristics to humble theories in physics education: the case of modelling personal appropriation of thermodynamics in naturalistic settings. Twelfth International Symposium, Frontiers of Fundamentals Physics (FFP12), Udine, 21-23 November 2011 (<http://www.fisica.uniud.it/~ffp12/proceedings.html>).

Pecori, B., **Tasquier, G.**, Levrini, O., Pongiglione, F., Venturi, M. (2011). The challenge of contemporary society on science education: the case of global warming. Twelfth International Symposium, Frontiers of Fundamentals Physics (FFP12), Udine, 21-23 November 2011.

Levrini O., Fantini P., Pecori B., Gagliardi M., **Tasquier G.**, Scarongella MT. (2010). A Longitudinal Approach to Appropriation of Science Ideas: A Study of Students' Trajectories in Thermodynamics, in Gomez, K., Lyons, L., & Radinsky, J. (Eds.) Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010) - Volume 1, Full Papers. International Society of the Learning Sciences: Chicago IL, 572-579.

Books and/or chapters in books

Bandecchi, A., **Tasquier, G.** (2022). *Laboratorio di fisica e didattica della fisica del corso di laurea in scienze della formazione primaria svolto a distanza: la sfida di sperimentare l'apprendimento basato sull'indagine in un ambiente online*. Chapter published in R. Bonino, D. Marocchi, M.

Rinaudo, M. Serio “Atti del X Convegno Nazionale di Didattica della Fisica e della Matematica, DI.FI.MA. 2021”.

Levrini, O. & **Tasquier, G.** (Eds.) (2020). *Electronic Proceedings of the ESERA 2019 Conference. The Beauty and Pleasure of Understanding: Engaging with Contemporary Challenges through Science Education*, Bologna: ALMA MATER STUDIORUM – University of Bologna. ISBN 978-88-945874-0-1

Levrini, O., **Tasquier, G.**, Amin, T., Branchetti, L., Levin, M. (Eds.). *Engaging with Contemporary Challenges through Science Education Research*. Selected papers from the ESERA 2019 Conference. Springer International Publishing. ISBN 978-3-030-74490-8

Venturi, M., Pecori, B., **Tasquier, G.**, Govoni, P. (2018). *L'avventura del progetto IRRESISTIBILE Insegnanti, studenti ed esperti a confronto su temi di ricerca d'avanguardia e aspetti della Ricerca e Innovazione Responsabile nei curricula scolastici*, Bologna, Bonomia University Press, 2018, pp. 147.

Barelli, E., **Tasquier, G.** (2017). *Thinking the future to live in the present*. Preface to the book “Future in progress” produced by the Cultural Center Lucio Lombardo Radice and edited by F. Chilloni, pp. 7-14.

Dissemination and Communication articles

Barelli, E., **Tasquier, G.** (2019). *La bellezza e il piacere di capire: l'educazione scientifica per le sfide contemporanee [The beauty and the pleasure of understanding: science education for contemporary challenges]*. *Prima Pagina* N. 69 - Settembre 2019, INCONTRI Meetings (<http://www.primapagina.sif.it/article/1006>).