# University Academic Curriculum Vitae

Personal information	Name: Marco Caniato E-Mail: mcaniato@unibz.it								
Education since leaving school	<ul> <li>year and title of first degree; which university 2005 - Master Degree in Materials Science and Engineering, University of Trieste</li> <li>year and title of second degree; which university 2008 Bachelor Degree in Architecture - University of Trieste in cooperation with Turin Polytechnic (prof. Marco Masoero)</li> </ul>								
	<ul> <li>year and title of post-graduate degrees (and university)</li> <li>2006 - School of Acoustics Postgraduate course in Acoustics, Ferrara University, 480 hours, scientific Area ING/IND 11</li> <li>2007 - School of Architecture Postgraduate course in Energy Certification and Design, Ferrara University, 400 hours, scientific Area ING/IND 11</li> <li>2008 - School of Acoustics Postgraduate course in Room acoustics: from designing to testing, Ferrara University , scientific Area ING/IND 11</li> <li>School of Acoustics Postgraduate course in Acoustic and Electroacoustic designing for speech listening room, Ferrara University, scientific Area ING/IND 11</li> </ul>								
	<ul> <li>year, subject area and title of PhD (and university)</li> <li>2016 - Ph. D in Civil Engineering, Ferrara University (Italy) S.S.D. ING- IND 11, tutor prof. Patrizio Fausti, subject Area: Engineering Science, title: Acoustic and thermal properties of timber constructions: theoretical and experimental investigation</li> <li>year, subject area and title of Habilitation (and university)         <ul> <li>2005 - Registration with the Italian Board of Engineers</li> <li>2007 - Italian Certification as Expert in Environmental Acoustics</li> </ul> </li> </ul>								
Scientific	year, subject area and title of Habilitation								

nationalItalian national Scientific Habilitation (Macrosettore 09-C2) valid fromhabilitation08/11/2020 to 08/11/2029

## Present - Title of appointment

Assistant Professor (Researchers with a fixed-term contract RTD-A) at the Free University of Bozen-Bolzano, Faculty of Science and Technology

Period: from 01/02/2018 to present.

<u>Employer</u>: Free University of Bozen-Bolzano, Faculty of Science and Technology.

Supervisor: prof. A. Gasparella.

Description of current activities:

My research activity performed as junior RTD researcher at the Free University of Bozen-Bolzano is related to the following main areas:

- ✓ characterization of the acoustic and thermal behavior of buildings components, both numerically and through experimental laboratory tests;
- ✓ design of the thermal and acoustic laboratories at the Free University of Bozen, located at NOI TechPark in Bozen;
- ✓ assessment via simulation of the acoustic performance of buildings and in particular related to timber ones and their insulation properties;
- ✓ assessment of indoor conditions, in particular related to acoustic and thermal comfort and IAQ and to the impact on occupants' performance and productivity;
- ✓ characterization of insulating materials and the assessment of new analytical and numerical models for the simulations of their properties

## Professional experience

Chronological list of all previous employments (each with job title, starting and finishing dates, level, employer, responsibilities)

From / to	Job title	Name of academic	Academic level	responsibilities		
		Institution				
1/6/2006- 31/5/2007	Fellow Researcher (assegno di ricerca)	University of Trieste	Fellow Researcher	Managing D4 Fesr funding – research Topic: Characterization of Resonance wood		
1/4/2011- 31/12/2016	Fellow Researcher (assegno di ricerca)	University of Trieste	Fellow Researcher	Acoustic Laboratory designer and Director. University Technical referent for the scientific committee related to Industria 2015 Funding. Person in charge of acoustic and thermal laboratory tests on insulating materials		
1/10/2017- 31/1/2018	Fellow Researcher (assegno di ricerca)	University of Trieste	Fellow Researcher	POR Fesr funding – Person in charge of acoustic and thermal laboratory tests on insulating materials		
1/2/2018- present	Assistant Professor (RTDa)	Free University of Bozen	Assistant professor	Klimahouse e produzioni energetiche Province of Bozen Founding – Person in charge of for laboratories		

		design	for
		energy,	
		acoustics,	
		ventilation	and
		indoor c	omfort
		tests. Re	search
		on (i)	indoor
		comfort	using
		living	lab
		facilities,	(ii)
		numerical	
		simulation	of
		thermal	and
		acoustic b	uilding
		component	ts

Experience	0	title	of	courses,	name	of	University/Ir	nstit	ute, s	ubject	area,
in academic		acad	emi	c level	(under	-/pc	ost-graduate	/	PhD),	result	s of
teaching	evaluations (full details in appendix)										

- *Teaching appointment* Post Graduate course RECA Risparmio Energetico e Comfort Abitativo, (2009) University of Trieste, II referenced modules (S.S.D. ING/IND 11) 10 hours
- 2010 -2011, *Teaching appointment* (Aggregate professor) "Impianti Tecnici" course (S.S.D. ING/IND 11) University of Trieste, Building Physics, Under graduate course. 60 hours + exams
- 2011 -2012, *Teaching appointment* (Aggregate professor) "Impianti Tecnici" course (S.S.D. ING/IND 11) University of Trieste, Building Physics, Under graduate course. 60 hours + exams
- 2013-2014, *Teaching assistant* at Controllo Ambientale degli Edifici (S.S.D. ING/IND 11) University of Trieste, Buildings Physics, Under graduate course. 30 hours. Prof. Stefano Longhi
- 2014-2015, *Teaching assistant* at Controllo Ambientale degli Edifici (S.S.D. ING/IND 11) University of Trieste, Buildings Physics, Under graduate course. 30 hours. Prof. Stefano Longhi
- 2015-2016, *Teaching assistant* at Controllo Ambientale degli Edifici course (S.S.D. ING/IND 11) University of Trieste, Buildings Physics, Under graduate course. 30 hours. Prof. Stefano Longhi
- 2016 -2017, *Teaching appointment* (Aggregate professor) Controllo Ambientale degli Edifici course (S.S.D. ING/IND 11)

University of Trieste, Buildings Physics, Under graduate course. 60 hours + exams

- 2017 -2018, *Teaching appointment* (Aggregate professor) "Controllo Ambientale degli Edifici" course (S.S.D. ING/IND 11) University of Trieste, Buildings Physics, Under graduate course.
   60 hours + exams
- May 2018, 2 *Teaching* modules at the post graduate course "Course di Formazione Permanente Tecnico Competente in Acustica" (S.S.D. ING/IND 11) University of Bologna, Buildings Physics, Post graduate course. 12 hours, Prof. Tronchin
- December 2018, *Teaching assistant* at "Fisica Tecnica" course (S.S.D. ING/IND 11) University of Trento, Buildings Physics, Under graduate course. 5 hours, prof. Baggio
- *Teaching* modules at the post graduate course "Corse di Formazione Permanente Tecnico Competente in Acustica" (S.S.D. ING/IND 11) University of Bologna, Buildings Physics, Post graduate course. 12 hours, Prof. Tronchin
- March-May 2019, *Teaching assistant* at "Tecnica controllo ambientale" course (S.S.D. ING/IND 11) University of Trento, Buildings Physics, Under graduate course. 20 hours, prof. Baggio
- 2019-2020 *Teaching appointment* (professor) "Technical physics for mechatronics" (In English) course (S.S.D. ING/IND 11) Free University of Bozen, Buildings Physics, Under graduate course. 60 hours + exams
- 2020 *Teaching* modules at the post graduate course "Corse di Formazione Permanente Tecnico Competente in Acustica" (S.S.D. ING/IND 11) University of Bologna, Buildings Physics, Post graduate course. 12 hours, Prof. Tronchin
- 2020 Invited lecture "Acustica dei materiali porosi", Class of Polymers, University of Trieste
- 2020-2021 *Teaching appointment* (professor) "Technical physics for mechatronics" (In English) course (S.S.D. ING/IND 11) Free University of Bozen, Buildings Physics, Under graduate course. 60 hours + exams
- 2021 Teaching modules at the post graduate course "Corse di Formazione Permanente Tecnico Competente in Acustica" (S.S.D. ING/IND 11) University of Bologna, Buildings Physics, Post graduate course. 8 hours, Prof. Tronchin
- March April 2021 *Visiting professor,* University of Minho, Portugal, Construction Process class, prof. Sandra Monteiro da Silva and prof. Ricardo Mateus
- From June 2021 *Visiting researcher*, University of Innsbruck, Austria

### Other academic responsibilities

- Acknowledged as *expert in the field (Cultore della Materia)* by the School Council. Building Physics (ING/IND 11), start of appointment 6.10.2015; Level of appointment: National; employer Ferrara University; brief description of responsibilities: Teaching lessons and exams

- Supervisor of 31 discussed theses:
- 7 Bachelor Degree thesis at the University of Trieste;
- 2 II level Master theses at University of Trieste
- Co-Supervisor of 2 discussed theses:
- 1 Bachelor Degree thesis at the University of Trieste;
- 1 II level Master theses at University of Trieste
- 2 II level Master theses at University of Udine
- *Member* of the PhD Council of Sustainable Energy and Technology of the Free University of Bozen-Bolzano (2019)
- *Person in Charge* for the research group for the design and realization of the thermal and acoustic laboratories at NOI Park, Bozen, for the Free University of Bozen (2018-2019)
- *Active member* of the research team developing the EFSR project named E21@NOI of The Free University of Bozen - Bolzano
- *Referent* person for the Research Agreement between Free University of Bozen and the Department of Engineering and Architecture of the University of Trieste (2019)
- *Referent* for the research group for national and international project applications such as:
  - Industria 2015, (2013-2017), on the project Mobilità sostenibile, code MS01\_00040. *Person in Charge* for the University of Trieste for the scientific and technical coordination and management
  - Por Fesr 2014-2020 Friuli Venzia-Giulia Region (2017), on the project eDOORS, *Person in Charge* for the University of Trieste for the project design and development
  - Por Fesr 2014-2020 Friuli Venzia-Giulia Region (2017), on the project Plastico, *Person in Charge* for the University of Trieste for the Acoustic tests
  - Por Fesr 2014-2020 Friuli Venzia-Giulia Region (2017), on the project GGTDoors, *Person in Charge* for the University of Trieste for the project design and development and for the Acoustic tests
  - INTER REG ITA SLO (2016), on the project BESTWATER -Better Efficiency. *Person in Charge* for the University of Trieste for the project design and development

- INTER REG ITA CRO (2017-2018), on the project ARTHUR (Code 10839679016), *Person in Charge* for the University of Trieste for the project design and development
- INTER REG ITA CRO (2017-2018), on the project Net4mP (Code 80007370382), *Person in Charge* for the University of Trieste for the project design and development and for the coordination of the project
- ITALY ISRAEL agreement (2017), on the project PolyFoNN Person in Charge for the University of Trieste for the project design and development
- ITALY ISRAEL agreement (2017), on the project HytEna Person in Charge for the University of Trieste for the project design and development
- INTER REG ITA AUS (2019-today), Leading project manager and communication manager of the European project BIGWOOD.
- INTER REG ITA AUS (2019-today), Leading project manager and communication manager of the European project SENSHome.
- ➢ INTER REG ITA AUS (2019-today), project manager and communication manager of the European project MC 4.0.
- Por Fesr 2014-2020, Province of Bozen, Active member of the project E21@NOI
- Internal project Funding, Free University of Bozen, SCORELINE project, Principal Investigator, 1/7/2021 present
- Third mission appointment
- (2008-2015) Research cooperation with Acustica Sistemi srl, Elastica srl, Isotecna sas, Eternoivica srl. *Person in Charge* for the University of Trieste for the acoustic tests on materials. Activities: Acoustic testing of resilient layers for the impact noise reductions of floating floors in buildings. Realizations of more than 40 test reports.
- (2014-2015) Research cooperation with Ermes Elettronica. *Person in Charge* for the University of Trieste for the project design and development of a camera shell for Desert conditions. Activities: Literature review on the topic, Temperature measurements on controlled laboratory conditions, implementation of the shell, temperature measurements through low emissivity different type of glasses. Exposition in controlled radiant box and measurements of both boundary conditions and internal conditions variations.

Thermal conductivity analysis of shell elements. Measurement of the dynamic variations caused by temperature cycling in laboratory conditions. Design of a Peltier Cell for the camera shell cooling.

- (2017-2018) Research cooperation with Officine del Bello srl on the project Innova 3T, code 15691. *Person in Charge* for the University of Trieste for the project design and development. Activities LCA estimations, supporting the choice of alternative materials and/or new applications of materials that are environmentally sustainable, by analyzing and comparing the properties with the supplier's technical specifications. Integration of the relevant databases into the production process and optimization of the final choice. Scientific-technological support to the experimentation of the new choices implemented in the previous phases, with the aim of reducing the carbonic impact both in relation to the production process and to the life cycle of the same product.

#### • Third mission dissemination for Continuous Education

- Course "Le novità in materia di Acustica" c/o Engineers board of Treviso. Director and teacher, June 2017
- Course "il comfort acustico negli ambienti chiusi" c/o Architects board of Brescia, Director and teacher, June 2017
- Course "Le novità in materia di Acustica" c/o l'Engineers board of Trieste Director and Teacher, May 2017
- Courses "il comfort acustico negli ambienti chiusi" and "Isolamento acustico degli edifici" c/o Architects and Engineers board of Bari, Teacher, May 2017
- Course "Le misure acustiche in campo ambientale" c/o Chemicals Board of Trieste, Teacher, March 2017
- Course "il comfort acustico negli ambienti chiusi" c/o Engineers board of Venezia, Teacher, March 2017
- Course "Acustica Legale" c/o Engineers board of Trieste Director and Teacher, December 2016, February 2017
- Course "il comfort acustico negli ambienti chiusi" c/o Engineers board of Trento. Teacher, November 2016
- Course "l'isolamento di facciata e la scelta consapevole dell'infisso" c/o Engineers board of Trieste. Director and Teacher, October 2016
- Course "Progettazione degli edifici in Legno" c/o Engineers board of Pordenone. Director and Teacher, September 2016

- Course "l'isolamento di facciata e la scelta consapevole dell'infisso" c/o Engineers boardof Pordenone. Director Teacher, April 2016
- Course: "ACUSTICA: edilizia e degradamento dei materiali" Engineers board of Trieste. Director and Teacher, february 2016
- Course "Acustica dei Locali Pubblici" c/o Engineers board of Trieste. Director and Teacher, November December 2015
- Course "Acustica Edilizia" c/o Engineers board of Trieste. Director and Teacher, November December 2015
- Course "Acustica degli impianti" c/o Engineers board of Trieste. Director and Teacher of the modules "Progettazione degli impianti a ciclo continuo e discontinuo. Calcolo degli antivibranti" and "criticità nelle misurazioni e applicazione della normativa" September - October 2014
- Seminars on "Acoustics in Buildings" c/o Architects board of of Pordenone. Teacher, June 2014
- Course "Acustica dei Locali pubblici" c/o Engineers board of Treviso. Director and Teacher of modules "Teoria di base della progettazione acustica edilizia" and "Teoria di base dell'Elettroacustica", "misura oggettiva del disturbo da rumore" and "valutazioni delle sorgenti sonore", May 2014
- Course "Acustica edilizia di Base" c/o Engineers board of Treviso. Teacher of "Acustica degli impianti" and "Rumore da calpestio e sua riduzione" modules, March 2014
- Course "Acustica degli impianti" c/o Engineers board of Treviso. Director and Teacher of modules "Progettazione degli impianti a ciclo continuo e discontinuo. Calcolo degli antivibranti" and "criticità nelle misurazioni e applicazione della normativa", November 2013
- Course "Acustica Legale" c/o Engineers board of Treviso. Director del Course e Teacher dei moduli "Acustica Edilizia" and "Normale Tollerabilità", June 2013
- "Teacher c/o Course "FSE -Tecniche di progettazione e riqualificazione edilizia con impianti ad alta efficienza", module 1 and module 2, 2011-2012, Consorzio dell'Area di Ricerca Trieste

external appointments at national and international level

<sup>-</sup> substitute *member* in the COST ACTION Denorms CA15125 Designs for NOise Reducing Materials and Structures (2015present)

- *External Expert* in the remote evaluation of the proposal/s for COST Scientific Committee, (2018-present)

- *Scientific Expert* nel registro REPRISE del MIUR per la categoria Fundamental Research (2018-present)

- Reviewer for several International Journals:

(1) Advances in research (ScienceDomain International)

(2) Applied Acoustics (Elsevier)

(3) Applied Science (MDPI)

(4) British Journal of Applied science and technologies (ScienceDomain International)

(5) British Journal of Economics, Management & Trade (ScienceDomain International)

(6) Building Acoustics (Sage Publishing)

(7) Building and Environment (Elsevier)

(8) Building Research & Information (Taylor and Francis)

(9) Buildings (MDPI)

(10) Case Studies in Thermal Engineering (Elsevier)

(11) Case Studies in building materials (Elsevier)

(12) Crystals (MDPI)

(13) Construction and building materials (Elsevier)

(14) Designs (MDPI)

(15) Energies (MDPI)

(16) Energy Efficiency (Springer)

(17) Energy Reports (Elsevier)

(18) Engineering Review, (University of Rijeka)

(19) Environmental Monitoring and Assessment (Springer)

(20) European Journal of Environmental and civil engineering

(Taylor and Francis)

(21) Experimental Techniques(Springer)

(22) Forests (MDPI)

(23) Frontiers in Energy Research (Springer)

(24) Frontiers in Materials (Springer)

(25) Future internet (MDPI)

(26) International Journal of Biological Macromolecules (Elsevier)

(27) International Journal of Environmental Research and Public Health (MDPI)

(28) Inventions (MDPI)

(29) Journal of Acoustic Society of America – Express Letter (Acoustic Society of America)

(30) Journal of Acoustics (Hapres)

(31) Journal of Applied Physical Science International (International Knowledge Press)

(32) Journal of Asian Architecture and Building Engineering (Taylor and Francis)

(33) Journal of Basic and Applied Research international (International Knowledge Press)

(34) Journal of Civil Engineering and Architecture (David Publisher)

(35) Journal of Cleaner production (Elsevier)

(36) Journal of Global Ecology and Environment (International Knowledge Press)

(37) Journal of Low frequency noise, vibration and active control (Sage Publishing)

(38) Journal of Building performance Simulations (Taylor and Francis)

(39) Journal of renewable materials (TechScience Press)

(40) Journal of Scientific Research and Reports (ScienceDomain International)

(41) Materials (MDPI)

(42) Ocean and Costal Management (Elsevier)

(43) Open Physics (De Gruyter)

(44) Renewable and sustainable Energy Review (Elsevier)

(45) Scientific Reports (Nature)

- (46) Sustainability (MDPI)
- (47) Symmetry (MDPI)
- (48) Urban Science (MDPI)
- (49) Waste and Biomass Valorization (Springer)
- (50) Waste Management (Elsevier)
- (51) Journal of Aeroacoustics (Sage)
- Certificate of "Excellence in reviewing" by the British Journal of Applied Science and Technology in 2017.

#### Memberships

- responsibilities for organizing conferences/seminars/exhibitions (place, duration, institute)
  - *Member* of the Advisory e Scientific Board of the International Congress on Acoustics, Buenos Aires, 2016
  - Structured Sessions *Coordinator* for ICA 2016 organized by International Commission for Acoustics; topic EN - Environmental Acoustics & Community Noise, Buenos Aires, 2016
  - *Topic Organizer* for ICA 2016 organized by International Commission for Acoustics; topic EN - Environmental Acoustics & Community Noise, Buenos Aires, 2016

- Structured Sessions *Coordinator* for the international congress INTERNOISE2019 Madrid organized by International Institute of noise control engineering
- *Member* of the organizing committee of BSA 2019 IV IBPSA-Italy Congress Bozen (http://bsa.events.unibz.it/)
- Structured Sessions *Coordinator* for BSA 2019 Bozen of the special issue "Acoustic Simulation"
- *Member* of the Advisory e Scientific Board of the International Workshop of Indoor Comfort, Bozen, 2019
- *Member* of the Advisory e Scientific Board of the International Workshop of Indoor Comfort, Bozen, 2020

Membership of academic or professional bodies (including membership of Editorial Boards of scientific publications; membership of scientific committees for international conferences)

- *Lead Guest Editor* of the special issue for the International Journal of Polymer Science (ISBN 16879422, 16879430), title: Thermal and Acoustic Properties of Polymeric Materials and Polymeric Meta-Materials, 2018
- *Member* of the Advisory e Scientific Board of the International Congress on Acoustics, Buenos Aires, 2016
- *Structured Sessions Coordinator* for the international congressINTERNOISE2019 organized by International Institute of noise control engineering about the topic "TC 05.04 Communication with Community".
- Organizer, session coordinator and scientific committee member for the international congress Building Simulation Application BSA 2019 organized by IBPSA Italy about the topic "Building Acoustics"
- *Organizer and scientific* committee *member* of the International Workshop on Indoor Comfort - Comfort perception of occupants with normal and special needs, 10-11 December 2019, Bozen
- *Session coordinator* for the international congress Building Simulation 2019 organized by IBPSA about the topic "Building Acoustics"
- *Organizer and session coordinator* for the International Congress of Sound and Vibration, Prague, July 2020, session T08 SS01 entitled "Passive sound absorbing and insulating materials"
- *Session Organizer* for the international congress INTER-NOISE 2020 organized by I-INCE held in Seul, Korea, August 2020

- Session coordinator for the International Congress of Sound and Vibration, Prague, July 2021, session T11.SS05 entitled "Acoustics of Timber Buildings"
- *Session Coordinator* for the International Congress of Sound and Vibration, Prague, July 2021, session T07RS06.SS05 entitled "Optimal design and uncertainty quantification"
- *Theme Area organizer coordinator* for the International Congress of Sound and Vibration, Prague, July 2021, entitled "Materials for noise and vibration control"
- *Structured session organizer coordinator* for the International Congress of Sound and Vibration, Prague, July 2021, Session T08SS1 entitled "Passive sound absorbing and insulating materials"
- *Organizer and scientific* committee *member* of the International Workshop on Indoor Comfort - Comfort perception of occupants with normal and special needs, December 2020, Bozen
- *Chairman* of the national workshop "Sostenibilità, economia circolare ed azioni sui materiali post-consumo", December 2020, organized by the University of Trieste
- *Guest Editor* for Building Acoustic (ISSN 1351010X), title: Acoustic Modelling on Buildings, Lead Editor: prof. Francesco Asdrubali
- *Guest Editor* for Designs (ISSN 2411-9660), title: Sustainable and Conventional Buildings
- *Guest Editor* for Applied Science (ISSN 2076-3417), title: "Human-Centred Design of the Built Environments: Latest Advances and Prospects"
- Topic Editor, for Applied Science (ISSN 2076-3417)

Publications Publications over the last 15 years in chronological order within each category following the International Standard for bibliographic references with DOI. With multiple authorship the main author's name appears in **BOLD**.

a) List of publications on invitation or not at national and international congresses

1. M. **Caniato**, S. Favretto, E. Lucchini, Caratterizzazione microstrutturale di legno per strumenti musicali, Proceedings of Italian acoustic association congress, Firenze (Italy) 13-15 June 2007

2. M. **Caniato**, S. Favretto, E.Lucchini, Comparison of different resonance wood with a new scientific method, Proceedings of 19th International Congress on Acoustics, Madrid,2-7 Settembre 2007

3. M. **Caniato**, S. Favretto, E.Lucchini, New approach for the characterization of resonance wood, Proceedings of 19th International Congress on Acoustics, Madrid,2-7 Settembre 2007

4. M. **Caniato**, F. Bettarello, M. Masoero, The Royal Church of San Lorenzo in Turin: Guarino Guarini and the Baroque architectural acoustics, Proceedings of Euroacoustics2008, Paris 29 June – 4 July 2008-03-27

5. M. **Caniato**, V. Fasoli, Bernardo Antonio Vittone: acoustics and architecture in the XVIII century, Proceedings of Euroacoustics2008, Paris 29 June – 4 July 2008-03-27

6. M. **Caniato**, V. Fasoli, M. Masoero, Istruzioni diverse concernenti l'officio dell'architetto civile: l'acustica negli scritti di Bernardo Vittone, Proceedings of Italian acoustic association congress, Milano (Italy) 11-13 June 2008

7. M. **Caniato**, F. Bettarello, M. Masoero, Caratterizzazione acustica della Real Chiesa di San Lorenzo a Torino, Proceedings of Italian acoustic association congress, Milano (Italy) 11-13 June 2008

8. F. Bettarello, G. Quiqueto, M. **Caniato**, Progettazione e realizzazione di uno studio di registrazione in abitazione privata non rispettante i requisiti acustici passivi, Proceedings of Italian acoustic association congress, Milano (Italy) 11-13 June 2008

9. M. **Caniato**, S. Favretto, E. Lucchini, Utilizzo di un nuovo metodo scientifico per la selezione del legno per strumenti musicali, Proceedings of the 24th Annual Meeting of the Polymer Processing Society, Salerno (Italy) 15-19 June 2008

10. M. **Caniato**, F. Bettarello, Acustica ed energetica d'eccellenza: confronto tra le richieste per l'ottenimento della certificazione LEED e gli obiettivi dalla legislazione nazionale vigente, Proceedings of Italian acoustic association congress, Turin (Italy) 10-12 June 2009

11. M. **Caniato** V. Fasoli, Il suono nelle forme architettoniche del XVIII secolo, Proceedings of Italian acoustic association congress, Turin (Italy) 10-12 June 2009

12. M. **Caniato**, F. Bettarello, S. Longhi, O. Sbaizero, Renovation of historic building for music rooms and recording studio: high acoustic and

energetic performances , Proceedings of InterNOISE, Lisbon 13 June – 16 June 2010

13. F. Bettarello, M. **Caniato**, R. Di Monte, J. Kaspar, O. Sbaizero, Preliminary Acoustic tests on resilient materials: comparison between common layers and nano-structured layers Proceedings of 20th International Congress on Acoustics, Sydney ,23-27 August 2010

14. M. **Caniato**, F. Bettarello, S. Longhi, O. Sbaizero, Conversione di edificio storico in aule per la musica e studio di registrazione: intervento ad alte prestazioni acustiche ed energetiche, Proceedings of Italian acoustic association congress, Siracusa (Italy) 26-28 may 2010

15. M. **Caniato**, F. Bettarello, V. Baccan, On field impact sound pressure level performances of basic wooden beam floor structures Proceedings of ISSA2010 Sustainability in Acoustics, Auckland 29 - 31 August 2010

16. M.**Caniato**, J. Kaspar, R. Di Monte, O. Sbaizero, Common layers and nano-structured layers: comparison between resilient materials used under floating floors Proceedings of 1st EAA Euroregio 2010, Ljubljana, 15-18 september 2010

17. M. **Caniato**, F. Bettarello, V. Baccan, II rumore da calpestio dei solai a travi portanti: prove in opera e considerazioni sui solai in legno, Proceedings of Italian acoustic association congress, Rimini (Italy) 8-10 june 2011

18. A. Tombolato, F. Bettarello, M. **Caniato**, S. Cordeddu, Comfort acustico per edifici predisposti alla didattica: integrazione della progettazione architettonica ed acustica, Proceedings of Italian acoustic association congress, Rimini (Italy) 8-10 june 2011

19. M. Valotto, S. Pasqualin, F.Bettarello, O. Sbaizero, M. **Caniato**, Nuovo laboratorio di prova per l'isolamento acustico in struttura leggera a secco, Proceedings of Italian acoustic association congress, Rimini (Italy) 8-10 june 2011

20. M. **Caniato**, F.Bettarello, S.Roveroni, F.De Giusti, A.Quaia, La classificazione acustica del territorio: confronto tra criteri derivanti da linee guida di differenti regioni italiane, Proceedings of Italian acoustic association congress, Roma (Italy) 4-6 July 2012

21. M. **Caniato**, F.Bettarello, V.Baccan, La misura degli indici R'w, L'nw e D2mntw: confronto in opera tra i metodi proposti dale norme UNI EN ISO 140 e UNI EN ISO 10052 ,Proceedings of Italian acoustic association congress, Roma (Italy) 4-6 July 2012

22. M. **Caniato**, F.Bettarello, La classificazione acustica degli edifici: criticità nell'applicazione della verifica a campione ,Proceedings of Italian acoustic association congress, Roma (Italy) 4-6 July 2012

23. M. **Caniato**, F. Bettarello, High thermal and acoustic performances on new building according to strict protocols in Advances

in Building Science, 2013, IIT Madras, pp.173-180, ISBN 978-93-80689-11-1

24. M. **Caniato**, S. Pasqualin, L. Sartor and R. Subramaniam, Energy efficiency of prefabricated buildings: New approach on metal structure constructions in Advances in Building Science, 2013, IIT Madras, pp.155-164, ISBN 978-93-80689-11-1

25. M. **Caniato**, V. Fonovich, S. Longhi, Risparmio energetico e comfort abitativo. Istruzioni per l'uso, Alinea Editrice, Firenze, 2012, ISBN 978-88-6055-748-3, MONOGRAFIA

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34. M. **Caniato**, Nuovo metodo per la valutazione del disturbo da rumore in ambiente abitativo, Proceedings of Italian acoustic association congress, Florence (Italy) July 2015

35. A. Quaia , F. Bettarello , M. **Caniato**, L'acustica nei teatri in calcestruzzo armato di inizio novecento, Proceedings of Italian acoustic association congress, Florence (Italy) July 2015

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37. M.**Caniato**, F. Bettarello, O. Sbaizero, C. Schmid, Recycled materials for noise reduction in floating floors 22nd International Congress on Sound and Vibration, ICSV 2015; Florence; Italy; 12 July 2015 through 16 July 2015; Code 121474

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45. A. Santoni, P. Fausti, P. Bonfiglio, M. **Caniato**, On the use of the transfer matrix method to evaluate sound insulation in complex building

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#### c) International peer-reviewed book chapters

87. M. **Caniato**, F. Bettarello, A. Gasparella, Energy and Acoustic Performances of Timber in Buildings, 2018, in: Reference Module in Materials Science and Materials Engineering, Elsevier, https://doi.org/10.1016/B978-0-12-803581-8.11216-0

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#### d) Books on national series

89. M. **Caniato**, V. Fonovich, S. Longhi, Risparmio energetico e comfort abitativo. Istruzioni per l'uso, Alinea Editrice, Firenze, 2013, II edizione, ISBN 978-88-6055-807-7, MONOGRAFIA

90. F. Bettarello, M. **Caniato**, Acustica Edilizia. Capire, Imparare, Valutare, Alinea Editrice, Firenze, 2013, ISBN 978-88-6055-815-2, MONOGRAFIA

91. S. Longhi, M. **Caniato**, F. Bettarello, La progettazione tecnica e acustica dei sistemi di scarico idrosanitario in parole semplici, Maggioli Editore, 2016, ISBN 916.1884.9, MONOGRAFIA

92. F. Bettarello, M. **Caniato**, Acustica negli edifici in legno, Maggioli Editore, 2018, ISBN 8891627452, MONOGRAFIA

e) Papers published on national journals

93. A. Barboni, A. Boscolo, M. **Caniato**, B. Piuzzi, Domotica e risparmio energetico, neo-Eubios, n.43, TEP edizioni, 2013, ISSN 1825-5515

94. M. Bellè, M. **Caniato**, Il bim come approccio al progetto architettonico a 360°. Applicazione alla progettazione multifisica, neo-Eubios 67, Marzo 2019, pp. 47-57, TEP edizioni

Further Presentations at scientific conferences over past years (invited or selected, keynote, nature and status of conference)

#### 2016

International Congress on Acoustics, Buenos Aires (Argentina), September 2016

Number of paper presented: 2

Number of Invited papers: 2

- Titles: a) Noise generated from large construction sites: Measurements and possible mitigations
  - b) Low frequency noise and disturbance assessment methods: A brief literature overview and a new proposal

#### 2018

Euronoise2018, Heraklion (Greece), May 2018
Number of paper presented: 1
Number of Invited papers: 1
Titles: Acoustic classification of dwellings using national and international standard: a critical comparison
International Conference on Ship & Maritime Research
Number of paper presented: 1
Number of Invited papers: 1
Titles: An Inneurative Thermal and Accustic Insulation Form for Neural Fire

Titles: An Innovative Thermal and Acoustic Insulation Foam for Naval Fire Doors Characterization and Study with FEM Analysis

#### 2019

*Building Simulation Application, Bozen (Italy), June 2019* Number of paper presented: 3

Number of Invited papers: 3

Titles: a) Acoustic comfort for spaces used by people with cognitive impairment: a starting point for the application of Acoustic Event Detection and Sound Source Recognition systems

b) Acoustic and Thermal Refurbishment on a Temporary Auditorium: BIM design and interventions influences

c) Modelling the sound insulation of mass timber floors using the finite transfer matrix method

Internoise, Madrid (Spain) June 2019

Number of paper presented: 1

Number of Invited papers: 1

Titles: The influence of source position and orientation on speech intelligibility in school environments

*International Congress on Sound and Vibration, Montreal (Canada) 2019* Number of paper presented: 2

Number of Invited papers: 0

- Titles: a) Acoustic simulation of timber floors performance using numerical models
  - b) Evaluation of the impact noise reduction by using thin flooring solutions

Building Simulation, Rome (Italy) September 2019

Number of paper presented: 3

Number of Invited papers: 2

Titles: a) Simulation of the transmission loss of curtain wall with mullions

- b) Innovative approach in Acoustic simulation of timber walls
- c) On the use of the transfer matrix method to evaluate sound insulation in complex building partitions

International Congress on Acoustics, Aachen (Germany) 2019

Number of paper presented: 1

Number of Invited papers: 1

Titles: Numerical simulation of CLT floors and comparison with empirical predictive models and measurements

#### 2020

Internoise, Seul (South-Korea), August 2020

Number of paper presented: 3

Number of Invited papers: 1

Titles: a) Multi-storey wooden buildings: an overview of European Projects and the BIGWOOD project presentation

b) Acoustic comfort applied to the living spaces of people with autism: designing interactive and supportive environments

c) A critical overview on the sensory perception related to people affected by Autism Spectrum Desorder

Participation to previous conferences.

- Italian acoustic association congress, Florence , 2007, Presented papers: 1
- 19th International Congress on Acoustics, Madrid, 2007, Presented papers: 2
- Euroacoustics2008, Paris, 2008, Presented papers: 2
- Italian acoustic association congress, Milan, 2008, Presented papers: 3

- Italian acoustic association congress, Turin, 2009, Presented papers: 2
- > InterNOISE, Lisbon, 2010, Presented papers: 1
- 20th International Congress on Acoustics, Sydney, 2010 Presented papers: 1
- Italian acoustic association congress, Siracusa, 2010 Presented papers: 1
- ISSA2010 Sustainability in Acoustics, Auckland, 2010, Presented papers: 1
- > 1st EAA Euroregio, Ljubljana, 2010 Presented papers: 1
- Italian acoustic association congress, Rimini, 2011 Presented papers: 3
- Italian acoustic association congress, Rome, 2012 Presented papers: 3
- International congress on Advances in Building Science, 2013, IIT Madras, 2013, Presented papers: 2
- International Congress on Acoustics, Montreal, 2013, Presented papers: 2
- Italian acoustic association congress united With DAGA 2013 and Alpe Adria Acoustic Congress, Meran, 2013, Presented papers: 3
- Italian acoustic association congress, Pisa, 2014 Presented papers:
   3
- Italian acoustic association congress, Florence, 2015 Presented papers: 3
- International Congress on Sound and Vibration, Florence, 2015, Presented papers: 1, INVITED PAPER
- $\triangleright$

**Spin-offs**, *Spin-off*: 2015 - Cofounder of the Spin-off MaterialScan s.r.l. of the **patents and** University of Trieste

#### Patents.

Entreprene urship

> ✓ European PATENT EP, Method for recycling waste material inventors: M. Caniato, A. Travan, n. Patent: EP16425023.5 date of priority 11/3/2016

<u>Description</u>: This method is dedicated to produce thermal and acoustic insulating foams from waste.

- ✓ European PATENT EP, Device and method for detecting the structural integrity of a sample object inventors: M. Caniato, EP16177665 July 2016
   <u>Description</u>: This method is dedicated to detect defects included in materials using an acoustic method
- ✓ European PATENT EP, Experimental method to detect the elastic modulus of objects, samples or semi-worked products of various materials inventors: M. Caniato, EP16187706 September 2016 <u>Description</u>: This method is dedicated to detect the elastic modulus of materials using an acoustic method
- ✓ European PATENT EP Acoustic panel for noise barriers and noise barrier provided with such a panel, inventors: F. Bettarello, M. Caniato, S. Pasqualin, L. Sartor, n. 2458090, 30/5/2012, date of filing 25/11/2011, priority 25.11.2010 Description: This product is an innovative sound insulating barriers which includes sound insulation, absorption and diffusion using Scroeder series
- ✓ PATENT IT Pannello multistrato ad uso edilizio , February 2013, inventors M. Caniato, S. Pasqualin, L. Sartor Description: This product is an innovative thermal and acoustic insulating panel which includes sound insulation, absorption and diffusion using Scroeder series, thermal insulation and conditioning pipes all included in a single precast panel. The application on a precast mountable modular building
- ✓ PATENT IT Metodo di rilevazione sperimentale del modulo elastico di oggetti, campioni, o semilavorati in materiale vario, September 2015, inventors: M. Caniato <u>Description</u>: This method is dedicated to detect the elastic modulus of materials using an acoustic method
- ✓ PATENT IT Dispositivo di rilevazione dell'integrità strutturale di un oggetto campione, September 2015 inventors: M. Caniato <u>Description</u>: This method is dedicated to detect defects included in materials using an acoustic method

Statement of research interest

Research interests:

- Evaluation of buildings energy and acoustic performances by means of analytical and detailed numerical simulation approaches.
- Characterization of the thermal and acoustic behavior of building envelope components through numerical simulations, laboratory and in field experimental tests.
- Evaluation of the inhabitants' indoor comfort in buildings by means of subjective questionnaires.
- Assessment of indoor conditions, in particular related to acoustic and thermal comfort and IAQ and to the impact on occupants' performance;
- Thermal and acoustic characterization of insulating materials and the assessment of new analytical and numerical models for the simulations of their properties

Certificate in Advanced English at Cambridge University, English written and spoken CERF C1  $\,$ 

Certificate in Advanced English at Free University of Bozen, English written and spoken CERF C1

Certificate of A2 German level at Goethe Institute language, German written and spoken CERF A2

**Disclaimer** Tutto quanto in sopra dichiarato corrisponde a verità ai sensi degli artt. 46 e 47 del D.P.R. 28 dicembre 2000, n. 445 e successive modificazioni e integrazioni

Date

Signature Marco Caniato (digitally signed)

### 28<sup>th</sup> august 2021