CURRICULUM VITAE

Michele Geronazzo

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Contents

Personal Information

Michele GERONAZZO
Date of birth: 05/08/1984
Place of birth: Valdobbiadene (Treviso), Italy
Nationality: Italian
Marital status: Married

Contacts

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Executive Summary

My research focuses on the modelling and simulation of complex systems for immersive multimodal virtual and augmented reality environments. In particular, I investigate the representation and management of acoustic and auditory information and its integration with other sensory data. Formal classifications that frame my profile include:

ACM Computing Classification System – CCS2012
- *[Simulation types and techniques]: Interactive simulation*
- *[Computing methodologies]: Virtual / Mixed / Augmented reality*
- *[Human-centered computing]: Interaction techniques / Auditory feedback*
- *[Human-centered computing]: Sound-based input / output*
- *[Communication hardware, interfaces and storage]: Signal processing systems*

Computing Research Repository – CoRR, topics *Human-Computer Interaction* and *Sound*.

Since September 2023 I hold the Italian National Scientific Habilitation as a **Full Professor** in Computer Engineering, scientific-disciplinary sector ING-INF/05 (competition sector 09/H1). I was previously awarded the Associate Professor habilitation in Computer Science (INF/01) in November 2021. I authored **109** publications, including **30** journal articles in international peer-reviewed venues, **6** chapters in books or encyclopaedias with international reach, **48** contributions to international peer-reviewed conferences, and **25** additional publications such as national conference papers, reports, and outreach pieces. I edited several conference proceedings and one international book, curated one special issue, and serve on the editorial boards of international journals.
Many outputs stem from national and international collaborations with co-authors affiliated with Italian institutions (**9**), European institutions (**8**), and North American institutions (**3**).
Key bibliometric indicators (retrieved on 05 June 2025) are:
Citations: (Google Scholar) 1604 – (Scopus) 863;
h-index: (Google Scholar) 21 – (Scopus) 16;
i10-index: (Google Scholar) 46.
I delivered **22** oral or poster presentations at national and international conferences, **6** of which were invited talks, and gave **8** research seminars at Italian and international universities.

My research has been recognised through **7** awards and numerous funded projects. Among others, the Italian Acoustics Association granted me the **"Gino Sacerdote" award** (2015) for the best doctoral thesis in acoustics, and the same thesis was a finalist for the **Italian Modeling and Simulation Movement (MIMOS) award**. I have been *principal investigator* of **2** international projects, including the H2020 FET-PROACTIVE project SONICOM[1], *project manager* of **1** national project and **2** software development projects. Moreover, I served as *key researcher* in **4** projects funded by the Universities of Padua, Verona, or by international corporations, and participated in **6** additional projects, including two European initiatives and one international standardisation effort. The overall budget of these initiatives amounts to approximately **6.8 € million**.

As **Chair** I organised the *4th–7th Sonic Interactions for Virtual Environments* workshops at the IEEE Virtual Reality Conference (2018, 2020, 2022) and co-organised the 2015 and 2017 editions. Since December 2018 I have been **Book Editor** of *Sonic Interactions for Virtual Environments, Sounds Real* (Springer Nature). I serve as **Associate Editor** for *ACM Transactions on Applied Perception* (since July 2023) and *IEEE Open Journal of Signal Processing* (since September 2024), and contributed as **Associate Chair** to *IEEE VR*

[1] https://cordis.europa.eu/project/id/101017743

(2026), *ACM CHI* (2024–2026), *ACM VRST* (2023–2025) and *ACM SUI* (2018).
I contributed to the local organising committee of the 11th Sound & Music Computing Conference (2011). I have been a member of the Scientific/Program Committees of **8** international conferences and workshops, co-organiser and programme committee member of **4** national events, and session chair at both international and national conferences. I maintain a regular and substantial *peer-review* activity for **8** international journals and **16** conferences.

My teaching portfolio comprises **2 undergraduate courses** and **3 doctoral courses** as course leader in Italian and international contexts, as well as collaborations in **4** undergraduate and master courses between 2013 and 2018. I contributed to project supervision within the Medialogy BSc and Sound and Music Computing MSc programmes at Aalborg University Copenhagen. I also hold the teaching qualification for the Italian high-school class A041 (Computer Science and Technologies) and served as tenured teacher at the Riccati–Luzzatti Technical-Economic Institute in Treviso (2019–2020).
Supervision and evaluation activities include **4 PhD candidates** (1 completed, 3 ongoing), about **33** bachelor and master theses, and **6** international visiting students or internships.

1 Career

1.1 Current position

Associate Professor of Computer Engineering (SSD ING-INF/05)
Department of Management and Engineering, University of Padua.
– December 2021 – present.
Official member
Human Inspired Technologies Research Centre, University of Padua.
– April 2024 – present.
Visiting Researcher
Faculty of Engineering – Dyson School of Design Engineering,
Imperial College London, United Kingdom.
– April 2021 – present.
Membership in scientific societies:
– **Senior Member**, Institute of Electrical and Electronics Engineers (IEEE)
  * IEEE Computer Society (*primary*)
  * IEEE Signal Processing Society
– **Member**, Association for Computing Machinery – Special Interest Group on Computer-Human Interaction (ACM-SIGCHI)
– **Associate Member**, European Acoustics Association (EAA) – Technical Committee on Psychological and Physiological Acoustics
National Scientific Qualification:
– **Full Professor**, competition sector 09/H1 (SSD **ING-INF/05**) Computer Engineering.

1.2 Fixed-term appointments

Senior Assistant Professor (RTD-b) and Adjunct Professor in Digital Media, SSD INF/01
Department of Humanities and Cultural Heritage, University of Udine.
– December 2020 – December 2021.
Research Associate (part-time)
Faculty of Engineering – Dyson School of Design Engineering, Imperial College London, United Kingdom.
– May 2020 – October 2020.
Project: *"Speech Perception and Listening Effort in Simulated Realistic Audio-Visual Environments"*
Scientific supervisor: Prof. Lorenzo Picinali.

Tenured teacher of Computer Science and Information Technologies
Riccati-Luzzatti Technical-Economic Institute, Treviso, Italy.
– December 2019 – November 2020 (career leave).
International postdoctoral researcher (equivalent to RTD-a, Ministerial Decree 236/2011, position aligned with Assistant Professor in the Danish state sector[2])
Technical Faculty of IT and Design, Aalborg University, Denmark.

[2]See Section 2.1 "Job Structure for Academic Staff" describing professional roles in the Danish academic system, https://www.cbs.dk/files/cbs.dk/job_structure_for_academic_staff_at_universities_2013_0.pdf.

– September 2017 – December 2019.
Project: *"Acoustically-trained 3D audio models for virtual reality applications"*

Postdoctoral research fellow (SSD ING-INF/05 and MEDF/01)
Department of Neurosciences, Biomedicine and Movement, University of Verona, Italy.
– May 2017 – August 2017.
Project: *"Binaural hearing and planning of action movements in cochlear implant patients"*
Scientific supervisor: Prof. Paola Cesari.

Postdoctoral research fellow (SSD ING-INF/05 and MEDF/01)
Department of Neurosciences, Biomedicine and Movement, University of Verona, Italy, and
Cochlear Research and Development Limited, United Kingdom.
– May 2016 – April 2017.
Project: *"AASSCI – Action anticipation and muscle reaction to sound stimuli in patients with unilateral and bilateral cochlear implant"* (no.832f15000780003)
Scientific supervisor: Prof. Paola Cesari.

Project leader (SSD ING-INF/05)
Department of Information Engineering, University of Padua.
– March 2014 – September 2016.
Project: *"PADVA – Personal Auditory Displays for Virtual Acoustics"* (no.CPDA135702).
Scientific supervisor: Prof. Federico Avanzini.

Junior postdoctoral research fellow (SSD ING-INF/05)
Department of Information Engineering, University of Padua.
– February 2014 – January 2016.
Project: *"Multimodal virtual environment for orientation & mobility education"*.
Scientific supervisor: Prof. Giovanni De Poli.

1.3 Other professional experience

Software developer, Research and Development department for factory logistics solutions, *Tesy Software s.r.l.*, Treviso (TV), Italy.
– June 2010 – September 2012 (consultant from January 2011 to September 2012).
– Responsibilities: real-time system design, optimisation of production processes and automated warehouses.
Freelance developer for *PUBCOMPANY s.r.l. - The Publisher's Service Company*, Albignasego (PD), Italy.
– March 2010 – May 2010.
– Project: software integration with Brain-Computer Interfaces for semi-automatic music generation.
Software developer (C/C++ and SQL) at *Centro Sistemi Treviso s.r.l.*, San Biagio di Callalta (TV), Italy.
– September 2009 – May 2010.
– Responsibilities: development of customised management software for manufacturing and textile companies.

2 Projects

Principal Investigator (PI):
– PI, *"Listener Acoustic Personalisation (LAP) Challenge 2024"*, IEEE Signal Processing Society grants 2024. October 2023–October 2024. (USD 5,000)
– Coordinating PI, *"The auditory digital twin of a cochlear implant: framework requirements for immersive sonic interactions with children (S-TWIN)"*, PRIN 2022, Ministry of University and Research. October 2023–February 2026. (331,000 €)
– Co-PI, *"SONICOM - Transforming Auditory-Based Social Interaction and Communication in AR/VR"*. EU Horizon 2020 grant 101017743, FET-Proactive Research and Innovation Action. January 2021–present. (overall budget 5.65 € million)
  * Coordination duties within the Imperial College London team.
  * Task leader for the "Listener Acoustic Personalization (LAP)" challenge (launch year 2023).
– Co-PI, *"Keys to Sound: Unlocking Ecologies of Music Cognition from Materiality to Digital Twins"*, INROAD grants 2021, Institutional Horizon Europe Committee - University of Pavia, PI: Massimiliano

Guido. January 2022–January 2023. (10,000€)
- *"Acoustically-trained 3D audio models for virtual reality applications"*. International fellowship funded by Aalborg University Copenhagen. September 2017–December 2019. (150,000€)

Project Manager:
- *"HOBA - Hrtfs On-demand for Binaural Audio"*. Software development project funded through the "Visiting Scientist 2015" grant, University of Padua, Scientific Coordinator: Prof. Federico Avanzini. September 2015–January 2016. Responsibilities: milestone monitoring and planning.
- *"PADVA - Personal Auditory Displays for Virtual Acoustics"*. University of Padua internal grant. March 2014–September 2016. Responsibilities: planning, monitoring, resource allocation.

Participation as *key-researcher*:
- *"ALT FRAILTY - Personalized Health Management of Physical, Mental and Social Frailty in the Elderly"*, Fondazione Friuli, PI: Patrizia Quattrocchi. January 2021–December 2021.
- *"Speech Perception and Listening Effort in Simulated Realistic Audio-visual Environments"*, William Demant Foundation, PI: Lorenzo Picinali. May 2020–October 2020.
- *"NordicSMC: The Nordic Sound and Music Computing Network"*, NordForsk University Hubs programme, PI: Stefania Serafin. August 2018–December 2019.
- *"Numerical simulation for head-related transfer function"*, collaboration between Facebook Reality Lab, Aalto University, and Aalborg University, PI: Lauri Savioja. December 2018–May 2020.
- *"Binaural hearing and planning of action movements in cochlear implant patients"*. Funded by Verona Brain Research Foundation. May 2017–April 2018.
- *"AASSCI – Action anticipation and muscle reaction to sound stimuli in patients with unilateral and bilateral cochlear implant"*. Joint project between the University of Verona and Cochlear Research and Development Limited. May 2016–April 2018.
- *"Efficient Perceptually Optimal Simulation of Room Acoustics"*, Academy of Finland - Project No. 265824, PI: Lauri Savioja. January 2015–May 2016.
- *"PADVA – Personal Auditory Displays for Virtual Acoustics"*. University of Padua internal grant. March 2014–September 2016.
- *"Multimodal virtual environment for orientation & mobility education"*. University of Padua internal grant (junior postdoc). February 2014 – January 2016.
- *"Sviluppo di un ambiente interattivo per technology-augmented learning"*. Thematic PhD scholarship funded by Fondazione Cassa di Risparmio di Padova e Rovigo, "Dottorati di ricerca 2010". January 2011–December 2013.

Additional participations:
- *"AHWS – Audio-haptic walking simulations for virtual reality, entertainment and rehabilitation applications"*, Danish Council for Independent Research (postdoc grant), Aalborg University Copenhagen, PI: Luca Turchet. February 2013–January 2016.
- *"SOFA project – Spatially Oriented Format for Acoustics"*, international standardisation project. January 2014–December 2014.
- *"Models and interfaces for customized binaural audio rendering"*. University of Padua internal grant (junior fellowship), PI: Simone Spagnol. February 2013–January 2015.
- *DREAM – Digital Reworking/reappropriation of ElectroAcoustic Music*. European project EACEA 2010-1174/001-001. Partners: University of Padua, Aalborg University, Middlesex University. September 2010–July 2012.
- *"Ruolo del feedback multimodale nell'esecuzione di task motori robot-assistiti"*. University of Padua internal grant. Scientific Coordinator: Prof. Giulio Rosati (Department of Innovation Engineering and Management). March 2010–February 2012.

3 Research Groups

Collaborations within research groups of national and international excellence.
- Department of Management and Engineering (DTG), University of Padua, as *associate professor*.
  - DTG was recognised as Department of Excellence 2018–2022 by the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR, 2017 call).
- Audio Experience Design research group, Dyson School of Design Engineering, Imperial College London, United Kingdom, scientific lead: Prof. Lorenzo Picinali; initial participation as research associate and ongoing collaboration as visiting researcher (2020–present).
  - Imperial College London ranks 2nd worldwide in the QS World University Rankings, 10th in the Times Higher Education World University Rankings, and 7th in "Reuters The World's Most Innovative Universities - Engineering and Technology", 2019-20.
- Department of Humanities and Cultural Heritage (DIUM), University of Udine, scientific lead: Prof.

Andrea Zannini, participation as fixed-term researcher (2020–2021).
  * DIUM is a Department of Excellence 2018–2022 according to ANVUR (2017 call).
  * The Bachelor in Cultural Heritage, for which I sat on the teaching board, ranked 1st in Italy according to the EA Ranking[3].
- Multisensory Experience Lab (MEL), TECH Faculty – Department of Architecture, Design and Media Technology, Aalborg University Copenhagen, scientific leads: Prof. Stefania Serafin and Prof. Rolf Nordahl; participation began as international postdoc followed by ongoing collaborations (2017–present).
  * TECH Faculty ranked 8th worldwide in the U.S. World News & World Report 2017 Engineering list and 4th in MIT's report "The Global State of the Art in Engineering Education" (2018).
- Action Perception Laboratory (LAP), Department of Neurosciences, Biomedicine and Movement (DNBM), University of Verona, scientific lead: Prof. Paola Cesari; collaboration originated with postdoctoral positions and continues through joint work (2016–present).
  * DNBM was recognised as Department of Excellence 2018–2022 by ANVUR (2017 call).
- CSC - Sound and Music Computing Group, Department of Information Engineering (DEI), University of Padua, scientific leads: Prof. Giovanni De Poli (until 2016) and Prof. Federico Avanzini (from 2017); participation through PhD studies, research fellowships, and continued collaborations (2011–2016).
  * DEI was recognised as Department of Excellence 2018–2022 by ANVUR (2017 call).

Collaborations within interdisciplinary groups:
- Member of the Active Ageing interdisciplinary group, University of Udine (2020–present).

4 Collaborations

4.1 International collaborations

Scientific collaborations within funded projects.
- Institut Jean Le Rond d'Alembert, Sorbonne Université, Brian F.G. Katz, within the H2020 FET-PROACT SONICOM project [O5, J9].
- School of Philosophy, National & Kapodistrian University of Athens, Areti Andreopoulou, within the H2020 FET-PROACT SONICOM project [O5, J9].
- Departmento de Tecnología Electrónica, University of Malaga, Arcadio Reyes Lecuona, within the H2020 FET-PROACT SONICOM project [O5, J9].
- Biology Department, University of Antwerp, Jonas Reijniers, within Roberto Barumerli's doctoral project and the related article [C17].
- School of Engineering and Natural Sciences, University of Iceland, Reykjavik, Simone Spagnol, within the AHWS project and publication [J25].
- Audio Communication Group, Technische Universität Berlin, Fabian Brinkmann, within the PADVA project and publication [C31].
- Department of Media Technology, Aalto University, Helsinki, Prof. Lauri Savioja (articles [J24, J15]) and Dr. Jari Kleimola, within the PADVA and HOBA projects [P3] leading to [C33].
- Acoustics Research Institute, Austrian Academy of Sciences, Vienna, Dr. Piotr Majdak, within the international project [P4] and publication [C34].
- 3D Audio and Applied Acoustics Lab, Princeton University, Prof. Edgar Choueiri, within the PADVA project and related articles [C34, C31].
- Department of Performing Arts, American University Washington D.C., Dr. Braxton Boren.
- Department of Architecture, Design and Media Technology, Aalborg University Copenhagen, Prof. Stefania Serafin and collaborators, through article [J25] and organisation of "IEEE 2nd and 3rd Virtual Reality Workshop SIVE".
- Acoustics group, Signal and Information Processing, Department of Electronic Systems, Aalborg University, Prof. Dorte Hammershøi and collaborators, within *"Acoustically-trained 3D audio models for virtual reality applications"*.

4.2 National collaborations

Scientific collaborations within funded projects.
- Institute for Maternal and Child Health IRCCS "Burlo Garofolo" within *"S-TWIN"*, 2023–present.
- University Hospital of Verona within *"Binaural hearing and planning of action movements in cochlear implant patients"*, publications [J17, O8, J14]. 2017–present.
- Department of Computer Science, University of Milan, Prof. Federico Avanzini, within *"Acoustically-trained 3D audio models for VR applications"* and articles [C23, J21, J19].

[3] https://educationaround.org/ranking-education-around-2021/

– Department of Neurosciences, Biomedicine and Movement, University of Verona, Prof. Paola Cesari, within the AASSCI project and articles [C26, O13, O12].
– Department of Mathematics and Computer Science, University of Udine, Prof. Federico Fontana, within the PADVA project and articles [C30, J23].
– Department of General Psychology, University of Padua, Dr. Massimo Grassi, within the postdoctoral project *"Multimodal virtual environment for orientation & mobility education"* and article [J27].
– Department of Robotics, Brain and Cognitive Sciences, Italian Institute of Technology (IIT), Genoa, Dr. Luca Brayda, within the doctoral project *"Sviluppo di un ambiente interattivo per technology-augmented learning"* and articles [C35, N5, J26].
– IUAV University of Venice, Prof. Davide Rocchesso, within the doctoral project *"Sviluppo di un ambiente interattivo per technology-augmented learning"* and articles [C37, C39, J29, N8].
– Department of General Psychology, University of Padua, Dr. Massimo Grassi, within the doctoral project *"Sviluppo di un ambiente interattivo per technology-augmented learning"* and article [C38].

Scientific collaborations outside funded projects.
– Department of Neurosciences, University of Padua, Dr. Pietro Scimemi.
– Department of Industrial Engineering, University of Padua, Prof. Giulio Rosati and Dr. Fabio Oscari, article [C44].

4.3 Industrial collaborations

Scientific collaborations within funded projects.
– Facebook Reality Lab, United States, *"Numerical simulation for head-related transfer function"* with publications [J15, J11], 2018–2020.
– Hefio Oy, Finland, *"Numerical simulation for head-related transfer function"* with [J15, J11], 2018–2020.
– GN Jabra, Denmark, thesis projects in IT and Media Technology at Aalborg University and publication [J12], 2018–2020.
– Huawei – R&D Finnish section, Finland, collaborative projects in IT and Media Technology at Aalborg University, 2019.
– Brüel & Kjær, Denmark, thesis projects in IT and Media Technology at Aalborg University, 2018.
– Cochlear Research and Development Limited, United Kingdom, within the AASSCI research project, 2016–2018.

5 Conference Roles

Chair:
– *IEEE Signal Processing Society sponsored "The Listener Acoustic Personalization (LAP) Challenge"* (2024).
– *7th Int. Workshop Sonic Interactions for Virtual Environments (SIVE)*, satellite event of IEEE Virtual Reality Conference 2022 (virtual, 2022).
– *5th Int. Workshop Sonic Interactions for Virtual Environments (SIVE)*, satellite event of IEEE Virtual Reality Conference 2020 (Atlanta, US, 2020).
– *4th Int. Workshop Sonic Interactions for Virtual Environments (SIVE)*, satellite event of IEEE Virtual Reality Conference 2018 (Reutlingen, Germany, 2018).

Co-organiser:
– *A11-04 Personalisation in Spatial Audio Technologies*, Associate Chair and session organiser at *Forum Acusticum 2023* (Turin, 2023).
– *Personalisation of Binaural Audio in Virtual and Augmented Reality*, special session at the *International Conference on Immersive and 3D Audio* (Bologna, 2021).
– *6th Int. Workshop Sonic Interactions for Virtual Environments (SIVE)*, satellite event of IEEE Virtual Reality Conference 2021 (virtual, 2021).
– *Workshop on Virtual Sound for Musical Cultural Heritage*, satellite event of the H2020 eHERITAGE Advanced Study Institute (Padua, 2017).
– *3rd Int. Workshop Sonic Interactions for Virtual Environments (SIVE)*, satellite event of IEEE Virtual Reality Conference 2017 (Los Angeles, 2017).
– *Workshop on music and expressiveness*, Department of Philosophy, Sociology, Education and Applied Psychology, University of Padua (2015).
– *2nd Int. Workshop Sonic Interactions for Virtual Environments (SIVE)*, satellite event of IEEE Virtual Reality Conference 2015 (Arles, 2015).
– "Mental maps from tactile virtual objects, Dr. Luca Brayda": *Colloquia @ DEI* (Padua, 2013).

Associate Chair:

– *IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR'26)* (Daegu, 2026).
– *Conference on Human Factors in Computing Systems (CHI'26)* (Barcelona, 2026).
– *Conference on Human Factors in Computing Systems (CHI'25)* (Yokohama, 2025).
– *Conference on Human Factors in Computing Systems (CHI'24)* (Hawaii, 2024).
– *31st ACM Symposium on Virtual Reality Software and Technology (VRST'25)* (Montreal, 2025).
– *30th ACM Symposium on Virtual Reality Software and Technology (VRST'24)* (Trier, 2024).
– *29th ACM Symposium on Virtual Reality Software and Technology (VRST'23)* (Christchurch, 2023).
– *6th ACM Symposium on Spatial User Interaction (SUI'18)* (Berlin, 2018).

Local Organising Committee member:
– *8th Int. Conference on Sound and Music Computing* (Padua, 2011).

Programme Committee member:
– *AES International Conference on Artificial Intelligence and Machine Learning for Audio* (London, 2025).
– *27th International Conference on Digital Audio Effects (DAFx'24)* (Guildford, 2024).
– *26th International Conference on Digital Audio Effects (DAFx'23)* (Copenhagen, 2023).
– *145th Audio Engineering Society Int. Convention (AES 145)* (New York, 2018).
– *15th International Sound & Music Computing Conference (SMC'18)* (Cyprus, 2018).
– *13th International Symposium on Computer Music Multidisciplinary Research (CMMR'17)* (Porto, 2017).
– *IEEE 12th Int. Conference on Signal-Image Technology & Internet-Based Systems* (Naples, 2016).
– *Workshop on Computational Intelligence Techniques for Industrial and Medical Applications (CITIMA'15)*, within *IEEE 11th Int. Conference on Signal-Image Technology & Internet-Based Systems* (Thailand, 2015).
– *12th Int. Conference on Sound and Music Computing (SMC'15)* (Maynooth, 2015).
– *Int. Symposium on Emerging Topics in Circuits and Systems (SET-CAS'15)*, within *4th Int. Conference on Advances in Computing, Communications & Informatics (ICACCI)* (Kochi, 2015).
– *Workshop on Computational Intelligence Techniques for Industrial and Medical Applications (CITIMA'14)*, within *IEEE 10th Int. Conference on Signal-Image Technology & Internet-Based Systems* (Marrakech, 2014).
– *XX Colloquio di Informatica Musicale* (Rome, 2014).
– *XIX Colloquio di Informatica Musicale* (Trieste, 2012).

Session Chair
– "Physical Bodies/Physical Instruments pt.1", *XXIII Colloquio di Informatica Musicale (XXIII CIM)* (Ancona, 2022).
– "Special session - Distinguished coders 2", *XXII Colloquio di Informatica Musicale (XXII CIM)* (Udine, 2018).
– "Spatial Audio- Binaural, HRTF", *134th Convention of the Audio Engineering Society* (Rome, 2013).

6 Editorial Boards

– Editorial Board, Associate Editor: *Multimedia Tools and Applications - Springer Nature*; October 2025.
– Editorial Board, Associate Editor: *IEEE Open Journal of Signal Processing*; September 2024.
– Editorial Board, Associate Editor: *ACM Transactions on Applied Perception*; July 2023.
– Book Editor: *Sonic Interactions in Virtual Environments* - Human–Computer Interaction Series, Springer Nature; January 2023.
– Editor: *IEEE 5th VR Workshop on Sonic Interactions for Virtual Environments* (Atlanta 2020) proceedings [B4], IEEE Computer Society.
– Editorial Board: *Technologies for VR* section, Frontiers in Virtual Reality[4], Frontiers Media; since October 2019.
– Lead Guest Editor: Special Issue *Interactions in Mobile Sound & Music Computing*, Wireless Communications and Mobile Computing (John Wiley & Sons and Hindawi) (IF: 1.8, BFI points: 2[5]); October 2019, editorial [B5].
– Editor: *IEEE 4th VR Workshop on Sonic Interactions for Virtual Environments* (Reutlingen 2018) proceedings, IEEE Computer Society.
– Editor: *IEEE 3rd VR Workshop on Sonic Interactions for Virtual Environments* (Los Angeles 2017) proceedings [B11], IEEE Computer Society.
– Editor: *IEEE 2nd VR Workshop on Sonic Interactions for Virtual Environments* (Arles 2015) proceedings [B12], IEEE Computer Society.

[4] https://www.frontiersin.org/journals/virtual-reality#editorial-board
[5] Maximum value assigned by the Danish Bibliometric Research Indicator (BFI).

– Editor: *XX Colloquio di Informatica Musicale* (Rome 2014) proceedings [B13].

7 Peer Review Activities

7.1 Programme committees and review panels

– Computers & Graphics - Elsevier (2023)
– IEEE Transactions on Mobile Computing - IEEE Computer Society (2022)
– ACM SIGGRAPH Asia 2022 (2022)
– ACM Conference on Human Factors in Computing Systems (CHI) (2016, 2021)
– Computers & Education - Elsevier (2021)
– IEEE Transactions on Visualization and Computer Graphics - IEEE Computer Society (2017-21)
– IEEE/ACM Transactions on Audio, Speech, and Language Processing - IEEE Signal Processing Society and ACM (2014-2019)
– The Journal of the Acoustical Society of America - ASA (2016-2021)
– International Journal of Human-Computer Studies - Elsevier (2016-2017)
– Journal of Ambient Intelligence and Humanized Computing - Springer (2018)
– IEEE Transactions on Multimedia - IEEE Computer Society (2016)
– Computer-Aided Design - Elsevier (2015)
– Applied Sciences, Acoustics section - MDPI (2017)
– C&C: 8th International Conference on Culture and Computing (2020)
– ACM Symposium on Virtual Reality Software and Technology (VRST 2017, 2019)
– ACM 20th International Conference on Multimodal Interaction (ICMI 2018)
– IEEE Virtual Reality (VR 2018, 2023)
– ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2017)
– ACM 19th and 20th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI 2017-2018)
– 20th International Conference on Digital Audio Effects (DAFx 2017)
– 4th International Conference on Movement Computing (MOCO 2017)
– ACM/IEEE International Conference on Human-Robot Interaction (HRI 2016)
– 21st International Conference on Auditory Display (2015)
– 14th International Conference on New Interfaces for Musical Expression (2014)
– 40th International Computer Music Conference (2014)
– 10th-13th International Conference on Sound and Music Computing (2013-2016)
– XIX - XXII Colloquium on Music Informatics (2012-2018)

7.2 Assessments

– External examiner for the PhD thesis of Etienne Thuillier, School of Electrical Engineering, Aalto University, Finland (2025).
– External reviewer for VQR 2020-24, National Agency for the Evaluation of Universities and Research (ANVUR), Italy (2025).
– External reviewer for VQR 2015-19, ANVUR, Italy (2022).
– External examiner for the PhD thesis of Manoj Dinakaran, Audio Communication Group, Technische Universität Berlin, Germany (2021).
– External evaluator for individual fellowships, Centre of International Excellence "Alexander von Humboldt", University of Bayreuth, Germany (2020).

8 Awards and Recognitions

Awards

– Sep. 2019. "EEA Best Paper and Presentation Award", granted by the European Acoustics Association to Roberto Barumerli at the *23rd International Congress on Acoustics*, for paper [O10] co-authored by me.
– Sep. 2019. "Best Poster Award", awarded by the Italian Society of Motor and Sports Sciences to Mehrdad Bahadori at the *XI SISMES National Congress*, for the abstract [J17] co-authored by me.
– Oct. 2017. "Best Abstract IRC 2017, 3rd prize" at the *Italian Resuscitation Council National Congress 2017*, abstract [O13].
– Sep. 2017. "Best Paper Award, 3rd prize" at the *20th Int. Conference on Digital Audio Effects (DAFx-17)*, paper [C25].

– Jul. 2015. "Gino Sacerdote" award for the best PhD thesis in acoustics, Italian Acoustics Association [D1, J28].
– Dec. 2013. "Best Short Paper Award" at the *11th Int. Conference on Advances in Mobile Computing & Multimedia (MoMM'13)*, paper [C37].
– Oct. 2010. "Top 10% Paper Award" at the *IEEE International Workshop on Multimedia Signal Processing (MMSP'10)*, paper [C46].

Recognitions

– Apr. 2019. Elevated to Senior Member of the IEEE.
– Sep. 2017. Finalist, CopenX Summit - Sound (Copenhagen) for best sound interaction project in virtual reality.
– Apr. 2017. Finalist, Movimento Italiano Modellazione e Simulazione (MIMOS) award for best research thesis on 3D, virtuality, and simulation [D1].
– Jun. 2015. Elevated to Full Member of the Audio Engineering Society (AES).

9 Invited Contributions

Presentations

– **Oral** – "The Egocentric Audio Perspective of the Digital Twin" at the workshop "Keys to Sound: Reconstructing Embodied Musical Ecologies from Materiality to Digital Twins", University of Pavia, 7 October 2022.
– **Oral** – "Sonic Interactions in Headphone-mediated Virtual Environments", *3D Audio on Headphone Workshop 2022*, AudioVisual Tech Lab, Huawei Munich Research Center, Germany, 1 April 2022.
– **Oral** – Special session "Binaural models: Algorithms and applications", *23rd International Congress on Acoustics (ICA 2019)*, Aachen, Germany, 10 September 2019.
– **Oral** – "Tecnologie per l'Interazione Sonora in Contesti di Realtà Virtuale e Aumentata Immersiva", *XXII Colloquio di Informatica Musicale (XXII CIM)*, Udine [N2], 23 November 2018.
– **Poster** – "Audio augmented reality headset: a product requirements research in today's available technologies", *AES Int. Conf. on Headphone Technology*, Aalborg, 2016; technical report [O14].
– **Oral** – "L'acustica dell'orecchio esterno: un approccio a modelli strutturali misti per display uditivi virtuali", *42nd National Congress of the Italian Acoustics Association*, University of Florence, 17 July 2015 [J28].
– **Oral** – "Misurazione e modellazione di HRTF", *AES-Italian Section Workshop – Audio 3D e Acustica Architettonica*, University of Bologna, 7 November 2013.
– **Oral** – "Stanza Logo-motoria: Feedback uditivo attraverso audio binaurale", *National Conference on Acoustic Feedback Systems*, Rittmeyer Institute for the Blind, Trieste, 29 June 2011.

Publications

– in **conference** – "The Egocentric Audio Perspective in Virtual Environments", *2nd Symposium: The Acoustics of Ancient Theatres*, Verona, July 2022 [C14].
– in **journal** – Acta Acustica, Special Issue on *Auditory models: from binaural processing to multimodal cognition*, European Acoustics Association; article [J8].
– in **journal** – Journal of New Music Research, Special Issue on *Audio-first VR*; article [J13].
– in **encyclopaedia** – Entries "Sound spatialization", "Immersive Auralization Using Headphones", and "User Acoustics with Head-Related Transfer Functions" in *Encyclopedia of Computer Graphics and Games*, Springer, 2018 [B8, B9, B10].
– in **journal** – Extended version of [C25], selected at the *20th Int. Conference on Digital Audio Effects (DAFx-17)*, Edinburgh, 2017; published in the Journal of the Audio Engineering Society [J19].
– in **journal** – "Auditory navigation with a tubular acoustic model for interactive distance cues and personalized head-related transfer functions", *Journal on Multimodal User Interfaces*, Springer; extended version of [C30], selected at the *21st Int. Conference on Auditory Display (ICAD15)*, Graz, 2015; publication [J23].
– in **conference** – "Subjective Evaluation of a Low-order Parametric Filter Model of the Pinna for Binaural Sound Rendering", *22nd Int. Congress on Sound and Vibration (ICSV22)*, Florence, July 2015 [O15].
– in **journal** – "Synthetic Individual Binaural Audio Delivery by Pinna Image Processing", *International Journal of Pervasive Computing and Communications*, Emerald [J29]; extended version of [C37], selected at *11th Int. Conf. on Advances in Mobile Computing & Multimedia (MoMM'13)*, Vienna, 2015.
– in **conference** – "Mixed structural modeling of head-related transfer functions for customized binaural audio delivery", *IEEE International Conference on Digital Signal Processing*, Santorini, July 2013 [C40].

Demonstrations

– "Let's take an acoustic selfie! Extraction of external ear features for binaural audio rendering", presented at the XXI Colloquio di Informatica Musicale, Cagliari, 2016; selected based on [N4].

10 Research Seminars

– 12 November 2019, seminar on my research activities at the Department of Computer Science, University of Verona, invited as shortlisted candidate for a tenure-track position (SSD ING-INF/05).
– 6 November 2019, seminar *"Sonic interactions in virtual/augmented realities"*, Department of Mathematics, Computer Science and Physics, University of Udine.
– 24 May 2019, talk *"Sound spatialization at the Multisensory Experience Lab"*, within the Binaural Spatialisation Challenges Workshop, Imperial College London – Dyson School of Design Engineering.
– 17 February 2017, talk *"The sound of action - work in progress"*, Department of Medical-Surgical Sciences and Transplants, University of Milan.
– 12 May 2016, seminar *"Audio processing in Pure Data and sound spatialisation"*, Department of Information Engineering, University of Padua, within the course *Musical Informatics*.
– 8 July 2015, seminar *"The future of spatial audio technologies in immersive augmented and virtual environments"*, Department of Information Engineering, University of Padua, within the workshop *Postdoctoral Research in Informatics*.
– 6 December 2013, seminar *"Mixed structural models for 3D audio in virtual environments"*, Acoustics Research Institute, Austrian Academy of Sciences, Vienna, within the *AES-Austrian Section Guest Lecture*.
– 7 May 2012, seminar *"When synthetic spatial audio would serve multimodal integration"*, Italian Institute of Technology (IIT), Genoa, within the *IIT Guest Lecture* series.

11 Scientific Outreach and Technology Transfer

11.1 Public outreach

– 9 September 2021, speaker at the workshop "Philosophy and digital transformation", Department of Humanities and Cultural Heritage, University of Udine.
– 29 September 2017, 30 September 2016, European Researchers' Night, University of Padua, demonstration "VR4EDU: Virtual Reality for Education", CSC - Sound and Music Computing Lab.
– 14 August 2016, article in the daily newspaper *Il Mattino di Padova* titled "Con la realtà virtuale migliora l'apprendimento a scuola".
– 25 September 2015, European Researchers' Night, University of Padua, demonstration "Mappe sonore: realtà virtuale ed aumentata con audio 3D in cuffia", CSC - Sound and Music Computing Lab.
– 26 September 2014, European Researchers' Night, University of Padua, demonstration "Tecnologie innovative di spazializzazione del suono per una realtà virtuale immersiva", CSC - Sound and Music Computing Lab.
– 15 June 2012, seminar *Audio 3D e tecnologia binaurale in cuffia, un ascolto ecologico*, Il Caffè dei Libri, Bassano Del Grappa, within the *Spritz della Scienza* outreach events.

11.2 Technology transfer

– 2024, **Founder** of ATENA Space s.r.l.s., a start-up developing an extended reality digital ecosystem to optimise management and communication in dental practices.
– 2023, Business Plan Competition winner – ICT category, Start-up Veneto 2023, Italy.
  ∗ Project: ATENA Virtual Assistant – Cyber-physical environment for dental clinics, leveraging immersive human-machine collaboration.

12 Standards and Software Development

– June 2021, release of the first public version of the *"sofamyroom"* framework on github.com, https://github.com/spatialaudiotools/sofamyroom, EUPL-1.2 licence, alongside pre-print [SJ1].
– May 2020, release of the first public version of the *"MSM - Binaural SDN"* framework on github.com, https://github.com/msmhrtf/binsdn, GNU GPLv3 licence, alongside [C16].
– March 2019, release of the first public version of the *"MSM - HRTF selection"* framework on github.com, https://github.com/msmhrtf/sel, GNU GPLv3 licence, alongside [J19].

– May 2018, release of the first public version of the *"HOBA – Hrtfs On-demand for Binaural Audio"* framework on github.com, https://github.com/hoba3d, MIT licence, accompanying the 144th AES Convention presentation [O11].
– September–October 2016, development of the demo *"Let's take an acoustic selfie! Extraction of external ear features for binaural audio rendering"*, XXI Colloquio di Informatica Musicale, Cagliari, Italy.
– January 2014 – January 2015, SOFA – Spatially Oriented Format for Acoustics, support to headphone-related standardisation within [P4].
– January 2013 – October 2014, Headphone impulse response database in BT-DEI format [C41, P5]; contributed to The Princeton Headphone Open Archive (PHOnA) supported by Sony Corporation of America [C34], https://www.princeton.edu/3D3A/Phona.html.
– January 2012 – May 2012, development of a *"Spatial Audio in Virtual Reality Scenario"*, multimedia installation for the University Museum Centre, University of Padua, exhibition *Visioni del Suono. Musica elettronica all'Università di Padova.*
– July 2011, development of the official website, 8th Int. Conference on Sound and Music Computing, Padua, Italy.

13 Teaching

13.1 Teaching committees

– Member, Doctoral School in Mechatronics Engineering and Product Innovation, Department of Management and Engineering - University of Padua (2024–present)
– Founding member, Doctoral School in Informatics and Artificial Intelligence, Department of Mathematics, Computer Science and Physics - University of Udine (2021–2024)
– Board member, Bachelor in Management Engineering, University of Padua (2022–present)
– Board member, Bachelor in Mechatronics Engineering, University of Padua (2021–present)
– Board member, Bachelor in Cultural Heritage, University of Udine (2020–2022)
– Board member, Bachelor in Humanities, University of Udine (2021–2022)

13.2 Courses

2025. PhD course (1 ECTS) "Immersive Technologies and Experiences for Smart Industry", Doctoral School in Mechatronics Engineering and Product Innovation, University of Padua.
2025. Lecturer, "Artificial Intelligence Training Course" (10 hours), Liceo Scientifico "Galileo Galilei" Dolo, Venice.
2025–. Course leader (6 ECTS, 72 hours) "Industrial Applications of Computer Vision", MSc in Mechatronics Engineering, University of Padua.
2022–. Course leader (6 ECTS, 72 hours) "Fundamentals of Computer Science", BSc in Management Engineering, University of Padua.
2022–2025. Course leader (6 ECTS, 48 hours) "Industrial Controllers and Communication Networks", BSc in Mechatronics Engineering, University of Padua.
2023. Lecturer (24 hours) "Industrial Computer Architectures and Networks", Higher Technical Institute (ITS) Meccatronico Veneto, Vicenza.
2021–22. Lecturer (1 ECTS, 10 hours) "Immersive media and social virtual reality experiences", intergenerational laboratory for students of Liceo Artistico "Sello", University of Udine, and the "Paolo Naliato" University of the Third Age.
2021–22. Adjunct Professor (6 ECTS, 40 hours) "Digital Humanities Lab", BA in Humanities, University of Udine.
2020–22. Adjunct Professor (6 ECTS, 40 hours) "Digital Media and Cultural Heritage", BA in Cultural Heritage, University of Udine.
2020–21. Adjunct Professor (3 ECTS, 20 hours) "Laboratory of Informatics for Digital Humanities - immersive media", BA in Cultural Heritage, University of Udine.
2018–19. PhD course (5 ECTS) "Virtual, Augmented and Mixed realities: Theory, Implementation, Applications and User Experience", Doctoral School in Media Technologies, Aalborg University Copenhagen.
2018–19. Supervisor and project tutor (85 hours) for the MSc in Sound and Music Computing, Aalborg University Copenhagen.
2017–18. Lecturer (4 hours) "Physical Modeling" (Prof. Stefania Serafin), MSc in Sound and Music Computing, Aalborg University.
2017–18. Supervisor and project tutor (115 hours) for the MSc in Sound and Music Computing, Aalborg University Copenhagen.

2017–18. Supervisor and project tutor (85 hours) for the BSc in Media Technology, Aalborg University Copenhagen.
2016–17. PhD course (10 hours) "Binaural hearing and movement computing of action planning", Doctoral School in Neurosciences, University of Verona.
2016–17. Teaching assistant (6 hours) "Musical Informatics" (Profs. Federico Avanzini and Giovanni De Poli), MSc in Information Engineering, University of Padua.
2016–17. Teaching support (25 hours) "Fundamentals of Computer Science" (Prof. Giorgio Satta), BSc in Management Engineering, University of Padua.
2016–17. Teaching assistant (16 hours) "Methods and Didactics of Motor Activities" (Prof. Paola Cesari), MSc in Preventive and Adapted Sports Sciences, University of Verona.
2014–16. Subject expert "Fundamentals of Computer Science", BSc programmes in Information Engineering, University of Padua.
2013–14. Lecturer (4 hours) "Musical Informatics" (Prof. Giovanni De Poli), MSc in Information Engineering, University of Padua.
2013–14. Laboratory tutor (190 hours) "Fundamentals of Computer Science" (Prof. Federico Avanzini), BSc programmes in Information Engineering, University of Padua.
2012–13. Laboratory tutor (190 hours) "Fundamentals of Computer Science" (Prof. Federico Avanzini), BSc programmes in Information Engineering, University of Padua.

14 Supervision

Since 2017 I have supervised **PhD candidates**:
- Emanuele Zanoni, *Acoustic Solutions for Personalized Earables: Methodologies, Technologies, and Applications*, Doctoral School in Mechatronics Engineering and Product Innovation, University of Padua, 2024–present.
- Alessandro Privitera, *Immersive analytics of lifelogging auditory data for digital humanities*, Doctoral School in Informatics and Artificial Intelligence, University of Udine, 2021–present.
- Daugintis Rapolas, *Assessing accommodation to synthetic sound localisation cues within extended reality applications*, Dyson School of Design Engineering, Imperial College London, 2021–present, Co-supervisor: Dr. Lorenzo Picinali.
- Roberto Barumerli, *Computational auditory models for sound source localization*, Doctoral School in Information Engineering, University of Padua, 2017–2021, Co-supervisor: Prof. Federico Avanzini.

Since 2011 I have supervised and co-supervised bachelor and master theses:

1 **Master's thesis** in the area of Industrial Engineering, University of Padua
- Emanuele Zaoni, *Spatial Upsampling of Head-Related Transfer Functions using a Physics-Informed Neural Network*, Master's thesis in Mechatronics Engineering, 2024.

5 **M.Sc. theses** in Media Technologies, Aalborg University Copenhagen
- Javier Molina García, *Fast Individual HRTF Acquisition with Unconstrained Head Movements for 3D Audio*, MSc in Sound & Music Computing, 2019.
- Nikolaj Villefrance Lerke, *A real time compensation system for spatial audio: development of a functional prototype*, MSc in Sound & Music Computing, 2019.
- Mikkel Bech Jensen, *Adaption Of Non-Individual Head-related Transfer Function in Virtual Reality*, MSc in Sound & Music Computing, 2018.
- Jason Yves Tissieres, *Anthropometric Personalisation of Head-Related Impulse Responses - an application to the Scattering Delay Network and Higher Order Ambisonics*, MSc in Sound & Music Computing, 2018.
- Luis Vieira, *Super hearing: a study on virtual prototyping for hearables and hearing aids*, MSc in Sound & Music Computing, 2018.

8 **Master theses** in Information Engineering, University of Padua
- Diego Omiciuolo, *Confronto di head-related transfer function personalizzate in ambienti di realtà virtuale*, MSc in Computer Engineering, 2019, Advisor: Stefano Ghidoni.
- Luca Buriola, *Personalizzazione di head-related transfer function basata su misure antropometriche*, MSc in Computer Engineering, 2019, Advisor: Stefano Ghidoni.
- Enrico Peruch, *Metodi per la selezione di HRTF basati su contorno dell'orecchio in ambienti acustici virtuali*, MSc in Computer Engineering, 2017, Advisor: Federico Avanzini.
- Fabio Prandoni, *A virtual reality environment with personalized spatial audio rendering*, MSc in Computer Engineering, 2017, Advisor: Federico Avanzini.
- Giacomo Sorato, *Personalizzazione di profili acustici per la realtà aumentata in campo mobile*, MSc in Computer Engineering, 2016, Advisor: Federico Avanzini.

– Filippo Beraldo, *Selfear 2.0: un'applicazione mobile con head-pose estimation per l'acquisizione di profili acustici individuali*, MSc in Computer Engineering, 2016, Advisor: Federico Avanzini.
– Alberto Bedin, *Head related transfer function selection techniques applied to multimodal environments for spatial cognition*, MSc in Computer Engineering, 2013, Advisor: Federico Avanzini.
– Fabrizio Granza, *Decomposizione strutturale del contributo acustico dell'orecchio esterno per il rendering spaziale del suono*, MSc in Computer Engineering, 2012, Advisor: Federico Avanzini.

1 **Master thesis** in Sound Engineering, Politecnico di Milano
– Lorenzo Monni, *Individual Headphones Compensation Techniques for Binaural Reproduction*, 2013, Advisor: Augusto Sarti.

2 **Master theses** in Preventive and Adapted Motor Sciences, University of Verona.
– Ambra Cubich, *Risposta neuromotoria, cognitiva e percettiva a stimoli sonori con semantica*, 2017, Advisor: Paola Cesari.
– Giordana Perusi, *Suono e azione: interazione tra spazio peripersonale e semantica del suono*, 2017, Advisor: Paola Cesari.

12 **Bachelor theses** in Mechatronics Engineering, University of Padua
15 **Bachelor theses** in Information Engineering, University of Padua
1 **Bachelor thesis** in General Psychology, University of Padua.
1 **Bachelor thesis** "Recording Studio Technician", Conservatorio Cesare Pollini, Padua.

Co-supervisor of **international internships**:
– Okuno Satoshi, visiting student from Shibaura Institute of Technology, Tokyo, Japan (September 2022–December 2022).
– Nikolaj Villefrance Møller, internship at AIAIAI Headphones, Denmark (September 2018–February 2019).
– Luis Vieira, internship at Dirac Research AB, Finland (September 2017–February 2018).
– Mathieu Laroze, visiting student from Institut National Polytechnique de Toulouse (June–July 2014).
– Gabriele Carotti-Sha, visiting student from Stanford University (June–September 2012).

Supervisor of **projects**:
2 **projects** in Media Technologies, Technical Faculty of IT and Design, Aalborg University.
8 **projects** within the course *Musical Informatics*, Department of Information Engineering, University of Padua.

Supervisor of **internships**:
– 4 projects within the Bachelor in Preventive and Adapted Motor Sciences, Department of Neurosciences, Biomedicine and Movement, University of Verona, 2016.

15 Academic Service

15.1 Assessments

Doctoral thesis committees
– 2024 - Marco Tiraboschi, Supervisor: Federico Avanzini. Thesis: *Signal Models, Analysis Algorithms, and Software Tools for Modal Audio Resynthesis.* Doctoral School in Computer Science, University of Milan.
– 2023 - Mattia Guidolin, Supervisor: Monica Reggiani. Thesis: *Misurazione e Modellazione Multisensore del Movimento Umano*, Doctoral School in Mechatronics Engineering and Product Innovation, University of Padua.

Co-reviewer of master theses
– 2020 - Grazia Pepe, *Riconoscimento gestuale dinamico della posizione angolare di una sorgente sonora in avvicinamento*, MSc in Computer Science, University of Udine, Supervisor: Federico Fontana.

16 Conference Presentations

Since 2011, presenter at 10 international conferences and 6 national conferences.
– *2022 IEEE 2nd International Conference on Intelligent Reality (ICIR)*, virtual, December 2022, paper [C13].
– *XXIII Colloquio di Informatica Musicale (XX CIM 2022)*, L'Aquila, October 2022, paper [N1].
– *2nd Symposium: The Acoustics of Ancient Theatres*, Verona, July 2022, paper [C14].
– *23rd International Congress on Acoustics (ICA 2019)*, Aachen, September 2019, paper [O9].
– *XXII Colloquio di Informatica Musicale (XXII CIM 2018)*, Udine, November 2018, paper [N2].

- *17th IEEE/ACM Int. Symposium on Mixed and Augmented Reality (ISMAR)*, Munich, October 2018, paper [C19].
- *144th Audio Engineering Society Convention*, Milan, May 2018, paper [O11].
- *4th IEEE VR Workshop on Sonic Interactions in Virtual Environments (SIVE 2018)*, Reutlingen, March 2018, paper [C24].
- *22nd ACM Symposium on Virtual Reality Software and Technology (VRST 2016)*, Munich, November 2016, paper [C27].
- *42nd National Congress of the Italian Acoustics Association (42 AIA 2015)*, Florence, July 2015, paper [J28].
- *XX Colloquio di Informatica Musicale (XX CIM 2014)*, Rome, October 2014, paper [N5].
- *41st National Congress of the Italian Acoustics Association (41 AIA 2014)*, Pisa, June 2014, paper [N7].
- *11th Int. Conference on Advances in Mobile Computing & Multimedia (MoMM13)*, Vienna, December 2013, paper [C37].
- *134th Audio Engineering Society Convention*, Rome, May 2013, paper [C42].
- *INTERPRET Workshop within IEEE SITIS Conference*, Dijon, November 2012, paper [C45].
- *SMC-HCI Workshop, ACM CHItaly 2011 Conference*, Alghero, September 2011, paper [N9].

Since 2011, poster presentations at 8 international conferences and 1 national conference.

- *15th Int. Conference on Sound and Music Computing (SMC 2018)*, Limassol, July 2018, paper [C21].
- *22nd ACM Symposium on Virtual Reality Software and Technology (VRST 2016)*, Munich, November 2016, paper [C26].
- *21st Int. Conference on Auditory Display (ICAD15)*, Graz, July 2015, paper [C31].
- *55th Audio Engineering Society Conference on Spatial Audio (AES55)*, Helsinki, August 2014, paper [C35].
- *IEEE Int. Conference on Acoustics, Speech, and Signal Processing (ICASSP 2014)*, Florence, May 2014, paper [C36].
- *10th International Symposium on Computer Music Multidisciplinary Research (CMMR'13)*, Marseille, October 2013, paper [C38].
- *134th Audio Engineering Society Convention*, Rome, April 2013, paper [C41].
- *XIX Colloquio di Informatica Musicale (XIX CIM)*, Trieste, November 2012, paper [N8].
- *EUSIPCO 2012 Conference*, Bucharest, September 2012, paper [C43].

17 Certificates

- *Introductory Course on Orbit (Intellectual Property Database)*, University of Padua, March 2014.
- *STEPS Seminars Towards Enterprise for PhD Students - Organisation & Work module*, Confindustria Padova, May-June 2012.
- *Multimodal interaction in virtual environments*, PhD course, Aalborg University Copenhagen, May 2011.

18 Professional Qualifications

- 17 December 2023 - 17 December 2037 - National Scientific Qualification 2018, sixth call, **Full Professor** for competition sector 09/H1 Computer Engineering, SSD ING-INF/05.
- 23 November 2021 - 23 November 2029 - National Scientific Qualification 2018, fifth call, **Associate Professor** for competition sector 01/B1 Computer Science, SSD INF/01.
- 9 September 2019 - 9 September 2028 - National Scientific Qualification 2018, second call, **Associate Professor** for competition sector 09/H1 Computer Engineering, SSD ING-INF/05.
- July 2015 - State examination for the teaching qualification A042 - Computer Science (upper secondary school), University of Verona; mark: 90/100.
- July 2009 - State examination for professional engineer in Information Engineering, University of Padua; mark: 207/240.

19 Publication List

Most publications listed below fall within the following *ACM Computing Classification System (2012)* categories:

Simulation types and techniques : Interactive simulation,
Computing methodologies : Virtual / Mixed / Augmented reality,
Human-centered computing : Interaction techniques / Auditory feedback,

Human-centered computing : Sound-based input / output,
Communication hardware, interfaces and storage : Signal processing systems

References

International peer-reviewed journals

[J1] Geronazzo, M. Strong and weak head-related transfer functions: The eHRTF analytical framework. *JASA Express Letters 5*, 8 (Aug. 2025), 087202.

[J2] Daugintis, R., Barumerli, R., Geronazzo, M., Pauwels, J., Picinali, L., and Poole, K. C. Listener Acoustic Personalization Challenge—LAP24: Head-Related Transfer Function Dataset Harmonization. *IEEE Open Journal of Signal Processing 6* (2025), 950–964.

[J3] Hogg, A. O. T., Barumerli, R., Daugintis, R., Poole, K. C., Brinkmann, F., Picinali, L., and Geronazzo, M. Listener Acoustic Personalization Challenge - LAP24: Head-Related Transfer Function Upsampling. *IEEE Open Journal of Signal Processing 6* (2025), 926–941.

[J4] Fantini, D., Geronazzo, M., Avanzini, F., and Ntalampiras, S. A Survey on Machine Learning Techniques for Head-Related Transfer Function Individualization. *IEEE Open Journal of Signal Processing 6* (2025), 30–56.

[J5] Privitera, A. G., Fontana, F., and Geronazzo, M. The Role of Audio in Immersive Storytelling: a Systematic Review in Cultural Heritage. *Multimedia Tools and Applications* (June 2024).

[J6] Fantini, D., Presti, G., Geronazzo, M., Bona, R., Privitera, A. G., and Avanzini, F. Co-immersion in Audio Augmented Virtuality: the Case Study of a Static and Approximated Late Reverberation Algorithm. *IEEE Transactions on Visualization and Computer Graphics* (2023), 1–11. Conference Name: IEEE Transactions on Visualization and Computer Graphics.

[J7] Geronazzo, M., Barumerli, R., and Cesari, P. Shaping the auditory peripersonal space with motor planning in immersive virtual reality. *Virtual Reality* (Oct. 2023).

[J8] Barumerli, R., Majdak, P., Geronazzo, M., Meijer, D., Avanzini, F., and Baumgartner, R. A Bayesian model for human directional localization of broadband static sound sources. *Acta Acustica 7* (2023), 12. Publisher: EDP Sciences.

[J9] Picinali, L., Katz, B. F., Geronazzo, M., Majdak, P., Reyes-Lecuona, A., and Vinciarelli, A. The SONICOM Project: Artificial Intelligence-Driven Immersive Audio, From Personalization to Modeling [Applications Corner]. *IEEE Signal Processing Magazine 39*, 6 (Nov. 2022), 85–88. Conference Name: IEEE Signal Processing Magazine.

[J10] Bahadori, M., Barumerli, R., Geronazzo, M., and Cesari, P. Action planning and affective states within the auditory peripersonal space in normal hearing and cochlear-implanted listeners. *Neuropsychologia 155* (May 2021).

[J11] Prepeliță, S. T., Gómez Bolaños, J., Geronazzo, M., Mehra, R., and Savioja, L. Pinna-related transfer functions and lossless wave equation using finite-difference methods: Validation with measurements. *The Journal of the Acoustical Society of America 147*, 5 (May 2020), 3631–3645. Publisher: Acoustical Society of America.

[J12] Geronazzo, M., Vieira, L. S., Nilsson, N. C., Udesen, J., and Serafin, S. Superhuman Hearing - Virtual Prototyping of Artificial Hearing: a Case Study on Interactions and Acoustic Beamforming. *IEEE Transactions on Visualization and Computer Graphics 26*, 5 (May 2020), 1912–1922.

[J13] Serafin, S., Avanzini, F., Goetzen, A. D., Erkut, C., Geronazzo, M., Grani, F., Nilsson, N. C., and Nordahl, R. Reflections from five years of Sonic Interactions in Virtual Environments workshops. *Journal of New Music Research 49*, 1 (Jan. 2020), 24–34.

[J14] Gabrieli, A., Nardello, F., Geronazzo, M., Marchetti, P., Liberto, A., Arcozzi, D., Polati, E., Cesari, P., and Zamparo, P. Cervical Spine Motion During Vehicle Extrication of Healthy Volunteers. *Prehospital Emergency Care* (Dec. 2019).

[J15] Prepeliță, S. T., Gómez Bolaños, J., Geronazzo, M., Mehra, R., and Savioja, L. Pinna-related transfer functions and lossless wave equation using finite-difference methods: Verification and asymptotic solution. *The Journal of the Acoustical Society of America 146*, 5 (Nov. 2019), 3629–3645.

[J16] Geronazzo, M., Rosenkvist, A., Eriksen, D. S., Markmann-Hansen, C. K., Køhlert, J., Valimaa, M., Vittrup, M. B., and Serafin, S. Creating an Audio Story with Interactive Binaural Rendering in Virtual Reality. *Wireless Communications and Mobile Computing 2019* (2019), 1–14.

[J17] Bahadori, M., Barumerli, R., Geronazzo, M., Cecco, R., Passarin, C., Marchioni, D., Carner, M., and Cesari, P. Action anticipation and sounds' semantics. In *In Proc. of XXVII SIPF National Congress* (Ferrara, Nov. 2019), Società Italiana di Psicofisiologia e Neuroscienze Cognitive.

[J18] Degli Innocenti, E., Geronazzo, M., Vescovi, D., Nordahl, R., Serafin, S., Ludovico, L. A., and Avanzini, F. Mobile virtual reality for musical genre learning in primary education. *Computers & Education 139* (Oct. 2019), 102–117.

[J19] Geronazzo, M., Peruch, E., Prandoni, F., and Avanzini, F. Applying a Single-Notch Metric to Image-Guided Head-Related Transfer Function Selection for Improved Vertical Localization. *J_AES 67*, 6 (2019), 414–428. Publisher: Audio Engineering Society.

[J20] Andreasen, A., Geronazzo, M., Nilsson, N. C., Zovnercuka, J., Konovalov, K., and Serafin, S. Auditory feedback for navigation with echoes in virtual environments: training procedure and orientation strategies. *IEEE Transactions on Visualization and Computer Graphics 25*, 5 (May 2019), 1876–1886.

[J21] Geronazzo, M., Spagnol, S., and Avanzini, F. Do we need individual head-related transfer functions for vertical localization? The case study of a spectral notch distance metric. *IEEE/ACM Transactions on Audio, Speech, and Language Processing 26*, 7 (July 2018), 1243–1256.

[J22] Serafin, S., Geronazzo, M., Nilsson, N. C., Erkut, C., and Nordahl, R. Sonic interactions in virtual reality: state of the art, current challenges and future directions. *IEEE Computer Graphics and Applications 38*, 2 (2018), 31–43.

[J23] Geronazzo, M., Avanzini, F., and Fontana, F. Auditory navigation with a tubular acoustic model for interactive distance cues and personalized head-related transfer functions. *Journal on Multimodal User Interfaces 10*, 3 (Sept. 2016), 273–284.

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I hereby declare that the information reported in this document is true and accurate in accordance with Italian Presidential Decree 445/2000, Articles 46 and 47.

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Michele Geronazzo