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 Date of birth: 20 April 1986; Nationality: Italian; 1 child (born 13 April 2025)

APPOINTMENTS AND EDUCATION

• **Academic position(s)**

- 01/09/2025 Associate professor, Department of Translational Research and New Technologies in Medicine and Surgery, University of Pisa, Italy
- 01/02/2023-31/08/2025 Researcher, Marie Skłodowska-Curie Individual Fellowship, Italian Institute of Technology, Neuroscience of Perception and Action Lab, Rome, Italy
- 01/01/2022-31/01/2023 Postdoctoral researcher
Advisor: G. Novembre
Italian Institute of Technology, Neuroscience of Perception and Action Lab, Rome, Italy
- 01/10/2017-31/12/2021 Postdoctoral researcher (Research Associate)
Advisor: M. Chait
UCL Ear Institute, University College London, London, United Kingdom
- 01/12/2016-30/09/2017 Visiting doctoral fellow
Advisor: V. Penhune
Concordia University, Montreal, Canada

• **Education**

- 01/10/2012-30/11/2016 PhD *cum Laude* in **Cognitive Neuroscience**
Thesis title: 'Action planning in music production: evidence from fMRI and EEG'
Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
Supervisors: D. Sammler, A. Villringer. Date of defence: 06/07/2017
- 01/07/2011 BA in Music (9/10) (diploma in flute at the **Conservatory of Music**).
Supervisor: P. Fre
Istituto Superiore di Studi Musicali F. Vittadini, Pavia, Italy
- 25/02/2011 Master 110/110 *cum laude* in **Neurobiology**
Thesis title: 'Neuronal and synaptic alterations in knock-out mice with Autistic Phenotype'.
Supervisor: E. D'Angelo
Università degli Studi di Pavia, Italy
- 15/07/2008 BS 110/110 *cum Laude* in **Medical Biotechnologies**
Thesis title: 'Analysis of the kinetics of inhibitor enzyme neuroserpin. Role in the pathogenesis of FENIB'.
Supervisor: S. Caccia
Università degli Studi di Milano, Italy

RESEARCH FUNDING

- 2024-25 Interviewed for UKRI individual Fellowship, European Research Council (ERC) Starting Grant 2024 (panel SH4, score B); ranked in the reserve list for Fondo Italiano Per la Scienza (panel SH4) and Marie Skłodowska-Curie Global Fellowship (mark 95/100).
- 2022 Marie Skłodowska-Curie Individual Fellowship (**Principal Investigator**)
Project: Neural encoding of novel and familiar proto-musical patterns in humans and monkeys, PHYLOMUSIC, 101064334)
Duration 2 years. Amount: € 188.000
- 2021 Alzheimer's Research UK, ECR Bridging Grant (**Principal Investigator**)
Project: Developing an auditory memory-based diagnostic test for Alzheimer's disease.
Duration: 4 months. Amount: £ 4,606

- 2016 Mobility Fellowship, Erasmus Mundus Exchange Network in Auditory Cognitive Neuroscience (**Principal Investigator**)
Project: Prediction and reward in music: how to maximize movement sequence learning?
Duration: 10 months. Amount: € 17.750
- 2012 4-year PhD studentship within the IMPRS Neuroscience of Communication PhD program at the Max Planck Institute CBS, Leipzig (DE)

PARTICIPATION TO NATIONAL AND INTERNATIONAL FUNDED PROJECTS

- 2024-2026 *ERC Proof of Concept* Lump Sum Grant 2023 (ERC-2023-PoC). AUTISMUS. Title: 'A joint music-making game augmenting social skills in autistic individuals.'
Principal investigator Dr Giacomo Novembre, Italian Institute of Technology, Neuroscience of Perception and Action Lab, Rome, IT.
Role: **Collaborator**
- 2024-2027 *project*: 'Investigating tracking and preference of auditory statistical regularities in birds', DOC Fellowship of Austrian Academy of Sciences at the Acoustics Research Institute (ARI) *Grant No. 27276* to Tab Oliver Bellman and Prof Marisa Hoeschele, Biology Cluster, Musicality and Bioacoustic &, Machine Learning, University of Vienna, AUST
Role: **Collaborator**
- 2023-2026 *Project*: 'Investigating objective indices of music understanding with multivariate neural data', GOIPG/2023/4841, funded by 2023 Government of Ireland Postgraduate Scholarship to John O'Doherty and Prof Giovanni Di Liberto, Intelligent Systems School of Computer Science and Statistics, Discipline of Artificial Intelligence, Trinity College Dublin, the University of Dublin, IR
Role: **Collaborator and PhD Co-Supervisor, candidate John O'Doherty**
- 2022-2026 *ERC-Starting Grant* MUSICOM (948186), European Research Council, Horizon 2020. Title: Sensorimotor Foundations of Communicative Musicality.
Principal investigator Dr Giacomo Novembre, Italian Institute of Technology, Neuroscience of Perception and Action Lab, Rome, IT.
Role: **Collaborator and PhD Co-Supervisor, candidate Sara Abalde**
- 2019-2025 *Project*: 'Investigating the effect of reward on learning with pupillometry and EEG', funded by NSERC grant (2021-04026) to Prof Virginia Penhune and NSERC-CREATE Program in Complex Dynamics of Brain and Behaviour, Concordia University, Montreal, CA
Role: **Collaborator and PhD Co-Supervisor, candidate Alex Albury**
- 2017-2021 *BBSRC grant* (BB/P003745/1), Biotechnology and Biological Sciences Research Council. Title: How the brain detects patterns in sound sequences.
Principal investigator Prof Maria Chait, UCL Ear Institute, University College London, London, UK.
Role: **Principal Researcher on the project**
- 2012-2020 *Research line*: 'Neural Bases of Intonation in Speech and Music' funded by Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
Principal investigator Dr Daniela Sammler, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, DE
Role: **Researcher on the project**

RECOGNITIONS AND AWARDS

- 2024 National Scientific Qualification for the position of Associate Professor (Second grade)
– Competition Sector **05/D1** - Physiology (valid from 27/06/2024 to 27/06/2025)
- 2024 National Scientific Qualification for the position of Associate Professor (Second grade)
– Competition Sector **11/E1** General Psychology, Psychobiology, and Psychometrics
(valid from 03/07/2024 to 03/07/2025)
- 2018 Visiting research funding for Invited Young Lecturers (IYL) at the Universal Acoustical
Communication Month (UACM) 2018, Sendai, Japan, funded by Tohoku University.
Duration: 2 weeks. Amount: € 3.000
- Since 2015 Four travel awards (summing to € 4.000) funded by
- UCL Ear Institute to attend Neuromusic VII (Aarhus, Denmark)
 - Outstanding Poster Award, Neuromusic VI (Boston, USA)
 - Concordia University to attend Neuromusic VI (Boston, USA)
 - Research Academy Leipzig to attend OHBM 2015 (Honolulu, Hawaii)

EDITORIAL ROLES

Reviewer for the following:

Funding agencies:

European Research Council (ERC),
Royal National Institute for Deaf People (RNID).

Scientific Journals:

Nature Communications,
Journal of Neuroscience,
Neuroimage,
PLoS Computational Biology,
eNeuro,
Hearing Research,
Frontiers in Auditory Cognitive Neuroscience,
Frontiers in Neuroscience,
Neurobiology of Ageing,
Journal of Eye Movement Research,
Psychological Science,
Journal of Experimental Psychology: General,
PloS one,
Cortex,
Journal of Cognitive Neuroscience,
Cognition, Psychological Research,
Neuropsychologia,
Music Perception,
Music Scientiae,
Cognitive processing

Conferences:

International Conference on Music Perception and Cognition,
Music & Eye-Tracking Conference,
UCL Neuroscience Symposium,
Associazione Italiana di Psicologia (AIP).

NATIONAL AND INTERNATIONAL COLLABORATIONS

Auditory Neuroscience

- Prof Maria Chait, University College London, UCL Ear Institute, Auditory Neuroscience, London, UK
- Prof Federico De Martino, Maastricht University, Sensory Circuits and Neuroimaging, Maastricht, NE
- Prof Daniel Pressnitzer, CNRS & École Normale Supérieure, Laboratoire des Systèmes Perceptifs, Paris, FR
- Prof Ingrid Johnsrude, Western University, Brain and Mind Institute, London Ontario, CA
- Dr Brigitta Toth, Research Centre for Natural Sciences (HUN-REN), Institute of Cognitive Neuroscience and Psychology, Budapest, HUN

Physiology

- Prof Alexandra Battaglia-Mayer, Department of Physiology and Pharmacology, University of Sapienza, Rome, IT

Biology

- Prof Marisa Hoeschele, University of Vienna, Biology cluster, Musicality and Bioacoustic & Machine Learning, AUST
- Prof Andrea Ravigani, Università Sapienza, Dipartimento di Neuroscienze umane, Roma, IT

Computer Science

- Dr Giovanni Di Liberto, Trinity College Dublin, Intelligent Systems, School of Computer Science and Statistics, Dublin, IR
- Prof Marcus T. Pearce, Queen Mary University, School of Electronic Engineering and Computer Science, London, UK

Cognitive Neuroscience

- Dr Giacomo Novembre, Italian Institute of Technology, Neuroscience of Perception and Action, Rome, IT
- Prof Virginia Penhune, Concordia University, Psychology, Montreal, CA
- Dr Daniela Sammler, Max-Planck-Institute (MPI-AE), Frankfurt/M., DE

RESEARCH INTERESTS AND PUBLICATIONS

My work investigates the neural and computational underpinnings of the human sensory-motor systems, focusing on auditory and motor sequence representations and regularity-based predictions. My research employs psychophysics, neuroimaging (M/EEG, fMRI), and computational modelling to understand sequential predictive processing across diverse populations and species.

Publications – peer-reviewed (* equal contribution)

Total no. of publications: 24

No. of first-author publications: 15

Total Citations: 968 (Google Scholar)

Hirsch (H) index: 14 (Google Scholar)

1. 2025 **Bianco R**, Chait M. Tracking the dynamics of discovery and abandonment of auditory models of regularities with MEG. *THE JOURNAL OF NEUROSCIENCE* (accepted)
2. 2025 Martins M J D, Bergmann Z, Leonova E, **Bianco R**, Sammler D, Villringer A. Acquisition and Utilization of Recursive Rules in Motor Sequence Generation. *COGNITIVE SCIENCE* (in press, <https://doi.org/10.1111/cogs.70108>)
3. 2025 Bigand F, **Bianco R**, Abalde S.F, Nguyen T & Novembre. EEG of the Dancing Brain: Decoding Sensory, Motor, and Social Processes during Dyadic Dance. *THE JOURNAL OF NEUROSCIENCE* 45 (21)
4. 2024 Bigand F, **Bianco R**, Abalde S.F & Novembre G. The geometry of interpersonal synchrony in human dance. *CURRENT BIOLOGY*, vol. 34, 3011–3019, <https://doi.org/10.1016/j.cub.2024.05.055>
5. 2024 Hu M., **Bianco R**, Hidalgo A., Chait M. Concurrent encoding of sequence predictability and event-evoked prediction error in unfolding auditory patterns: Insights from MEG. *THE JOURNAL OF NEUROSCIENCE*, ISSN: 0270-6474, doi: 10.1523/JNEUROSCI.1894-23.2024
6. 2024 **Bianco R**, Zuk N J, Bigand F, Quarta E, Grasso S, Arnese F, Ravigani A, Battaglia-Mayer A, Novembre G. Neural encoding of musical expectations in a non-human primate. *CURRENT BIOLOGY*, vol. 5, p. 179-181, ISSN: 1879-0445, doi: 10.1016/j.cub.2023.12.019
7. 2023 **Bianco R**, Hall E T R, Pearce Marcus T., Chait M. Implicit auditory memory in older listeners: From encoding to 6-month retention. *CURRENT RESEARCH IN NEUROBIOLOGY*, vol. 5, p. 179- 181, ISSN: 2665-945X, doi: 10.1016/j.crneur.2023.100115
8. 2023 **Bianco R**, Chait M. No Link Between Speech-in-Noise Perception and Auditory Sensory Memory – Evidence from a Large Cohort of Older and Younger Listeners. *TRENDS IN HEARING*, vol. 27, ISSN: 2331-2165, doi: 10.1177/23312165231190688
9. 2023 Albury A W., **Bianco R**, Gold B P., Penhune V B. Context changes judgments of liking and predictability for melodies. *FRONTIERS IN PSYCHOLOGY*, vol. 14, ISSN: 1664-1078, doi: 10.3389/fpsyg.2023.1175682
10. 2023 Novembre G, Nguyen T, Bigand F, Tucci V, Papaleo F, **Bianco R**, Koul A. Sociality and Timing: Correlation or Causation? Comment on ‘The evolution of social timing’ by Verga L., Kotz S. & Ravigani A. *PHYSICS OF LIFE REVIEWS*, vol. 5, p. 179-181, ISSN: 1571-0645, doi: 10.1016/j.plrev.2023.10.023

11. 2022 **Bianco R**, Novembre G, Ringer H, Kohler N, Keller P E, Villringer A, Sammler. The lateral Prefrontal Cortex Is a Hub for Music Production from Structural Rules to Movements. *CEREBRAL CORTEX*, vol. 32, p. 1-18, ISSN: 1047-3211, doi: 10.1093/cercor/bhab454
12. 2021 **Bianco R**, Mills G, de Kerangal M, Rosen S, Chait M. Reward Enhances Online Participants' Engagement with a Demanding Auditory Task. *TRENDS IN HEARING*, vol. 25, ISSN: 2331-2165, doi: 10.1177/23312165211025941
13. 2020 Martins M J D, Fischmeister F Ph S, Gingras B, **Bianco R**, Puig-Waldmueller E, Villringer A, Fitch W T, Beisteiner R. Recursive music elucidates neural mechanisms supporting the generation and detection of melodic hierarchies. *BRAIN STRUCTURE AND FUNCTION*, vol. 169, p. 383-394, ISSN: 1863- 2653
14. 2020 Harrison P M C, **Bianco R**, Chait M, Pearce M T. PPM-Decay: A computational model of auditory prediction with memory decay. *PLOS COMPUTATIONAL BIOLOGY*, vol. 16, ISSN: 1553- 734X
15. 2020 **Bianco R**. How regularities in sound sequences inform action planning: Neural and behavioural evidence from silent piano performance. *ACOUSTICAL SCIENCE & TECHNOLOGY*, vol. 41, p. 355- 357, ISSN: 1346-3969, doi: 10.1250/ast.41.355
16. 2020 Milne A*, **Bianco R***, Poole K, Zhao S, Oxenham A, Billig A, Chait M. An online headphone screening test based on dichotic pitch. *BEHAVIOR RESEARCH METHODS*, vol. 169, p. 383-394, ISSN: 1554-3528, doi: 10.1101/2020.07.21.214395
17. 2020 **Bianco R**, Harrison P M C, Hu M, Bolger C, Picken S, Pearce M T, Chait M. Long-term implicit memory for sequential auditory patterns in humans. *ELIFE*, vol. 169, p. 383-394, ISSN: 2050-084X
18. 2020 Di Liberto G M., Pelofi C*, **Bianco R***, Patel P, Mehta A D., Herrero J L., de Cheveigné A, Shamma S, Mesgarani N. Cortical encoding of melodic expectations in human temporal cortex. *ELIFE*, ISSN: 2050-084X
19. 2019 **Bianco R**, Ptasczynski L E, Omigie D. Pupil responses to pitch deviants reflect predictability of melodic sequences. *BRAIN AND COGNITION*, vol. 169, p. 383-394, ISSN: 1090-2147, doi: 10.1016/j.bandc.2019.103621
20. 2019 **Bianco R**, Gold B P, Johnson A P, Penhune V B. Music predictability and liking enhance pupil dilation and promote motor learning in non-musicians. *SCIENTIFIC REPORTS*, vol. 169, p. 383-394, ISSN: 2045-2322, doi: 10.1038/s41598-019-53510-w
21. 2019 Martins M J D*, **Bianco R***, Sammler D, Villringer A. Recursion in action: An fMRI study on the generation of new hierarchical levels in motor sequences. *HUMAN BRAIN MAPPING*, vol. 169, p. 383-394, ISSN: 1097-0193, doi: 10.1002/hbm.24549
22. 2018 **Bianco R**, Novembre G, Keller PE, Villringer A, Sammler D. Musical genre-dependent behavioural and EEG signatures of action planning. A comparison between classical and jazz pianists. *NEUROIMAGE*, vol. 169, p. 383-394, ISSN: 1053-8119, doi: 10.1016/j.neuroimage.2017.12.058
23. 2016 **Bianco R**, Novembre G, Keller Peter E P E, Scharf F, Friederici Angela D A, Villringer A, Sammler D. Syntax in action has priority over movement selection in piano playing: an ERP study. *JOURNAL OF COGNITIVE NEUROSCIENCE*, vol. 142, p. 454-464, ISSN: 0898-929X, doi: 10.1162/jocn
24. 2016 **Bianco R**, Novembre G, Keller P E E, Kim Seung-Goo S-G., Scharf F, Friederici A, Villringer A, Sammler D. Neural networks for harmonic structure in music perception and action. *NEUROIMAGE*, vol. 142, p. 454-464, ISSN: 1053-8119, doi: 10.1016/j.neuroimage.2016.08.025

Preprints (under review)

1. **Bianco R**, Toth B, Bigand F, Nguyen T, Sziller I, Haden G, Winkler I, Novembre G. Human newborns form musical predictions based on rhythmic but not melodic structure. *BiorXiv* (<https://doi.org/10.1101/2025.02.19.639016>)
2. 2025 Nguyen T, Bigand F, Reisner S, Koul A, **Bianco R**, Markova G, Hoehl S, Novembre G. Development of auditory and spontaneous motor responses to music over the first year of life. <https://elifesciences.org/reviewed-preprints/107088> (*eLife*)
3. Bastug B, Rajendran V, **Bianco R**, Agus T, Chait M, Pressnitzer D. Memory for repeated auditory textures. *PsyArXiv* (<https://doi.org/10.31234/osf.io/zjce5>)
4. Zuk N, **Bianco R**, Chait M. Temporal grouping and sequence inference drive pattern detection in fast multi-feature sequences. *PsyArXiv* (https://doi.org/10.31234/osf.io/jth3x_v1)

5. Bellmann T, Witt M, Hoeachele M, **Bianco R**. Parrots and Humans Prefer Pitch Sequences of Intermediate Complexity. *BiorXiv* (<https://doi.org/10.1101/2025.06.22.660906>)

In preparation

6. O'Doherty J, **Bianco R**, Di Liberto G, Investigating the Neurophysiology of Melody Enjoyment, *Presented at Neuromusic VIII, Helsinki, FI*
7. Abalde S, Bigand F, Nguyen T, **Bianco R**, Keller PE, Novembre G, On the role of ancillary body movements in joint music making and interpersonal synchronisation. *Presented at Neuromusic VIII, Helsinki, FI*

DISSEMINATION

• ***Invited Scientific Conference Talks***

- 2026 (planned) Keynote: 'Going Down to Go Up: Understanding the Neuroscience of Music Through Psychoacoustics', International Conference on Technologies for Music Notation and Representation (TENOR), 2026, Vienna, AU
- 2025 Symposium: 'Looking for the building blocks of human musicality across species', The 18th International Conference on Music Perception and Cognition (ICMPC), 2025, São Paulo, Brazil
- 2024 Symposium: 'Processing of predictable and non-predictable melodic and rhythmic sequences', The 10th World Mismatch Negativity Conference, Salamanca, SP.
- 2024 Symposium: 'New Approaches and Technologies in Auditory Neuroscience', Association for Research in Otolaryngology (ARO), Anaheim, USA.
- 2023 Symposium: 'Online Experimentation in Audition: Recent Advances and Future Directions', Association for Research in Otolaryngology (ARO), Orlando, USA.
- 2023 Symposium: 'Auditory Expectations, Learning and Plasticity', Association for Research in Otolaryngology (ARO), Orlando, USA.
- 2022 Symposium: 'Music learning and memory: from sensorimotor activations to social interaction', Italian Association of Psychology (AIP), 30' conference, University of Padova, IT.
- 2018 Invited speaker: 'How acoustic regularities inform action planning: neural and behavioral evidence from piano performance'. Tohoku Universal Acoustical Communication Month (UACM) 2018, Sendai, JP.

• ***Selected Scientific Conference Talks***

- 2023 The 17th International Conference on Music Perception and Cognition (ICMPC), 2023, Tokyo, JP.
- 2023 *Rhythm* Perception and Production Workshop (RPPW), 2023, *Nottingham, UK*.
- 2021 Advances and Perspectives in Auditory Neuroscience (APAN), 2021, online
- 2021 UCL Neuroscience Symposium, 2021, London, UK.
- 2019 Advances and Perspectives in Auditory Neuroscience (APAN), 2019, Chicago, USA.
- 2019 Interdisciplinary Advances in Statistical Learning (IASL), 2019, San Sebastian, ES.
- 2018 Basic Auditory Science (BAS) 2018, Newcastle, UK.
- 2017 Music & Eye-Tracking Conference, Max Planck Institute EA, Frankfurt/M., DE
- 2017 The Neurosciences and Music – VI, Music, Sound and Health, Boston, USA
- 2014 KogWis2014: How Language and Behaviour Constitute Cognition. Tübingen, DE

• ***Invited to Scientific presentations at Seminars, Colloquia, or Lectures***

- 2024 NeMO-CAMP 2024 workshop on Neuroscience and Music Ontology, the Institut de Neurosciences des Systèmes and the Institut de l'Audition, Marseille, FR
- 2024 GPIP – starting a grant proposal, Bicocca University, Milan, IT
- 2024 Funding your research and beyond, Italian Institute of Technology, Milan, IT
- 2023 CogCom/BeCogBio Seminar WS 2023/2024, Vienna, AT
- 2023 GPIP – starting a grant proposal, Bicocca University, Milan, IT
- 2023 IMPRS Summer School, Max Planck Institute CBS Leipzig, DE
- 2023 International School for Advanced Studies (SISSA), Trieste, IT
- 2023 Trinity College, Institute of Neuroscience, The University of Dublin, Dublin, IR
- 2022 Cambridge Music and Science seminar series, University of Cambridge, UK.

2022	CLaME Lecture series, New York University (NYU), New York, USA.
2021	International Laboratory for Brain, Music, and Sound Research (BRAMS), Montreal, CA
2021	Cognitive Psychology Institute Colloquium, Vrije Universiteit, Amsterdam, NL
2020	MMB/PANC Lecture Series, Goldsmiths 2019-2020, London, UK
2018	Charing Cross Hospital Lectures, Imperial College London, London, UK
2013	Instituto D'Or Pesquisa e Ensino, Rio de Janeiro, Brasil

- **Outreach activities for the public**

My research was featured on/I was interviewed for:

- daily press (*The Economist*, *Die Welt*, *El Pais*, *ScienceDaily*, *La Repubblica*, *Corriere della Sera*, *Il Foglio*, *Ecodiaro*, *India Today*, *The Science Times South-Korea*, *Gigazine Japan*, *SciamBrasil*, *Correio Braziliense*),
- magazine (*Nature Italy*, *Labour journal*),
- radio (*FranceInter*, *Kulturradio*, *MDR*, *BR-Klassik*, *Deutschlandfunk*)
- TV (*CBSNewyork US*).

A list of outreach contributions is listed below (or here <https://robsbianco.wixsite.com/website>):

2024	Dancing to someone else's beat, The multisensory challenges of group dancing – Festival della Scienza, Genova, IT
2024	Music, memory, and evolution – Scaldasole Bookshop, Milan, IT
2023	Music, Sounds, Images, Movements – European Researchers Night (MSCA), Rome, IT
2023	What is creativity? A dialogue between art and neuroscience – Daphne Roma, IT
2022	The Power of Music – 2 nd edition, Teatro Kursaal Santalucia, Bari, IT
2017-2018	World Hearing Day', London, UK
2016	The brain of classical and jazz pianists. Max Planck Institute, CBS, Leipzig, DE

TEACHING AND INSTITUTIONAL RESPONSIBILITIES

I teach human neurophysiology at the University of Pisa (Physiology of the Central Nervous System at the Medical School III year and Dentistry School II year) and have taught Neuroscience and Audiology (BSc and MSc courses) at UCL, as well as Methods for Neural Signal Processing (SPM). Since my PhD, I have co-supervised four PhD and 14 MSc students and during my UCL postdoc, I led a research group of up to eight master's students. Furthermore, beyond research, I have contributed to institutional mentorship programs, including spARO (as mentor and mentee), served on the UCL Neuroscience Career Network committee to organize mentoring schemes and workshops, and participated in the UCL Ear Institute sustainability team.

- **Teaching activities**

From 2025 – University of Pisa, Physiology of the nervous systems (88h) –Medical School
 From 2025 – University of Pisa, Physiology of the sensory systems (25h) –Dentistry School
 2021 – University College London (FIL), Institute of Neurology, *Course*: Statistical Parametric Mapping (SPM) – neural signal processing, 2 hours (lecture on MEG/EEG signal processing), Co-teacher: Prof. Vladimir Litvak
 2021 – University College London, MRes Audiology, *Course*: Research Methods and Statistics (EARI0019), 2 hours, Co-teacher: Prof Jennifer Linden
 2021 – University College London, MRes Advanced Neuroimaging, *Course*: Clinical Module 1: Foundational Neuroanatomy, Systems and Disease (ANIM0004), 4 hours, Co-teacher: Dr. Chris Routh
 2021 – University College London, BSc and MSci Neuroscience, BSc Biomedical Sciences, and BSc Natural Sciences, *Course*: Human Neuroanatomy (ANAT0003), 4 hours, Co-teacher: Prof. Anderson Patrick
 2020 – Goldsmiths University, MSci Music, Mind & Brain, *Course*: Statistical predictions and auditory memory, 2 hours, Co-teacher: Prof. Diana Omigie

2020 – University College London (FIL), Institute of Neurology short BSc and MSci program (and external students), *Course*: Statistical Parametric Mapping (SPM) – neural signal processing, 6 hours (tutoring practical sessions), Co-teacher: Prof. Vladimir Litvak

2020 – University College London, BSc and MSci Neuroscience, BSc Biomedical Sciences, and BSc Natural Sciences, *Course*: Human Neuroanatomy (ANAT0003), 4 hours, Co-teacher: Prof. Anderson Patrick

2019 – University College London, BSc and MSci Neuroscience, BSc Biomedical Sciences, and BSc Natural Sciences, *Course*: Human Neuroanatomy (ANAT0003), 4 hours, Co-teacher: Prof. Anderson Patrick

2019 – University College London (FIL), Institute of Neurology short BSc and MSci program (and external students), *Course*: Statistical Parametric Mapping (SPM) – neural signal processing, 6 hours (tutoring practical sessions), Co-teacher: Prof. Vladimir Litvak

2019 – University College London, MSci Experimental Psychology, *Course*: Journal Clubs Neuroscience/Neurophysiology, 5 hours, Co-teacher: Dr Daniel Bendor

2019 – University College London, MSci Neuroscience, *Course*: Methods in Cognitive Neuroscience II: Neuroimaging (PSYC0064), 6 hours, Co-teacher: Dr Leun J. Otten

2018 – University College London, MSci Experimental Psychology, *Course*: Journal Clubs Neuroscience/Neurophysiology, 5 hours, Co-teacher: Dr Daniel Bendor

2018 – University College London, MSci Neuroscience, *Course*: Methods in Cognitive Neuroscience II: Neuroimaging (PSYC0064), 6 hours, Co-teacher: Dr Leun J. Otten

- ***Students' supervision***

2023-present Co-supervision of PhD candidate John O'Doherty with Prof Giovanni Di Liberto. Intelligent Systems School of Computer Science and Statistics, Discipline of Artificial Intelligence, Trinity College Dublin, IR. Thesis title: 'Investigating objective indices of music understanding with multivariate neural data'.

2021-present Co-supervision of PhD candidate Alexandre Albury with Prof. Virginia Penhune. Department of Psychology, Concordia University; Montreal, CA. Thesis title: 'Effects of musically evoked emotions on motor learning and auditory perception'.

2021-present Co-supervision of PhD candidate Sara Abalde with Dr. Giacomo Novembre. Neuroscience of Perception and Action Lab, Italian Institute of Technology, Rome, IT. Thesis title: 'On the role of ancillary body movements in interpersonal synchronization during joint music making'.

2021 Supervision of 1 MSc student Mingyue Hu (in Neuroscience, UCL) with Prof Maria Chait, UCL Ear Institute, University College London, UK. Thesis title: 'Investigating the implicit memory of acoustic patterns by Electroencephalograph and psychophysics.'

2020 Supervision of 1 MSc student Elena Gutierrez (in Neuroscience, UCL) with Prof Maria Chait, UCL Ear Institute, University College London, UK. Thesis title: 'The effect of reward on rapid, implicit memory formation for sequential auditory patterns.'

2019 Supervision of 1 MSc student Pavan Chaggar (in Neuroscience, UCL) with Prof Karl Friston and Prof Maria Chait, University College London, UK. Thesis title: 'Brain mechanisms underlying the detection of patterns in rapid sound sequences: Hippocampal recruitment by a temporo- frontal network supports statistical learning in humans.'

2019 Supervision of 1 MSc student Hera Ahmad (in Audiological Science, UCL) with Prof Maria Chait, University College London, UK. Thesis title: 'Memory for rapid reoccurring patterns of sounds.'

2019 Supervision of 1 MSc student Barathy Ganeshakumara (in Audiological Science, UCL) with Prof Maria Chait, University College London, UK. Thesis title: 'Memory for rapid reoccurring patterns of sounds.'

2019 Supervision of 1 MSc student Cora Bolger (in Clinical Neuroscience, UCL) with Prof Maria Chait, University College London, UK. Thesis title: 'The effect of repetition and forgetting on auditory sequence memory.'

2019 Co-supervision of 1 MSc student Ilona Onyango (in Music, Mind and Brain) with Prof Diana Omige, Goldsmith University, UK. Thesis title: 'Tracking Music-induced Arousal and Appreciation with Pupillometry'

2018 Co-supervision of 1 MSc student Sami Picken (in Neuroscience, UCL) with Prof Maria Chait, University College London, UK. Thesis title: 'Long-term auditory sequence memory'

2018 Co-supervision of 1 MSc student Nicholas Feasey (in Music, Mind and Brain) with Prof Diana Omige, Goldsmith University, UK. Thesis title: 'The Role of Prior Knowledge on the Harmonic Violation Processing in Expert Pianists: An EEG Study'

2018 Co-supervision of 1 MSc student EstherPtasczynski (in Music, Mind and Brain) with Prof Diana Omige, Goldsmith University, UK. Thesis title: 'Emotions in the Eyes: Does pupil dilation track violations of pitch expectancies?'

2017 Co-supervision of 1 MSc Jasper Pöhls (Psychology), Max Planck Institute CBS Leipzig, Martin Luther University Halle-Wittenberg, Germany, Thesis title: 'The role of IFG in syntax processing during music performance: A tDCS study'

2017 Co-supervision of 1 MSc Katharina Roscher, (Psychology), Max Planck Institute CBS Leipzig, University of Regensburg, Germany, Thesis title: 'Die Rolle von motorischem und sensorischem Priming beim Klavierspiel: Ein Verhaltensexperiment'

2017 Co-supervision of 1 MSc Gisela Govaart, (Psychology), Max Planck Institute CBS Leipzig, University of Amsterdam, The Netherlands. Thesis title: 'Syntax in musical action: EEG evidence for syntax processing during music production and observation in pianists'

- ***Institutional responsibilities***

2024 PhD external examiner of PhD candidate Zhipeng Zhan, Supervisor Prof. Christopher I. Petkov, Comparative Neuropsychology, Newcastle University (Newcastle, UK). Thesis title: 'Complexity of Primate Cognition through Audio-Visual Sensory Convergence'.

2019-2024 Member of Association for Research in Otolaryngology (ARO) Mentorship program (SpARO) engaging as a mentee first and a mentor later on to help trainees learn the ropes of a professional career in speech and hearing-related sciences.

2018-2020 Member of Neuroscience Careers Network (NCN) committee (UCL, London, UK). I developed and administered career advice/ mentoring/ grant-writing seminars and workshops for early career scientists at the faculty level. I also marked abstracts and granted best-poster awards.

2019-2021 Educational mentor on different topics for secondary education and preparation for university (1 mentee, Refugee Support Network, London)

2017-2020 Member of the Sustainability team at the Ear Institute which takes part in Green Impact and has received Gold at the 2023 UCL Sustainability Awards (UCL, London, UK).

CAREER BREAK: In addition to COVID-19 delays affecting my neuroimaging work at UCL, my career was significantly interrupted in September 2024 due to pregnancy-related health complications, followed by maternity leave until September 2025.

