

## **FRANCESCA CANTONI**

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### **EDUCATION**

2023 – 2026, PhD in Music Cognition, LEAD - Université de Bourgogne, CNRS Dijon, France  
Thesis: "Rhythm processing and temporal predictions during development" Supervisor: Dr. Barbara Tillmann; Co-supervisor: Dr. Anna Fiveash

2021 – 2022, Master in Psychology, Neuroscience and Human Sciences, University of Pavia, Italy Graduated with distinction (110/110 cum laude) Thesis: "The Influence of Social Appreciation on Musical Pleasure: a Behavioral Study" Supervisor: Prof. Laura Ferreri

2017 – 2020, Bachelor in Psychosocial Sciences of Communication, University of Milan-Bicocca, Italy Graduated with distinction (110/110 cum laude) Thesis: "Analysis of the Correlation between Relative Pitch and Absolute Pitch in individuals with different Musical Training" Supervisor: Prof. Natale Stucchi

### **RESEARCH EXPERIENCE**

Dec 2023 – Present, PhD Student, LEAD - Université de Bourgogne, CNRS Dijon, France

- Investigating rhythm processing and temporal predictions in children and adults using behavioral measures and physiological techniques.
- Employing experimental paradigms using PsychoPy, OpenSesame, and Python.
- Conducting tapping tasks using Arduino

Oct 2023 - Dec 2023, Research Fellow, Laboratory of Neuroscience of Perception and Action, IIT Rome, Italy

- Studied the role of music and caregiver movement on infants using full-body motion capture techniques, and analyzing motion data via Vicon Motion Capture.

Jan 2023, Technical Support, Live Musical Experiment, Brain Cognition & Plasticity Unit (Barcelona), University of Pavia, and Symphony Orchestra of Milan, Italy

- Supported a live experiment exploring musical pleasure, curiosity, and memory during orchestral performances.

## CONFERENCES & PRESENTATIONS

Sept 11-13<sup>th</sup>, 2025, Turin, Italy, *31<sup>st</sup> Congress of the Italian Association of Psychology – Experimental Section*: **oral presentation** “I musicisti suonano bene insieme a tempo? Un nuovo Beat Alignment Test per valutare le abilità ritmiche nei bambini” (Do Musicians Play Well in Rhythm Together? A New Beat Alignment Test to Assess Rhythmic Abilities in Children)

Sept 8-9<sup>th</sup>, 2025, Pavia, Italy, *Focused Working Group Rhythm & Reward*: **oral presentation**

June 16-19<sup>th</sup>, 2025, Jyväskylä, Finland, *20<sup>th</sup> Rhythm Perception & Production Workshop (RPPW20)*: **poster presentation** “Do the Musicians Play Well in Rhythm Together? A New Beat Alignment Task to Assess Rhythmic Abilities in Children”

June 11-13<sup>th</sup>, 2025, Oslo, Norway, *18<sup>th</sup> International Conference of Students of Systematic Musicology (SysMus25)*: **poster presentation** “Behind the Beat: Investigating the Cognitive and Musical Foundations of *Au Fond du Temps*”

Apr 2025, Amiens, France, *Workshop Rhythm Across the Lifespan Through Multiple Lenses*: **oral presentation** “Developing a More Musical Approach to Beat Perception and Production Tasks for School-Aged Children”

Apr 16<sup>th</sup>, 2025, Varese, Italy: **oral presentation** to students at high school “Musica e Cervello: Emozioni, Piacere e Ritmo nell'Evoluzione e nello Sviluppo Umano” (Music and the Brain: Emotions, Pleasure, and Rhythm in Human Evolution and Development)

Mar 2025, Dijon, France, *Experimentarium*: **oral presentation** to general public “Quand la musique aide à comprendre les capacités linguistiques des enfants” (When Music Helps to Understand Children's Language Abilities)

Nov 2024, Marseille, France, *NeMO-CAMP workshop on Neuroscience and Music Ontology*: **oral presentation** “Assessing Rhythmic Abilities in Children: A More Musical Version of the Beat Alignment Task”

Oct 2024, Saclay, France, *FAST (French Association for timing) Conference*: **poster presentation** “Unveiling Rhythmic Abilities in Children: A Comprehensive Review and Novel Assessment Approach”

Sept 26<sup>th</sup>, 2024, Dijon, France, Workshop *Rhythm in Music and Speech across the Lifespan*, Université de Bourgogne: **oral presentation** “Rhythmic Abilities in Children: New Perspectives for Assessment”

June 6<sup>th</sup>, 2024, Dijon, France, *29<sup>th</sup> edition of Forum des Jeunes Chercheurs (FJC)*, organized by the Environnement-Santé doctoral school of Université de Bourgogne: **poster presentation** “Rhythmic Ability in Children: A Comprehensive Review and Novel Assessment Approach”

May 17<sup>th</sup>, 2024, Milan, Italy, 13<sup>th</sup> session of the seminar *Gioco e ri-scrittura del mondo* (Play and Re-writing the World), organized by the University of Milan and the Fonds Ricœur in Paris: **oral presentation** “La musica come esperienza estetica tra piacere, gioco e movimento” (Music as an Aesthetic Experience Between Pleasure, Play, and Movement)

June 13-16<sup>th</sup>, 2024, Helsinki, Finland, *Neuromusic VIII conference*: **poster presentation** “Unveiling Rhythmic Abilities in Children: A Comprehensive Review and Novel Assessment Approach”

## TECHNICAL SKILLS

- Experimental Design: OpenSesame, PsychoPy, Python
- Motion Capture: Vicon
- Behavioral Measures: Tapping tasks with Arduino
- Data Analysis: JASP, Jamovi, R programming
- Audio Editing: Audacity; Music Production: Cubase, GarageBand
- Web Development: Basic HTML, CSS, JavaScript

## PUBLICATIONS & WORK IN PROGRESS

Cantoni, F., Mandernach, Z., Entzmann, L., Fullone, E., Tillmann, B., Fiveash, A. (in prep).  
"Do the Musicians Play Well in Rhythm Together? A New Beat Alignment Task to Assess Rhythmic Abilities in Children".

## LEADERSHIP & INVOLVEMENT

2021 - Present Pianist and Multi-Instrumentalist, EFFETTI Band, Varese, Italy

- Collaborating on electro-pop-indie music projects with professional production support.

2017 - 2021 Choir Member, Chamber Choir Hebel, Saronno, Italy

- Performed with renowned artists including Ennio Morricone and Andrea Bocelli.

## ADDITIONAL INTERESTS

- Scientific Communication: Engaging non-expert audiences through accessible and captivating presentations.
- Education: Exploring the use of music to enhance cognitive processes, creativity, and foster social connections.
- Hiking and Nature: Enjoying the interplay between physical challenge and mental relaxation.