

MARCELLO GIORDANO, PH.D.

✉ marcello@marcellogiordano.ca

🌐 marcellogiordano.ca

🌐 / giordanomarcello

SUMMARY

I am an experienced Human-Computer Interaction researcher, expert in user-centered design, user studies, machine learning and rapid prototyping. I am a competent programmer, and throughout my career I have acquired skills in all things HCI: from haptic feedback design to motion capture and gestural analysis, eye tracking and AR/VR interactions. I thrive in a stimulating environment where working with cutting-edge technology and solving challenging problems is always on the agenda.

EXPERIENCE

Facebook Reality Labs

Toronto, Canada

Research Scientist

September 2020 to Present

At Facebook Reality Labs (FRL) I work on developing **new interactions and experiences** that will enable users to interact with a smart, AI-powered ecosystem of **AR/VR** devices and applications. My research projects include: **modeling of user intent** to facilitate input and **haptic feedback design** for all-day wearable devices.

Chatham Labs (*acquired by Facebook*)

Toronto, Canada

Research Scientist and Co-Founder

July 2019 to September 2020

At Chatham Labs, I am part of a team of expert research scientists working on **HCI problems** for both internal research and external clients. The projects I work on include: **Predictive modeling** of user interactions with an AR/VR system using multi-modal input sources; Interns supervision, working on **eye tracking**, **haptic interactions** and fabrication techniques.

Huawei Technologies

Toronto, Canada

Human-Computer Interaction Researcher

March 2018 to July 2019

At Huawei Technologies, I worked on designing new **haptic interactions for mobile and wearable devices**, as well as AI powered, **context aware applications** for wearables and smart-home.

Ultraleap Ltd

Bristol, UK

Haptics Engineer

May 2016 to February 2018

During my time at Ultraleap (formerly Ultrahaptics) I worked on designing of **haptic feedback and interactions** for mid-air haptic technology. My responsibilities included: **user evaluation** by means of qualitative and quantitative methods, **statistical data analysis**, physical measurements of vibrating structures and **data processing**.

University of Padova

Padova, Italy

Marie-Curie Post-Doctoral Fellow

January 2016 to May 2016

My post-doc at the University of Padova focused on characterizing the **haptic behavior of a piano keyboard**, by measuring the physical and perceptual properties of piano key vibrations.

SKILLS

• Technical Skills

- Interaction Design, User Research
- Quantitative and Qualitative Research Methods
- Haptic Technology and Haptic Experience Design
- Python, C#, Machine Learning Frameworks (TensorFlow), Unity Development
- Digital Signal Processing (DSP), Laser Doppler Vibrometry (Polytec), Motion Capture Systems (Qualisys)

• Organization, communication, time management

- Self-driven, curious, able to work under pressure and in fast-paced teams
- Excellent communication skills
- Reliable, capable of meeting strict deadlines

- **Languages**

- English (Fluent), French (Fluent), Italian (Native), Spanish (Intermediate)

- **Citizenship**

- Italian, Canadian (Permanent Resident)

EDUCATION

- **Ph.D**, Music Technology – Haptics, *McGill University (Montreal, Canada)*, 2016
 - Thesis: *Vibrotactile Feedback and Stimulation in Music Performance*
 - Advisor: Marcelo M. Wanderley
- **M.A**, Media Technology, *Grenoble Institute of Technology (Grenoble, France)*, 2010
- **M.Sc**, Mathematics and Applications, *Pierre and Marie Curie University (Paris, France)*, 2009
- **B.Sc**, Mathematics, *"Sapienza" University of Rome (Rome, Italy)*, 2008

SELECTED PUBLICATIONS

Ahn S., Santosa S., Parent M., Wigdor D., Grossman T., **Giordano M.** - "StickyPie: A Gaze-Based, Scale-Invariant Marking Menu Optimized for AR/VR", *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* - 2021

Chilles J., Frier W., Abdouni A. **Giordano M.**, Georgiou O. - "Laser Doppler Vibrometry and Fem Simulations of Ultrasonic Mid-Air Haptics" - *IEEE World Haptics Conference (WHC)* - 2019

Frier W., Ablart D., Chilles J., Long B., **Giordano M.**, Obrist M., Subramanian S. - "Using Spatiotemporal Modulation to Draw Tactile Patterns in Mid-Air" - *International Conference on Human Haptic Sensing and Touch Enabled Computer Applications* - 2018

Giordano M., Georgiou O., Dzidek B., Corenthy L., Kim J. R., Subramanian S., Brewster S. A. - "Mid-Air Haptics for Control Interfaces" - *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* - 2018

Corenthy L., **Giordano M.**, Hayden R., Griffiths D., Jeffrey C., Limerick H., ... Subramanian S. - "Touchless Tactile Displays for Digital Signage: Mid-Air Haptics Meets Large Screens" - *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* - 2018

Tranchant P., Shiell M. M., **Giordano M.**, Nadeau A., Peretz I., Zatorre R. J. - "Feeling the beat: Bouncing Synchronization to Vibrotactile Music in Hearing and Early Deaf People" - *Frontiers in neuroscience* - 2017

Giordano M., Wanderley M.M. - "Follow the Tactile Metronome: Vibrotactile Stimulation for Tempo Synchronization in Music Performance" - *Proc. of the Sound and Music Computing Conference (SMC)* - 2015

Giordano M., Hattwick I., Franco I, Egloff D., Frid E., Lamontagne V., Martinucci M., Salter C., Wanderley M.M. - "Design and Implementation of a Whole-Body Haptic Suit for "Ilinx", a Multisensory Art Installation" - *Proc. of the Sound and Music Computing Conference (SMC)* - 2015

Frid E., **Giordano M.**, Schumacher M., Wanderley M.M. - "Physical and Perceptual Characterization of a Tactile Display for a Live-Electronics Notification System" - *Proc. International Computer Music Conference - Sound and Music Computing (ICMC | SMC)* - 2014

Schumacher M., **Giordano M.**, Wanderley M.M. - "Vibrotactile Notifications for Live Electronics Performance: A Prototype System" - *Proc. International Symposium on Computer Music Multidisciplinary Research (CMMR)* - 2013

Giordano M., Wanderley M.M. - "Perceptual and Technological Issues in the Design of Vibrotactile-Augmented Interfaces for Music Technology and Media" - *Haptic and Audio Interaction Design (HAID) - Lecture Notes in Computer Science, Springer* - 2013

Giordano M., Sinclair S., Wanderley M.M. - "Bowing a vibration-enhanced force-feedback device" - *Proc. New Interfaces for Musical Expression Conference (NIME)* - 2012