# Niccolò Granieri

# Music Interaction Designer

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#### Education

- 2021 **Fellow of the Higher Education Academy**, *Birmingham City University*, Birmingham, UK.
- 2016 2020 PhD (Pass with minor corrections) in Music Technology (FT), Royal Birmingham Conservatoire, BCU, Birmingham.
  - Title Augmenting the experience of playing the piano: controlling audio processing through ancillary gestures.
- Supervisors Prof. Lamberto Coccioli Royal Birmingham Conservatoire, Birmingham City University
  James Dooley Royal Birmingham Conservatoire, Birmingham City University
  Jason Hockman Birmingham City University
  Tychonas Michailidis Southampton Solent University
  - 2017 PGCert in Research Methods, Birmingham City University, Birmingham, UK.
- 2012–2015 **BMus (Summa cum Laude) in Music and New Technologies**, *Conservatorio di Musica G. Tartini*, Trieste, IT.
  - 2014 Soundtrack Composition Course, Lizard Accademia Musicale, Firenze, IT.
  - 2014 Wave Field Synthesis Workshop, Conservatorio di Musica G. Tartini, Trieste, IT. Techniques for the Wave Field Synthesis diffusion system and the composition of electroacoustic performance with Prof. Giorgio Klauer.
  - 2014 **Masterclass Decibel Group**, *Conservatorio di Musica G. Tartini*, Trieste, IT. The complete John Cage Variations Projects.
  - 2013 Electronic Music Production Course, London School of Sound, London, UK.
- 2006–2011 High School Diploma Language Course, Liceo Francesco Petrarca, Trieste, Italy.

#### Work Experience

- March 2023 Music Technology Researcher (Researcher), IRCCS Burlo Garofolo, Trieste, IT.

  Ongoing Researcher at children's hospital "IRCCS Burlo Garofolo" in the department of Audiology for the project titled "Unravelling childhood sensorineural hearing loss outcome variability".

  Tools: Python, Max, Pure Data
- November 2020 External Examiner (Examiner), University of Chichester, Chichester, UK.

  Ongoing External examiner for the following courses: MA Music Education, MA Composition for Film, TV and Games, MA Sound Design for Visual Media programmes in partnership with Sonus Factory.
- September 2022 **Lecturer in Game Audio (Lecturer)**, *Civica Orchestra di Fiati*, Trieste, IT. February 2023 Lecturer for the Game Audio course for students of all ages and levels of expertise. *Tools: Unity, FMOD, Pure Data* 
  - January 2020 Lecturer in Digital Media Technology (Lecturer), DMT Lab, School of Computing and Digital Technology, Birmingham City University, Birmingham, UK.

    Lecturer in Birmingham City University's Department of Digital Media Technology teaching from undergraduate to post-graduate across different faculties. Some of the modules taught were: NIME, Game Audio, A/V Fundamentals, Computer Programming, Audio Systems.

Tools: Max, Pure Data, Unity, FMOD, Adobe Suite, Python, Arduino, Version Control (Git, GitHub)

October 2019 Workshop Facilitator and Academic Expert, Providence, Rhode Island, USA.

Prepared and delivered workshop around the topic of Machine Learning for Creative Applications using ml.lib, a library of machine learning externals for Max and Pure Data.

Tools: Max, Pure Data, ml.lib

February 2019 - Freelance Software Developer and UI Designer for AudioBulb, Sheffield, UK.

January 2020 Max software developer for the AMBIENT plugin.

Tools: Max, Version Control (Git, GitHub), Graphic Design Tools (Pixelmator, Sketch, Affinity)

September 2018 - Teaching Fellow (Visiting Lecturer), Royal Birmingham Conservatoire, Birmingham, UK.

January 2020 Techniques of Electronic Music Elective, Interactive Music Technology Performance, Music Technology Contexts.

Tools: Max, Pure Data, Arduino

September 2018 - Student Tutoring, Royal Birmingham Conservatoire, Birmingham, UK.

January 2020 One-to-one tutoring with students in their final year to guide them in the conceptualisation and

realisation of their final year projects.

February 2018 - **Teaching Fellow (Visiting Lecturer)**, Coventry School of Art and Design, Coventry, UK.

July 2018 Lecturer for the Multimedia Programming Environments module. Subjects include designing an interactive musical system using Max MSP 6 and the usage of the JS object to implement write and design objects.

Tools: Max MSP 6, Javascript

September 2016 – Teaching Fellow (Visiting Lecturer), Faculty of Computing, Engineering and The Built

July 2018 Environment, Birmingham City University, Birmingham, UK.

Lecturer for the Audio Systems module. Subjects include designing an interactive system using the Arduino board, coding in the Arduino IDE and generating sound using the Mozzi library or Pure Data and various sensors.

Tools: Arduino, Mozzi, Pure Data

September 2016 - **Demonstrator**, Faculty of Computing, Engineering and The Built Environment, Birming-

July 2017 ham City University, Birmingham, UK.

Demonstrator for the Lab part of the Audio Systems module. Subjects include helping students build a pre-amplifier, soldering, testing.

September 2015 – Traineeship (Assistant Researcher), Integra Lab, Royal Birmingham Conservatoire, Birm-

June 2016 ingham, UK.

Assistant to all researchers in the Integra Lab. Developed a set of modules for the Integra Live softwares emulating the Eurorack modular synthesiser format.

## Funding and Awards

February 2017 **STEAM Bursary**, Birmingham City University, Birmingham, UK.

 $\pounds$  14.296 - Annual Birmingham City University PhD Classic Doctoral Training Grant and PhD Fee Waiver.

December 2014 Erasmus+ Research Bursary, Conservatorio di Musica G. Tartini, Trieste, IT.

 $\in$  4.112 - Erasmus+ Research bursary awarded as part of the EU Work With Music programme.

#### **Publications**

#### **Book Chapters**

2021 Granieri, N., Dooley, J., Michailidis, T.

Retaining Pianistic Virtuosity in #MIs: Exploring Pre-Existing Gestural Nuances for Live Sound Modulation through a Comparative Study. Innovation in Music. Performance, Production, Technology, and Business, 1st Edition. Routledge.

2019 Granieri, N., Michailidis, T., Dooley, J.

Microgestural implementation for the creation of an expressive keyboard interface. Innovation in Music. Performance, Production, Technology, and Business, 1st Edition. Routledge.

**Papers** 

2023 Wilson, W., Granieri, N., Ali-Maclachlan, I..

Time's up for the Myo? The smartwatch as a ubiquitous alternative for audio-gestural analyses. Proceedings of the International Conference on New Interfaces for Musical Expression, NIME

2022 Wilson, W., Ali-Maclachlan, I., Granieri, N..

Combining Gestural and Audio Approaches to the Classification of Violin. International Workshop on Folk Music Analysis, FMA

2019 Granieri, N., Dooley, J.

Reach: a keyboard-based gesture recognition system for live piano sound modulation. Proceedings of the International Conference on New Interfaces for Musical Expression, UFRGS, pp. 375-376

Posters

2018 Granieri, N.

Reach – Designing Keyboard Instruments with pianists in mind. Sound, Image and Interaction Doctoral Symposium 2018 (SIIDS18). Madeira Interactive Technologies Institute, Madeira, PT.

2017 Granieri, N.

From piano to piano. Research Conference 2017(RESCON). Birmingham City University, Birmingham, UK.

Conference Presentations

2019 Granieri, N.

Retaining Pianistic Virtuosity in #MIs Exploring Pre-Existing Gestural Nuances for Live Sound Modulation through a Comparative Study, Innovation In Music 2019 (InMusic19). University of West London, London, UK.

2018 Granieri, N.

Reach – Designing Keyboard Instruments with pianists in mind. Sound, Image and Interaction Doctoral Symposium 2018 (SIIDS18). Madeira Interactive Technologies Institute, Madeira, PT.

2017 Granieri, N., Michailidis, T., Dooley, J.

Microgestural implementation for the creation of an expressive keyboard interface. Innovation in Music 2017 (InMusic17), London, UK.

2017 Granieri, N.

Expressing through gesture nuances: Bridging the analog and digital divide. Beyond Borders 17, Birmingham City University, Birmingham, UK.

2017 Granieri, N.

Implementing Expressive Microgestures in a Creative Digital Environment. Research and Innovation Conference (RIConf17). Southampton Solent University, Southampton, UK.

Workshops

2020 Jensenius, A. R., McPherson, A., Xambó Sedó, A., Martin, C., Armitage, J., Granieri, N., Fiebrink, R., Naveda, L.

NIME Publication Ecosystem Workshop. New Interfaces for Musical Expression (NIME20). Royal Birmingham Conservatoire, Birmingham City University, Birmingham, UK.

Dissertations

2015 Undesired Signal, Conservatorio di Musica G. Tartini, Trieste, IT.

Final bachelor dissertation revolving around the difference between noise and music in contemporary times. The thesis included the performance of a piece related to the discussion, that used the rumble of the audience as the main sound source, and random number generator as main algorithmic composers.

## Supervisory Roles

September 2022 - Danilo Randazzo (PhD Part-Time), Birmingham City University, Birmingham, UK.

Ongoing Title: Real-time Timbre Augmentation: Performing Inherent Sound Properties

September 2021 - William Wilson (PhD Full-Time), Birmingham City University, Birmingham, UK.

Ongoing Title: Computational Analysis of Style in Traditional Fiddle Playing

## Professional Memberships

Paper Reviewer, NIME (2020–2022), FMA (2022), HAID (2022), CHI (2021), Audio Mostly (2021), Eurasia Graphics (2021), Digital Creativity Journal (2021), Sound Image and Interaction Journal (2020), RIFFS Journal (2019–2020).

Music Reviewer, NIME (2020-2022).

Workshop Reviewer, Audio Mostly (2021).

Installation Chair, NIME (2020).

**Founder and Committee Member**, *Technology in Musical Performance Study Group* (2019).

#### **Events**

- July 2020 NIME2020 International Conference on New Interfaces for Musical Expression Conference Organiser, Installation Chair, Reviewer, Royal Birmingham Conservatoire, Birmingham, UK, Organisation of the yearly International NIME conference, hosted at the Royal Birmingham Conservatoire. The conference gathers researchers and musicians from all over the world to share their knowledge and late-breaking work on new musical interface design..
- December 2019 **TiMP Symposium Technology in Musical Performance Event Organiser, Committee Member**, Royal Birmingham Conservatoire, Birmingham, UK, Organisation and supervision of the first TiMP Symposium, hosted in the Royal Birmingham Conservatoire. A forum for all who engage with electronics in live music performance. The group aims to stimulate discussion and collaboration between performers, composers, sound artists, practitioners, programmers, software developers and sound designers on musical performance with/mediated by technology.
  - May 2018 Arduino Day Event Organiser, Royal Birmingham Conservatoire, Birmingham, UK, Organisation and supervision of the Arduino Day 2018 hosted in the Royal Birmingham Conservatoire to make young conservatoire students interact with the world of embedded boards, sensors and DIY instruments.

### Software Development

2020 Ambient.

Freelance software developer for Ambient, standalone granular synthesiser.

Tech Stack: Max

2019 ml.lib, Bullock, J., Momeni, A.

Open source software tester and junior developer for the Pure Data and Max machine learning library. *Tech Stack: Max, C++, Version Control (Git, GitHub)* 

2018 **Span Extract**, *Granieri*, *N*.

Open source software developer of the command line tool to search and parse interview transcripts. *Tech Stack: Python, Version Control (Git, GitHub)* 

2018 Reach, Granieri, N., Bledsoe, J.

Open source software developer of the Leap Motion Orion SDK OSC mapper. Tech Stack: JUCE(C++), Max, Pure Data, Version Control (Git, GitHub)

2015 Eurorack Modules - Integra Live, Granieri, N.

Realisation of a set of modules in Pure Data to recreate the basics of a Eurorack Modular Synthesiser for Integra Live.

Tech Stack: Pure Data, Version Control (Git, BitBucket)

## Languages

Italian Native Speaker

English Near Native

French Intermediate

Spanish Intermediate

German Basic

excellent command good working knowledge good working knowledge