# **Manuel Anglada-Tort**

# Postdoctoral researcher

*April 2022* 

Max Planck Institute for Empirical Aesthetics

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### **Personal Profile**

I am interested in how people experience the auditory world and the impact of their mental representations on human behaviour and culture. To explore this, my research combines methods from different disciplines with massive online experiments, including high-resolution perceptual paradigms, cultural transmission chains in rhythm and singing modalities, cross-cultural research, and network science.

# **Education and research**

#### 2020 - Postdoctoral researcher

Computational Auditory Perception Group, Max Planck Institute for Empirical Aesthetics (Germany), supervised by Dr Nori Jacoby.

- Researching fundamental components of auditory perception, including rhythm and melody.
- Developing new psychological methods, including large-scale perceptual experiments and iterated learning paradigms in complex production modalities, such as speech and singing.
- Developing new testing software for online behavioural experiments (*REPP*, sing4me, *PsyNet*).
- Articles published in *Behavior Research Methods, Nature Human Behaviour, Psychology of Aesthetics, Creativity, and the Arts, NeurIPS 2020,* and *CogSci 2022.*

#### 2018 - Research consultant

SoundOUT - Sonic Testing (UK); DLMDD - Sonic Branding Agency (UK)

- Amazon (2020-2021): tested the effectiveness of sonic logos for Amazon using massive online experiments.
- Aldi (2019): performed large-scale behavioural research to identify a new audio logo identity for Aldi UK.

#### SoundOUT – Sonic Testing (UK)

• SONOS - Home Sound Systems (2019): Assessed the impact of audio systems on music listening experiences.

#### *iV Audio branding (US)*

• Cadbury Chocolate (2018-2019): Examined crossmodally congruent relationships between sound, flavour, and mood.

### 2017-20 PhD in Psychology, Summa Cum Laude

Audio Communication Group, Technische Universität Berlin (Germany), supervised by Prof Dr Stefan Weinzierl and Prof Dr Daniel Müllensiefen.

- Applied insights from behavioural economics to decision making in the context of music, aesthetics, and the arts.
- Collaborated with international researchers in various scientific contributions (e.g., Prof Dr Adrian North, Curtin University, Australia; Prof Alexander Lamont, Keele University, UK; Steve Keller, Sonic Strategy Director in Pandora, US).
- Publications in the Quarterly Journal of Experimental Psychology, Memory, Psychology of Aesthetics, Creativity, and the Arts, Journal of Advertising Research, International Journal of Advertising, Psychology of Music, and Music & Science.

#### 2014-15 MSc in Music, Mind & Brain, Distinction

Psychology Department, Goldsmiths, University of London, (UK), supervised by Prof Dr Daniel Müllensiefen.

- Focus on neuroscience, research methods, psychoacoustics, and music cognition.
- Conducted a master thesis on the role of context in music and aesthetic judgements, published in *Music Perception*.

### 2009-13 BA in Psychology

Universtiat Rovira i Virgili (Spain)

- Focus on cognitive science, research methods, and psycholinguistics.
- Conducted a final-year research project on the processing of emotional words in bilingual speakers, published in *Second Language Research*.

# **Teaching and supervising**

#### 2021 Academic mentor

ICMPC-ESCOM mentoring scheme, funded by the British Academy

• One to one mentoring for academics from developing countries, providing guidance and support to produce a journal article for publication.

### 2019 Lecturer in Psychology

Humboldt-Universität zu Berlin (Germany)

- Taught research methods and statistics using R, both at the BA and master level.
- Wrote and marked weekly assignments and final exams.

### 2015- Co-supervisor of MSc projects

MSc in Audio Communication and Technology, Technische Universität Berlin (Germany)

- Melanie Schulz (2020-2021)
- Miguel Reyes (2020-2021)
- Till Noé (2019-2020)

Msc in, Mind & Brain, Goldsmiths, University of London (UK)

- Austin Coates (2020-2021)
- Pattera Sutanthavibul (2018-2019)
- Kerry Schofield (2017-2018)
- Heather Thueringer (2017-2018)
- Emily Beth Hill (2017-2018)
- Thomas Baker (2016-2017)
- Björn Thorleifsson (2015-2016)

#### 2015-17 Special Needs Teacher

The Garden School (UK)

- Taught and supported autistic students with complex learning disabilities.
- Worked collaboratively with parents and professionals.

# **Funding**

#### 2017-20 PhD scholarship

Funded by the Studienstiftung des Deutschen Volkes (Germany)

- 3-year doctoral scholarship granted to highly qualified and socially committed researchers.
- The Studienstiftung (German National Academic Foundation) is one of the largest and most prestigious organizations for the promotion of gifted students in Germany

#### 2017-19 Conference Awards

Funded by the Society for Education, Music, and Psychology Research

• Travel grant to attend the conference, "Again & Again: Musical Repetition in Aesthetics, Analysis, and Experience".

Funded by the German Society for Music Psychology

• Travel grant to attend the 2018 DGM Conference, Giessen (Germany).

Funded by the Society for Education, Music, and Psychology Research

 Travel grant to attend the 15th International Conference on Music Perception and Cognition (ICMPC) and 10th Conference of the European Society for the Cognitive Sciences of Music (ESCOM), Graz Austria

Funded by the Society for Education, Music, and Psychology Research

• Travel grant to attend the 9<sup>th</sup> Conference of the European Society for the Cognitive Sciences of Music (ESCOM), Ghent (Belgium).

# Software development

My strongest programming languages are R and Python. I also have experience with JavaScript, HTML/CSS, and MATLAB.

I am a co-developer of the following software packages:

\*PsyNet Open-source platform to build, run, and automate next-generation online psychological experiments (Python, JS, HTML).

**REPP** Open-source package for measuring sensorimotor synchronisation in online experiments (Python).

https://gitlab.com/computational-audition/repp

Sing4me A package in development for conducting speech and singing experiments online, including methods to extract fundamental frequencies from voice and manipulate sequences of sounds (Python).

<sup>\*</sup> PsyNet has not yet been officially released, but this is planned for 2022.

## **Publications**

- **2022 Anglada-Tort, M.**, Harrison, P. M. C., & Jacoby, N. (2022): Studying the effect of oral transmission on melodic structural features using online singing experiments. *Conference paper accepted for an oral presentation in Cognitive Science Society 2022 (CogSci22), Toronto, Canada.* 
  - \*Anglada-Tort, M., Harrison, P. M. C., & Jacoby, N. (2022): REPP: A robust cross-platform solution for online sensorimotor synchronization experiments. *Behavior Research Methods*. https://doi.org/10.3758/s13428-021-01722-2
  - \* Along with this publication, I published a free and open-source Python library that allows conducting auditory synchronization online experiments (<a href="https://gitlab.com/computational-audition/repp">https://gitlab.com/computational-audition/repp</a>). This technology is being used in several labs.
  - \*Niarchou, M., Gustavson, D. E., Sathirapongsasuti, J. F., **Anglada-Tort**, M., Eising, E., Bell, E., ..., Jacoby, N., & Gordon, R. L. (2022): Genome-wide association study of musical beat synchronization demonstrates high polygenicity. Manuscript accepted in *Nature Human Behavior*. bioRxiv preprint doi: https://doi.org/10.1101/836197
  - \*Responsible for implementing and deploying large-scale beat synchronization experiments online to more than 500 participants, data analyses and visualization.
  - \*Jacoby, N., Polak, R., Grahn, J., Cameron, D. J., Lee, K. M., Godoy, R., ... Anglada-Tort, M., Harrison, P. M. C., McPherson, M. J., Dolan, S., Durange, A., & Mcdermott, J. (2022, July 6). Universality and cross-cultural variation in mental representations of music revealed by global comparison of rhythm priors. Manuscript accepted in *Nature Human Behavior*. PsyArXiv preprint doi: https://doi.org/10.31234/osf.io/b879v
  - \*Responsible for implementing and deploying an online iterated learning paradigm in the tapping modality (rhythm) in India, Brazil, and the US.
  - **Anglada-Tort, M.,** Masters, N., Steffens, J., North, A., & Müllensiefen, D. (2022). The Behavioural Economics of Music: systematic review and future directions. Manuscript accepted in *Quarterly Journal of Experimental Psychology*.
  - **Anglada-Tort, M.,** Schofield, K., Trahan, T., & Müllensiefen, D. (2022). I've heard that brand before: The role of music recognition on consumer choice. Manuscript accepted in the *International Journal of Advertising*.
- \*Savage, P. E., Jacoby, N., Margulis, E. H., Daikoku, H., **Anglada-Tort, M.,** Castelo-Branco, S. E.-S., ..., Patel, A., & Schippers, H. (2021). Building sustainable global collaborative networks: Recommendations from music studies and the social sciences. In E. H. Margulis, D. Loughridge, & P. Loui (Eds.), *The science-music*

borderlands: Reckoning with the past, imagining the future. MIT Press. Preprint doi: http://doi.org/10.31234/osf.io/cb4ys

\*Book Chapter based on a symposium entitled "Building sustainable global collaborative research networks", February 2021

Anglada-Tort, M., Krause, A. E., & North, A. C. (2021). Popular music lyrics and musicians' gender over time: A computational approach. *Psychology of Music*, *49*(3), 426-444. Doi: <a href="https://doi.org/10.1177/0305735619871602">https://doi.org/10.1177/0305735619871602</a>

**Anglada-Tort, M.,** Keller, S., Steffens, J., & Müllensiefen, D. (2021): The impact of source effects on the evaluation of music for advertising: Are there differences in how advertising professionals and consumers judge music? *Journal of Advertising Research.* Doi: <a href="https://doi.org/10.2501/JAR-2020-016">https://doi.org/10.2501/JAR-2020-016</a>

**2020** Anglada-Tort, M., & Skov, M. (2020): What counts as Aesthetics in Science? A bibliometric Analysis and Visualization of the Scientific Literature from 1970 to 2018. *Psychology of Aesthetics, Creativity, and the Arts.* Advance online publication. Doi: <a href="https://doi.org/10.1037/aca0000350">https://doi.org/10.1037/aca0000350</a>

\*Harrison, P. M. C., Marjieh, R., Adolfi, F., van Rijn, P., **Anglada-Tort, M.**, Tchernichovski, O., Larrouy-Maestri, P., & Jacoby, N.(2020). Gibbs Sampling with People. 34th Conference on Neural Information Processing Systems (NeurIPS 2020). https://arxiv.org/abs/2008.02595

\*Neural Information Processing Systems is the most prestigious international machine learning and neuroscience conference. Our article was accepted for oral presentation, something achieved by only the top 1% of submitted articles.

**2019** Anglada-Tort, M., Steffens, J., & Müllensiefen, D. (2019): Names and titles matter: The impact of linguistic fluency and the affect heuristic on aesthetics and value judgements of music. *Psychology of Aesthetics, Creativity, and the Arts, 13* (3), 277-292. Doi: https://dx.doi.org/10.1037/aca0000172

Anglada-Tort, M. (2019): Measuring stereotypes in music: A commentary on Susino and Schubert (2019). *Empirical Musicology Review, 14*(1-2), 16-21. Doi: <a href="http://dx.doi.org/10.18061/emr.v13i1-2.6387">http://dx.doi.org/10.18061/emr.v13i1-2.6387</a>

Anglada-Tort, M., Thueringer, H., & Omigie, D. (2019): The busking experiment: A field study measuring behavioural responses to street music performances. *Psychomusicology: Music, Mind, and Brain, 29*(1), 46-55. Doi: <a href="http://dx.doi.org/10.1037/pmu0000236">http://dx.doi.org/10.1037/pmu0000236</a>

**Anglada-Tort, M.,** & Sanfilippo, K.R.M. (2019): Visualizing music psychology: A bibliometric analysis of Psychology of Music, Music Perception, and Musicae Scientiae from 1973 to 2017", *Music & Science, 2*, 2059204318811786.

Doi: https://doi.org/10.1177/2059204318811786

**Anglada-Tort, M.** (2018): Commentary on Canonne (2018): Listening to improvisation. *Empirical Musicology Review*. Doi:http://dx.doi.org/10.18061/emr.v13i1-2.6387

- **2018** Anglada-Tort, M., Baker, T., & Müllensiefen, D. (2018): False memories in music listening: Exploring the misinformation effect and individual difference factors in auditory memory. *Memory*, 1-16. Doi: https://doi.org/10.1080/09658211.2018.1545858
- **2017 Anglada-Tort, M.,** & Müllensiefen, D. (2017): The repeated recording illusion: The effects of extrinsic and individual difference factors on musical judgments. *Music Perception*, *35*(1), 94-117. Doi: https://doi.org/10.1525/mp.2017.35.1.94

Ferré., P., **Anglada-Tort, M.**, Guasch, M. (2017): Processing of emotional words in bilinguals: Testing the effects of Word concreteness, task type and language status. *Second Language Research*, *34*(3), 371-394. Doi: https://doi.org/10.1177/0267658317744008

# **Invited presentations**

- 2020 Max Planck Institute for Empirical Aesthetics, Frankfurt am Main (Germany) 'What counts as aesthetics in Science?'
- 2019 Max Planck Institute for Empirical Aesthetics, Frankfurt am Main (Germany)

  'Measuring responses to music: methods, challenges, and alternative approaches'
- 2019 Queen Mary, University of London, London (UK)
  'Measuring responses to music: methods, challenges, and alternative approaches'
- 2019 Humboldt-Universität zu Berlin, Berlin (Germany)

  'The Behavioural Economics of Music: A Framework for investigating music decision making'
- 2019 Hanover University of Music, Drama, and Media, Hanover (Germany) 'Visualizing Music Psychology: Who, What, When, and Where'
- 2018 Queen Mary, University of London, London (UK)
  'The Behavioural Economics of Music: a framework for investigating music decision making'

# **Conference presentations**

- 2021 Rhythm Production and Perception Workshop (RITMO), virtual conference 'REPP: A robust cross-platform solution for online sensorimotor synchronization experiments'
- 2021 NEST Conference: New England Sequencing & timing, virtual conference 'REPP: A robust cross-platform solution for online sensorimotor synchronization experiments'
- 2021 16th International Conference on Music Perception and Cognition (ICMPC) and 11th Conference of the European Society for the Cognitive Sciences of Music (ESCOM), Sheffield (UK)

Talk 1: 'The Behavioral Economics of Music: A framework for investigating music decision making'

*Talk 2:* 'REPP: A robust cross-platform solution for online sensorimotor synchronization experiments'

Talk 3: 'Influencing musical memories: how young adult listeners rembemr music over long-time spans'

#### 2019 Conference on Behavioral Science, Prague (Czech Republic)

'The Behavioral Economics of Music'

2019 Again & Again: Musical Repetition in Aesthetics, Analysis, and Experience, London (UK)

'The Repeated Recording Illusion'

- 2018 15th International Conference on Music Perception and Cognition (ICMPC) and 10th Conference of the European Society for the Cognitive Sciences of Music (ESCOM), Graz (Austria)
  - *Talk 1*: 'False memories in music listening: Exploring the misinformation effect and individual difference factors in memory for music'
  - *Talk 2*: 'The effects of source bias on the evaluation of music in advertising: professionals vs. Consumers'
- 2018 Conference of the German Society for Music Psychology (DGM), Giessen (Germany) 'Source-Effekte, ästhetische Bewertung und geschätzte Lizenkosten im Kontext von Werbemusik'
- 2017 25<sup>th</sup> Anniversary of the European Society for the Cognitive Sciences of Music (ESCOM), Ghent (Belgium)

'Does the fluency of artists and songs' names matter? The effect of linguistic fluency on evaluations of music'

2016 14<sup>th</sup> International Conference on Music Perception and Cognition (ICMPC), San Francisco (US)

'The song remains the same: Biases in musical judgments and the illusion of hearing different songs'

### **Peer review**

I have reviewed articles for the journals of *Psychology & Marketing*, *Psychology of Aesthetics*, *Creativity, and the Arts*, *Music Perception*, *Brain Sciences*, *Psychology of Music*, *POETICS*, *Music Education Research*, *Empirical Musicology Review*, and *Journal of Media Business Studies*. I have also reviewed submissions for the 2017 and 2018 conferences of the *International Society for Music Information Retrieval* (ISMIR), and the 2021 *International Conference of Students of Systematic Musicology*.

# **Academic referees**

#### Dr Nori Jacoby

Postdoctoral supervisor, Max Planck Institute for Empirical Aesthetics nori.jacoby@ae.mpg.de

#### Prof Dr Daniel Müllensiefen

PhD supervisor, Goldsmiths, University of London d.mullensiefen@gold.ac.uk