

David John Baker

Contact Information

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Online Platforms

ResearchGate
Github
MCCL
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EDUCATION

Doctor of Philosophy, Music Theory, in Progress
Louisiana State University, Baton Rouge, Louisiana, USA *Expected Completion* 2019

Master of Science, Music, Mind and Brain
Goldsmiths, University of London, England February, 2014
Thesis - *Salience and Memorability of Leitmotives in the Music of Richard Wagner*

Bachelor of Music, Instrumental Performance
Baldwin Wallace Conservatory of Music, Berea, OH, USA May, 2012

PROFESSIONAL EXPERIENCE

Visiting PhD Student, *Queen Mary, University of London* July 2016 – August 2016
Centre for Digital Music, London, England

- Project Title: *Segmentation in Jazz: Mapping Musical Expertise in the Brain*
- Co-designed experiment comparing IDyOM machine learning segmentation with EEG markers
- Co-designed experimental interface

Visiting PhD Student, *Transforming Musicology* June, 2016
Goldsmiths Computing Department, London, England

- Collaborated with various Transforming Musicology team members in data cleaning, analysis, and writing
- Presented various findings from Transforming Musicology Project at International Conference for Music Perception and Cognition in San Francisco, CA

Research Assistant, *Music Computation and Cognition Lab* August 2014 – May 2015
Louisiana State University Music Theory Department, Baton Rouge, Louisiana

- Responsible for online data collection via MCCL@LSU server
- Designed and implemented experiments central to lab's research interests
- Attended to various details of lab administration (participation scheme, maintain/set-up equipment)
- Encoded symbolic data to Bebop corpus
- Created online jsPsych implementation of Gold-MSI Musical Sophistication Questionnaire [GitHub]

Recording Technician, *LSU Recording Studio* August 2014 – May 2015
Louisiana State University School of Music, Baton Rouge, Louisiana

- Recorded recitals for School of Music performances in Recital Hall and local venues (ProTools and in-house equipment)
- Stage managed events, consisting of helping prepare and disassemble stage for performers
- Contracted for 150 hours over course of year

Music Industry Consultant

London, England

May 2015 – Present

- Developed tool for SliceThePie.com to measure and characterize music based on value judgments of users targeted at website's main demographics; tool is currently being used by Soundout [Paper]
- Aided with presentation at Academy Day Workshop at "Music, Brands, and Advertising: Testing What Works" at Audio Branding Academy 2015, Berlin, Germany, May 2015.
- Details from Audio Branding Academy presentation can be found in publications section

Research Assistant, Transforming Musicology Project

May 2015 – August 2015

Goldsmiths Psychology Department, London, England

- Analyzed Skin Conductance Response (SCR) and Heart Rate (HR) data for experiments related to research
- Oversaw two MSc. projects affiliated with Transforming Musicology project
- Digitally annotated audio files for Music Information Retrieval Machine Learning Project in collaboration with Birmingham University
- Wrote academic and general public articles for Transforming Musicology project for research dissemination

Research Assistant, Transforming Musicology Project

September 2014 – December 2014

Goldsmiths Psychology Department, London, England

- Conducted behavioral research investigating perception of musical structures as part of AHRC-funded project working together with Goldsmiths, University of London Computer Science Department and musicologists from University of Oxford.
- Research focused on perception of leitmotives in the music of Richard Wagner and included paradigms involving musical memory, skin-conductance response, as well as systematic research into compositional structure of musical materials.
- Findings presented at various academic and public events

PUBLICATIONS

- Mullensiefen, **Baker, D.**, Rhodes, C., Crawford, T., Dreyfus, L. (2016). Recognition of leitmotives in Richard Wagner's music: chroma distance and listener expertise. In Springer (Ed.) *Analysis of Large and Complex Data*. [Book Chapter]
- **Baker, D.**, Trahan, T., Mullensiefen, D. (2016) Measuring Music To Brand Personality: A Semantic Differential Tool for Measuring Emotional Space. *Proceedings of 2016 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]
- **Baker, D.**, Rosado, A, Shanahan, E., Shanahan, D. (2016) The Interaction of Schema-Driven Gestures and Instrumental Affordances in Bebop Improvisations. *Proceedings of 2016 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper]
- Blust, A., **Baker, D.**, Richard, K., Shanahan, D. (2016) Music, Animacy, and Rubato: What makes music sound human? *Proceedings of 2016 International Conference on Music Perception and Cognition*. [Conference Proceedings Paper, in press]
- **Baker, D.**, (2015) "Unlocking the Mysteries of Your Brain, Dr. Daniel Levitin Public Lecture", in *Psychomusicology: Music, Mind, and Brain*, Vol 25, No.4, pp. 455-456. [Public Lecture Review]
- **Baker, D.**, Rindfleisch, C., Mullensiefen, D. (2015) Parsifal and the effect of narrative on unconscious arousal. *Proceedings of 2015 European Society of Cognitive Sciences of Music*. [Conference Proceed-

ings Paper]

- Mullensiefen, D., **Baker, D.** (2015) Music in Advertising: Testing What Works (2015) Audio Branding Academy Yearbook 2015.[Article in Yearbook]
- Mullensiefen, **Baker, D.**, D., Lewis, R., Rhodes, C., Fields, B., and Crawford, T. (2014) Multi-modal Musical Performance Capture. In: *Digital Music Research Network (DRM+9)*. London, United Kingdom. [Conference/Workshop Item]

ACADEMIC PRESENTATIONS

- Ventura, J., Elliott, E., **Baker, D.**, & Shanahan, D. (November, 2016). Investigating the Relationship between Musical Working Memory and Musical Sophistication in Non-Musicians. Poster to be presented at the 57th Annual Meeting of the Psychonomic Society in Boston, MA.
- **Baker, D.**, Mullensiefen, D. (2016) Perception of Leitmotives in Richard Wagner's *Der Ring des Nibelungen*. Proceedings of 2016 International Conference on Music Perception and Cognition. [Short Format Talk]
- **Baker, D.**, Rosado, A, Shanahan, E., Shanahan, D. (2016) The Interaction of Schema-Driven Gestures and Instrumental Affordances in Bebop Improvisations. International Conference on Music Perception and Cognition, San Francisco, USA. [Long Format Talk]
- **Baker, D.**, Trahan, T., Mullensiefen, D. (2016) Measuring Music To Brand Personality: A Semantic Differential Tool for Measuring Emotional Space. International Conference on Music Perception and Cognition. [Poster Presentation]
- Blust, A., **Baker, D.**, Richard, K., Shanahan, D. (2016) Music, Animacy, and Rubato: What makes music sound human? International Conference on Music Perception and Cognition. [Poster Presentation]
- **Baker, D.**, Mullensiefen, D. (2016) Hearing Wagner: Physiological Responses to Richard Wagner's *Der Ring des Nibelungen*. Proceedings of 2016 International Conference on Music Perception and Cognition. [Poster Presentation]
- **Baker, D.**, Rindfleisch, C., Mullensiefen, D. (2015) Parsifal and the effect of narrative on unconscious arousal. Presentation given at Society of Music Perception and Cognition (SMPC) 2015, Nashville, TN, 4th of August. [Conference Talk]
- Mullensiefen, D., **Baker, D.** (2015) Music in Advertising: Testing What Works. Presentation given at Audio Branding Academy 2015 (ABA) 2015, Berlin, Germany, 27th of May. [Industry Workshop]
- Mullensiefen, D. **Baker, D.** (2014) The Ring Cycle Experiment. Presentation given at 'Hearing Wagner' event part of AHRC Being Human Festival, Birmingham, England, UK, 22nd of November. [Public Outreach Talk]
- **Baker, D.** Psychology of Leitmotives in Wagner: Two Studies on Cue Abstraction. Presentation given at SysMus14, London, England, UK, 20th September. [Graduate Student Conference Talk]
- **Baker, D.**, Albrecht, H. (2014) The Psychology of Leitmotive Processing in Richard Wagner's Music: Evidence from Two Memory Experiments. Presentation given at Deutsch Gesellschaft für Musikpsy-

chologie, Fraunhofer, Germany, September 2014. [Conference Talk]

- Mullensiefen, **Baker, D.**, D., Rhodes, C., Crawford, T., Dreyfus, L. (2014). Recognition of leitmotives in Richard Wagner's music: chroma distance and listener expertise. Presentation given at 2014 European Conference on Data Analysis (ECDA) 2014, Jacobs University, Germany, July 2014 [Conference Talk]
- **Baker, D.** (2014) Salience and Memorability of Wagner's Leitmotives as a Function of Listener's Experience. Presentation given at OBERTO Graduate Student Conference, Oxford, England, UK, July 2014. [Graduate Student Conference Talk]

TEACHING EXPERIENCE

Foundational Music Study, MUS 1701

Instructor of Record

Louisiana State University Music Department, Baton Rouge, Louisiana August 2016 – May 2017

- Taught remedial music theory and aural training course three times a week to undergraduates
- Responsible for all course material ranging from lectures, to homework assignments, bi-weekly recitations, to play-and-sing piano preparations, and teaching of aural-skills.

Aural Skills IV

Instructor of Record

Louisiana State University Music Department, Baton Rouge, Louisiana

Semesters Taught

Spring 2016, Spring 2017

- Taught Aural Skills Labs to second-year undergraduate students, classes focused on providing individual attention to learning how to sight-sing chromatic and atonal melodies as well as complex rhythms.
- Responsible for grading bi-weekly individual recitations with materials ranging from prepared melodies, to play-and-sing piano preparations, to sight-singing
- Aided Instructor of Record for large Music Theory lecture

Aural Skills III

Instructor of Record

Louisiana State University Music Department, Baton Rouge, Louisiana

Semesters Taught

Autumn 2016, Autumn 2017

- Teaches Aural Skills Labs to second-year undergraduate students, classes focused on providing individual attention to learning how to sight-sing melodies and rhythms.
- Responsible for grading bi-weekly individual recitations with materials ranging from prepared melodies, to play-and-sing piano preparations, to sight-singing
- Aided Instructor of Record for large Music Theory lecture

MSc Project Co-supervision with Dr. Daniel Mullensiefen

March 2015 – August 2015

Goldsmiths Psychology Department, London, England

- Examining the Physiological Effects of Wagner's Ring Der Ring des Nibelungen: A Musicological Investigation, Emma Sewell
- Examining the Physiological Effects of Wagner's Ring Der Ring des Nibelungen: Laterality and EDA Measures, Jay McKenzie

Teaching Assistant, Teach Yourself R!

September 2014 – May 2015

Goldsmiths Psychology Department, London, England

- Provided support for informal course to introduce students to *R* programming language

Individual Instruction, Trumpet Lessons

July 2006 – Present

Milwaukee, WI, Cleveland, OH, London, England

- Instructed students of various ages and abilities (Grade School – Senior Citizen) to play trumpet
- Have taught through various small Schools of Music, as well as privately

COURSEWORK

Ph.D Coursework, Major Area, Music Theory

Lecturer

Louisiana State University, School of Music, Baton Rouge, USA

- American Music, Autumn 2016
- Computer Music (Max/MSP), Autumn 2016,
- Research Methods, Autumn 2016
- Independent Study, Summer 2016, Queen Mary Visiting PhD Studentship
- Computational Musicology and the Digital Humanities, Spring 2016
- History of Music Theory I, Spring 2016
- Schenkarian Analysis, Spring 2016
- Post Tonal Analysis, Autumn 2015
- Soviet Music, Autumn 2015
- History of Electroacoustic Music, Autumn 2015

Dr. Brett Boutwell
Dr. Jesse Allison
Dr. Dan Isbell
Dr. Daniel Shanahan
Dr. Daniel Shanahan
Dr. Allison McFarland
Dr. Jeffery Perry
Dr. Robert Peck
Dr. Inessa Bazayev
Dr. Jesse Allison

Ph.D Coursework, Minor Area, Psychology

Lecturer

Louisiana State University, Psychology Department, Baton Rouge, USA

- Intermediate Statistics, Autumn 2016

Dr. Jason Hicks

Non-Degree Coursework

Lecturer

Online Correspondence

- *Learn perl*, Stanford University
- Introduction to Empirical Musicology Summer School, Summer 2012

Dr. Craig Sapp
Dr. David Huron

Masters Coursework

Lecturer

Goldsmiths Psychology Department, London, England

- Research Skills, Autumn 2013
- Music Perception, Autumn 2013
- Statistics and Experimental Design, Autumn 2013–Spring 2014
- Cognitive Neuroscience of Music, Spring 2014
- Biological Aspects of Brain Function
- Methods and Techniques of Neuroscience
- Thesis, Summer 2014

Dr. Lauren Stewart
Dr. Daniel Mullensiefen
Dr. Rory Allen
Dr. Rory Allen
Dr. Gianna Cocchini
Dr. Joydeep Bhattacharya
Dr. Daniel Mullensiefen

COMPUTATION AND ANALYSIS

Statistical Analysis Experience

- Regression, Multiple Regression, T-Test, ANOVA, Correlation, Factor Analysis, Item Response Theory, Signal Detection, Q Methodology
- See Classes for complete listings

Programming Languages

- Intermediate Knowledge: *R*
- Basic Familiarity: bash, Javascript (jsPsych package), Max/MSP
- Sample code and analyses available on request or via my Github

Software Familiarity

- Humdrum, Sonic Visualiser, Audacity, PhotoScore Ultimate (OMR), MuseScore, Finale, Sibelius, Ledalab (Matlab for EDA Analysis), Moodle 3

PUBLIC DISSEMINATION AND IMPACT

Invited Talks

- Music: It's All In Your Head, An Intro to Music Therapy and Cognition. Ronnie Gardner Method, North London, September 2014.

Blogging

- Contributed Regularly to Transforming Musicology project blog [\[link\]](#)
- Contributed to Bachtrack.com for public article on Science, Pleasure, and Music [\[link\]](#)
- Guest Blogger on MajoringInMusic.com on pursuing a career in Music Cognition [\[link\]](#)

MEMBERSHIPS

Society of Music Perception and Cognition, Student Member
Society of Music Theory, Student Member

SELECT MUSICAL ACCOMPLISHMENTS

Conducted select pieces at BW Concert Wind Ensemble, April 2012
Featured Soloist with Baldwin Wallace Wind Ensemble with Dwight Oltman on Bugler's Holiday
Invited to play in Severance Hall Master Class Series with Lyle Steelman of the Cleveland Orchestra
Freelance Musician and Private Instructor in Greater Cleveland Area

REFERENCES

Dr. Daniel Shanahan, Assistant Professor of Music Theory at Louisiana State University
d.shanahan@lsu.edu

Dr. Daniel Mullensiefen, Reader at Goldsmiths Psychology Department, University of London
d.mullensiefen@gold.ac.uk