Dr. Justin D. Mathew, Ph.D
Department of Performing Arts and Technology
North Carolina State University

Education

- Doctorate in Computer Science, 2017, University of Paris-Saclay, Paris, France.
    - Advisors: Stéphane Huot, Brian FG Katz
- Masters in Music Technology, 2012, New York University, New York, NY.
    - Advisor: Agnieszka Roginska
- Bachelors in Electrical and Computer Engineering, 2010, University of Rochester., Rochester, NY.

Work Experience

- ***Associate Teaching Professor, Director of Undergraduate Programs, Program Coordinator - Music Technology***, present, North Carolina State University, Department of Performing Arts and Technology, Raleigh, NC, USA.
- ***Lecturer in Music Engineering***, August 2022-May 2024, University of Miami, Frost School of Music, Coral Gables, FL, USA.
- ***Staff Engineering Scientist***, July 2022-October 2024, Nielsen, Fort Lauderdale, FL, USA.
- ***Lead Audio R&D Engineer***, January 2018-June 2022, Magic Leap, Fort Lauderdale, FL, USA.
- ***Ph.D Researcher***, June 2013 - October 2017, Inria Lille-Nord Europe & CNRS LIMSI, Lille & Paris, France.
- ***Graduate Research Assistant,*** August 2011 - December 2012, New York University, New York, NY, USA.
- ***Graduate Research Intern***, July 2012 - August 2012, Army Research Lab, Aberdeen Proving Grounds, MD, USA.

Publications

Constructing an Instructional Mixed-Use Studio; Mathew, Justin; Benkert, Stuart; North Carolina State University; North Carolina State University; Express Paper 361 at the 159th Audio Engineering Society Convention; Long Beach, CA, 2025

Near-field audio rendering, RS Audfray, JM Jot, SC Dicker, MB Hertensteiner, JD Mathew, AA Tajik, et. al, US Patent App. 18/761,089

Physics-based audio and haptic synthesis, CN Leider, JD Mathew, MZ Land, BI Wood, JS Lee, AA Tajik, JM Jot US Patent App. 18/649,778

Measuring Auditory Localization Potential on XR Devices. JD Mathew, M Pensko, D Cortes, M Hertensteiner Audio Engineering Society Conference: AES International Conference on AVAR, 2022

Quantifying Localization Potential using Interaural Transfer Function, JD Mathew, L Januszkiewicz, M Pensko, M Hertensteiner, R Audfray, Audio Engineering Society Convention 151, 2021

Comparison of spatial and temporal interaction techniques for 3D audio trajectory authoring, JD Mathew, S Huot, BFG Katz, Journal on Multimodal User Interfaces 14 (1), 83-100, 2020

Subjective Performance Criteria for Mixed-Reality Immersive Audio
JM Jot, R Audfray, J Mathew, D Mauney, PROCEEDINGS of the 23rd International Congress on Acoustics , Universitätsbibliothek der RWTH Aachen, 2019

Un cadre de conception pour les interfaces utilisateur des outils de production audio 3D
J Mathew, Doctoral dissertation, Université Paris-Saclay, Inria Lille-Norde Europe, LIMSI-CNRS, 2017

Survey and implications for the design of new 3D audio production and authoring tools
JD Mathew, S Huot, BFG Katz, Journal on Multimodal User Interfaces 11, 277-287, 2017

A morphological analysis of audio objects and their control methods for 3d audio
J Mathew, S Huot, A Blum, NIME 2014-14th International Conference on New Interfaces for Musical Expression, 2014

High resolution radiation pattern measurements of a grand piano-The effect of attack velocity
A Roginska, JD Mathew, J Anderson, AU Case, Proceedings of Meetings on Acoustics 19 (1), 2013

Zophonos EX2004
Samsung v. Zophonos
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Electric guitar-A blank canvas for timbre and tone
AU Case, A Roginska, JD Mathew, J Anderson, Proceedings of Meetings on Acoustics 19 (1), 2013

Radiation Pattern Differences between Electric Guitar Amplifiers
J Mathew, S Blackmore, Audio Engineering Society Convention 134, 2013

Measurement and analysis of the spectral directivity of an electric guitar amplifier: Vertical plane
A Roginska, J Mathew, A Madden, J Anderson, AU Case, Audio Engineering Society Convention 133, 2012

Honors, Awards, and Fellowships

- NC State University DSA Seed Grant, 2024 - AI-powered feature analysis and categorization of musician performances and technique
- MITACS-Inria Global Research Award, 2015 - McGill University, Montreal, Quebec, CA