

## Dr. Christophe E. Jackson PhD, DMA, MSPAS, PA-C

Assistant Research Professor Neuroscience, Clinician, Design Engineer, & Musician

### EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	START DATE MM/YYYY	END DATE MM/YYYY	FIELD OF STUDY
University Alabama at Birmingham	BS	08/1999	05/2003	Biology, Piano Performance
University of Alabama at Birmingham	MS	08/2006	12/2009	Bio-Physics, Piano Performance
University of Alabama at Birmingham	PhD/DMA	12/2009	05/2011	Bio-Engineering, Piano Performance
Tulane University	Post-doc	05/2011	08/2015	Neuro-engineering, Music
University of Alabama at Birmingham	MSPAS	08/2015	4/2018	Physician Assistant

### A. Personal Statement

I am a clinician, neuroscientist and musician investigator working at the intersections of neuroscience, engineering, music and medicine. My goal is to continue advancing translational research at the intersections of clinical medicine, engineering, neurosciences, and performing arts to develop medical devices, therapeutics, diagnostics, and advance research to improve treatment outcomes in neuro-degenerative disease, neuro-prosthetics, cognition & memory, and brain metabolism in chronic conditions as well as to understand the effects of music on executive function, performance, training and stress mitigation. During PhD, I honed my expertise in the neuro-biological sciences, engineering, and music to further translational scientific investigations to design and develop a portable sound booth to measure musician's hearing and voice in the field. After completion of Bioengineering and Piano Performance PhDs in 2011, I joined the laboratory of Dr. Ed Golob at Tulane University, where I studied how auditory processing affected attention, short-term memory, and relationships to Noise Induced Hearing loss and the effects of music on the brain. There we investigated auditory systems as models to better understand cognition, neuro-biological changes in aging, neuro-diseases, and audition using EEG, cognitive tasks, and MRI as how music performance and education confers increased neural networks protective against neurodegenerative disease. During clinical training as a Physician Assistant, I assisted with surgical cases, diagnosed patients, implemented treatment plans. My musical training began at the age of 4 within New Orleans and Alabama. I am a musician heart and have utilized my training in classical and jazz piano on the stages of New Orleans, New York, and around the country and overseas to promote America's first classical music, Jazz. Additionally, I have focused on performances and contributions of performing artists to culture, technology, and culture. From my background and training, I am well positioned to further collaborations, innovation, and entrepreneurship in academia, arts, engineering, and neurosciences.

## B. Positions and Honors

### Academic Positions and Employment

1998 - 2011 Pianist UAB Department of Music  
1998 - 2011 Anatomy/Biology Lab Instructor, UAB  
2008 - 2010 Physics Lab Instructor, Samford University  
2008 - 2010 Piano Accompanist, Samford University  
2011 - 2015 Postdoctoral Researcher, Tulane University, Dept of Neurosciences & Music  
2022 - present Associate Research Professor, Tulsa University Neurosciences and Music

### Clinical Positions and Employment

2018 - 2020 PA Neurocritical Care Ochsner, New Orleans, La  
2019 - present PA Neurosurgery WellStar Level 1 Trauma Atlanta, Ga  
2021-present PA Orthopedic Surgery WellStar Level 1 Trauma Atlanta, Ga  
2021 -present PA Lead Urological Surgery Atlanta Cosmetic Urology Atlanta, Ga

### Other Experience and Professional Memberships

1998 - Present Member, Performance Arts Medicine  
2011 - Present Member, Ford Foundation Fellow  
2011 - Present Member, American Association for Neurosurgery  
2015 - Present Member, American Association of Physician Assistants ( AAPA)  
2015 - Present Member, National Association of Physician Assistants (NCCPA)

### Honors

2006-2007	Louis Stokes Alliance Bridge to Doctorate Fellowship (NSF)
2007 - 2010	Scholarship, National Science Foundation Graduate Research Fellow (GRFP)
2008	Scholarship, Catherine Ireland Travel Grant
2011	Ford Foundation Dissertation Fellowship
2016	Scientist Diversity Mentorship Program Johnson & Johnson Fellow
2021	African Black Leadership Entrepreneurship Fellow ( ADN)
2021	National Medical Fellowship Clinical Investigator Fellowship & Certificate
2023-2024	Cleveland Institute of Music Faculty Development program

## C. Contribution to Science

1. **Graduate Career:** My early graduate career contributions were focused on developing deep knowledge across biology, anatomy, pathophysiology, physic, and engineering to applying my knowledge of engineering to develop and design medical devices to acquire biological assessments accurately in the field. More specifically, I worked with a team of engineers, physicists, biologist, surgeons, musicians, mid-level clinicians to develop a novel portable sound booth for voice and hearing measurement. I lead, designed, coordinated, synthesized, and executed collaborations at the intersection of medicine, engineering, biology, and physics into tangible products.

- a) Jackson, C.E., Tarvin, J.T., Richardson, P.A., Watts, S.A., Castellanos, P.F., *Construction and Characterization of a Portable Sound Booth for Onsite Voice Recording*, Medical Problems of Performing Artists: Volume 26 (3). September 2011.
  - b) Jackson, C.E., Tarvin, J.T., Richardson, P.A., Gaskill, C., Castellanos, P.F. *Acoustical Analysis of trained and untrained singers after prolonged voice use*. The University of Alabama at Birmingham, 2013, 202. <http://gradworks.umi.com/35/61/3561278.html>
2. **Postdoctoral Career:** My postdoctoral scientific contributions focused on aspects of hearing particularly important to humans such as sound intensity in sound, speech, and music. There we addressed basic science to explore auditory models to understand cognitive and neurobiological changes accompany normal aging, Alzheimer disease, and chronic effects of noise-induced hearing loss in musicians. Additionally, during my postdoctoral career I was tasked to create and design medical devices for MedTech companies for neurocognitive, neuromusculoskeletal, and hearing. During postdoctoral training, I established and spearheaded the development of several collaborations between the New Orleans Musicians Clinic, New Orleans Creative Center of Performing Arts High School, Tulane University, and Performance Arts Medicine Association for music, neuroscience, and basic science research centered around the culture unique to New Orleans
- a) Jackson, C.E., Golob, E., *Music as a Model to Study Cognition in Musicians and Non-Musicians*. Medical Problems of Performing Artists: Volume 26 (3). September 2012.
  - b) Golob, E.G., Seay, M., Manning, L., Yurgil, K., Suri, S., Charney, D., Jackson, C.E., *Spatial Attention Tasks and the Differences of Aging in Musicians Vs Non-Musicians*. NSF. BCS -0844961, NIH GM 103629 Tulane University Floweree Fund
  - c) Music and Movement Presentation at the Parkinson Foundation Alabama: Jackson, C.E. <https://onlinesymposia.com/online-videos/40-parkinson-association-of-alabama/paa2015/250-music-and-movement-christophe-jackson>
- September 2011: New Orleans Musicians' Clinic Hearing Summit: Discussing design solutions to combat hearing loss for musicians, DJs, those who work in music venues and music fans.** I hosted design summit for The New Orleans Musicians' Clinic (NOMC), in conjunction with Loyola University's Center for Music Arts Entrepreneurship, the Performing Arts Medicine Association (PAMA), Athletes in the Arts and WWOZ New Orleans Jazz radio station, an innovative workshop on hearing loss during Industrial Design Society of America (IDSA) **NOLA 2011** for national industrial designers. Our ultimate goal was to challenge designers to create better sound systems, provide earplugs, sound baffles and ear protectors.
- February 2012: Save Sounds initiative launched: Opening Save Sounds forum.** I was the first director of the New Orleans Musicians Assistance Foundation (NOMAF) the "Save New Orleans Sounds" Initiative. There I created educational materials geared at educating musicians, music lovers, club owners, employees of clubs, sound engineers and about the risks of noise induced hearing loss and offering practical solutions: <http://www.neworleansmusiciansclinic.org/medical-resources/hearing/about-save-nola-sounds/>
- April 2012: Save Sounds hearing screenings for musicians, DJs, and audio engineers during French Quarter Festival.** I worked with Save NOLA Sounds to provide free professional hearing tests for musicians, their workers and listeners. The project, sponsored by the NOMC, urging musicians, club staff and audiences to be mindful of noise exposure and to "practice safe sounds" by measuring decibel levels

using cell-phone apps.

**Google ZooLabs Principle Investigator:** Principle Investigator for a music tech Google start-up in Oakland California. I conducted ethnographic research, feasibility studies at the confluence of music industry, best practices, beliefs, and entrepreneurship. This study became the foundation for the company practices and strategic vision. While there got to work with PIXAR, Apple Music, and Pandora.

**Clinical Training:** As a physician assistant, I developed clinical expertise in core areas of surgery, family medicine, and emergency medicine. While in program I conducted research to address use of therapeutics for Parkinson Patients, Integrated Medical Devices, and Neuro-monitoring intraoperatively. I was provided a fellowship during my clinical training by Scientist Minority Development MedTech Program to to work with Johnson & Johnson as a clinician, engineering to design medical devices and launch a MedTech design program to train students.

- a) Jackson, C.E., Swatzell, K.E. *Difference of Gait Improvements in Parkinson Patients in Response Auditory or Visual Cueing*” Master’s Thesis University of Alabama at Birmingham: September 2017.
- b) Christophe Jackson UAB <https://www.uab.edu/shp/cds/physician-assistant/student-alumni-affairs/558-christophe-jackson>
- c) UAB PA Selected National Mentoring Program: <https://www.uab.edu/shp/home/shpnews/1064-christophe-jackson-smdp-med-tech-award>
- d) SMDP MEDTECH Scholars: [http://www.smdp.mentoringportal.org/site/smdp\\_medtech/participants/](http://www.smdp.mentoringportal.org/site/smdp_medtech/participants/)

**Johnson & Johnson Consumer and Gideon & Daedalus BioMedTech LLC**

**BioMedTech Design Lab:** I launched a Medical Device Repair/Design company and Bio-Med-Tech design lab to train, prepare, and employ the state’s first MedTech workforce for industry. Johnson and Johnson Consumer provided Gideon with business challenges. My team of clinicians, engineers, educators, designers, scientists, and entrepreneurs trained students on the process of identifying problems, generating ideas, and implementing solutions. [https://www.annistonstar.com/the\\_daily\\_home/daedalus-innovation-project-coming-to-talladega-career-tech/article\\_a20e98a2-b125-11e6-afa9-8fc527107982.html](https://www.annistonstar.com/the_daily_home/daedalus-innovation-project-coming-to-talladega-career-tech/article_a20e98a2-b125-11e6-afa9-8fc527107982.html)

## **Clinical Experience**

Rotation	Location	Clinician
<b>General Surgery</b>	Brookwood Medical Center	John Mathews MD
<b>Psychiatry</b>	Veterans Hospital	John Dahl MD
<b>Internal Medicine</b>	St. Vincent's Hospital	Richard May, MD
<b>Neurosurgery</b>	UAB Hospital	Dave Aldritch PA-C
<b>Cardiology</b>	Grandview Hospital	Vic Aurora MD
<b>Otolaryngology</b>	UAB Hospital	Artemis Cox MD
<b>Pediatrics</b>	Martin Pediatrics Anniston	Angela Martin MD
<b>OB/GYN</b>	St. Vincent's Hospital	Francois Bladeua MD
<b>Inpatient Medicine</b>	UAB Medical West	Siddarath Bansal MD
<b>Emergency</b>	UAB Hospital	Linda Thompson, MD
<b>Outpatient Medicine</b>	Clanton Family Medicine Practice	Jani Hirenuaker, MD

## **Clinical Certifications**

2015 - 2018      Advanced Cardiac Life Support for Providers Certification  
2015 - 2018      Basic Life Support for Providers Certifications  
2018 - present    Certification by National Commission on Certification of Physician Assistants  
2018 - present    Physician Assistant Licensure State of Louisiana  
2018 - present    Physician Assistant Licensure State of Alabama  
2018 - present    Physician Assistant Licensure State of Georgia

## **Current Research Support**

### **Johnson & Johnson Consumer Medical Device Company Contract Support MedTech Design Lab to Gideon LLC.**

8/2017 – 9/2018 Jackson (PI) Amount: \$500,000.00

Johnson and Johnson Consumer has consulted Gideon's team of clinicians, engineers, educators, designers, scientist, and entrepreneurs to develop and trained students on the process of identifying problems, generating ideas, and implementing solutions for MedTech through specific challenges from Johnson & Johnson Consumer brands such as Johnson Baby, Johnson Face, and Johnson Pain brands. The goal of the program is not only to create new opportunities for the students but also improve processes and design of products in the industry. Gideon is working with Johnson & Johnson Sustainable Healthcare Entrepreneurship group to train MedTech workforce development in the southeast.

## **Completed Research Support**

### **National Science Foundation Louis Stokes Alliance for Minority Research Bridge to the Doctorate Fellowship**

8/21/2005-8/21/2007 Dale (PI) Amount: \$105,000.00

Independent Scientist Award: awarded to promising minority students for completion of master's research towards Ph.D.

### **Academy of Science**

4/21/2007 Jackson (PI) Amount: \$1000.00

Written and awarded grant support. Research grant was awarded to cover expenses and travel costs.

### **National Science Foundation Graduate Research Fellowship**

8/27/2007-8/2010 Jackson (PI) Amount: \$240,000.00

Research efforts funded through the National Science Foundation as an initial effort to establish a multi-disciplinary, multi-institution collaboration among the arts, sciences, and medicine in the Birmingham area.

### **Alabama State Council on the Arts Artist Technical Assistance Grant award**

6/2012 Jackson (PI) Amount: \$1000.00

Alabama State Arts Council provided \$1,000 towards travel cost to attend and present at the Performance Arts Medicine Conference in Aspen, Colorado.

### **Ford Foundation Dissertation Fellowship**

8/21/2012-8/21/2013 Jackson (PI) Amount: \$100,000.00

Ford Foundation seeks to increase the diversity of the nation's college and university faculties by increasing their ethnic and racial diversity, to maximize the educational benefits of diversity, and to increase the number of professors who can and will use diversity as a resource for enriching the education of all students.

### **Ford Foundation Post-doctoral Program Planning Committee Engineering**

8/21/2013-8/21/2015 Jackson (PI) Amount: \$20,000.00

Ford Foundation seeks to increase the diversity of the nation's college and university faculties by increasing their ethnic and racial diversity, to maximize the educational benefits of diversity, and to increase the number of professors who can and will use diversity as a resource for enriching the education of all students.

## **Research Activities**

**January 2006- May 2013: *Comparison of vocal efficiency of trained versus untrained singers before and after vocal performance focusing on the biomechanics of voice production.*** I worked with Dr. Paul F. Castellanos, MD, UAB Department Head and Neck Surgery, on research involving the recording of trained and untrained singers before and after vocal performances in a specially designed portable sound booth (PSB), using a head mounted microphone and electroglottograph.

**January 2006 –May 2012: *Characterization and validation of a Portable Sound Booth (PSB) for testing singers before and after voice use onsite.*** I worked with Drs. Paul F. Castellanos, MD, UAB Department of Head and Neck Surgery, John T. Tarvin, PhD, chair Samford Physics Department, and Uday Vaidya, PhD, Professor UAB Department of Mechanical Engineering, to design and develop a portable sound booth (PSB). I designed and constructed a prototype PSB to acquire voice recordings under controlled conditions.

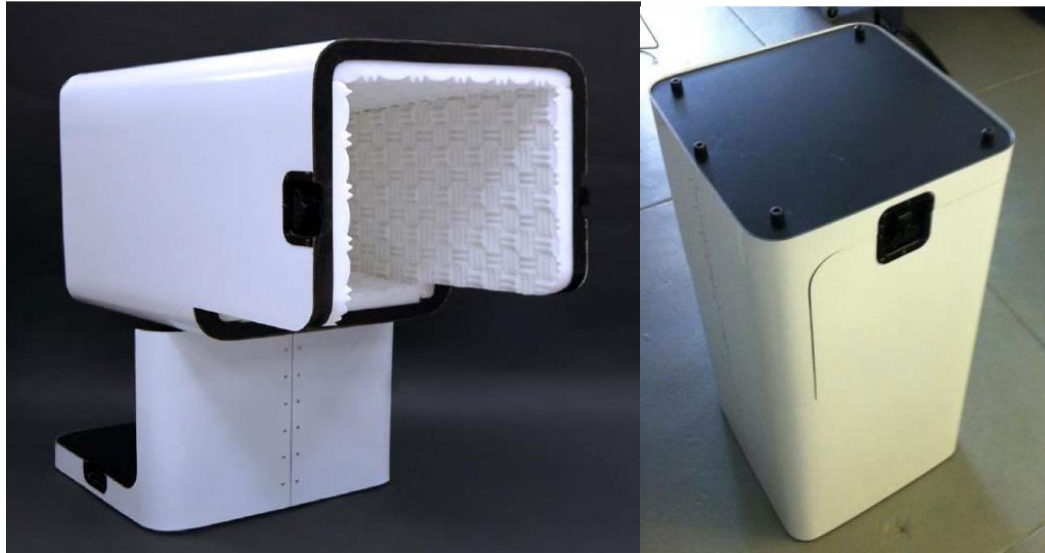
**March 2010: *Recommendation and establishment of a Voice Laboratory to objectively track student progress.*** I worked with Dr. Paul A. Richardson, DMA, Samford School of the Arts. I proposed and developed a voice laboratory to assist students and professors in obtaining objective measurement of music students' progress. I was in charge of assisting voice students in the lab.

**June 2008-August 2008: *Performance Arts Medicine Certificate of Vocology (Voice Science)*** I worked with Dr. Ingo Titze at the National Center for Speech and Voice Communications Sciences in Denver, CO. I received a Certificate of Performance Arts Rehabilitation Sciences/Vocology from the National Center for Speech and Voice Communication Sciences. My study and specialized training covered voice habilitation for performing artists and research techniques.

**August 2003- August 2005 *Properties of voice and its recognition in the brain as language.*** I worked with Dr. Helen Southwood of Spain Rehabilitation, UAB Department of Speech Pathology. My main responsibilities were to work with voice recognition programs, perform spectrographic analysis of voice, and assess visualization of speech patterns in the human brain

## Inventions: Portfolio – Christophe Jackson PhD

### Portable Sound Booth



Photograph of professional re-design of the PSB prototype by Push Products.

### Use During French Quarter Festival Music Festival Fire House Hearing Screening





## **Dr. Christophe Jackson in Music, Medicine and Science**

1. Christophe Jackson Music and Medicine AAPA: <https://www.aapa.org/news-central/2020/05/neurosurgery-pa-combines-love-of-music-medicine-and-science/>
2. Dr. Christophe Jackson PhD, DMA, PA-C; Studying the Healing of Music PBS: [Scientists study the healing effects of music on the brain](#)
3. The Science of Song: Christophe Jackson : [The Science of Song - Magazine | UAB](#)
4. New Orleans: The City of Noise Silenced by Coronavirus: [New Orleans: the city of noise silenced by coronavirus – Channel 4 News](#)
5. African Black Entrepreneurship Leadership Program: <https://www.forbes.com/sites/meghanmccormick/2021/10/01/the-african-diaspora-network-invests-in-black-american-entrepreneurs/?sh=cf36a785787f>
6. [First Cohort of Silicon Valley Accelerator for Black Owned Businesses Announced](#)
  
7. PA Student Christophe Jackson MedTech:2016 [PA student Christophe Jackson selected for SMDP MedTech | Flickr](#)
8. Birmingham Aids Outreach Public Service Awareness Campaign: [BAO PSA with Christophe Jackson](#)
9. Home for Holidays in NOLA: Christophe Jackson Pianist: [Home for the Holidays in Nola](#)
10. Dis Queen Was Dissed! Queen Krewe Madri & King NOLAVie: [Dis Queen was dissed – Via Nola Vie](#)
11. Lottte Geeven & Christophe Jackson | River| New Orleans +Sound Art Installation Collaboration: [lotte geeven installs the river book + sound piece in new orleans](#)
12. [None Of Us Can Hear Anymore: OffBeat Magazine: None of Us Can Hear Anymore - OffBeat Magazine](#)
13. NYTimes Face of Race Relations [The New Face of Race Relations - The New York Times](#)
14. Innovative Ideas for Saving Music TEDx Dexter Avenue Montgomery Alabama: [Innovative Ideas for Saving Music: Christophe Jackson at TEDxDexterAve](#)
15. UAB student Wins Ford Foundation: [UAB student wins Ford Foundation Fellowship - News](#)
16. Cleveland Institute of Music Faculty Future Faculty Fellowship: <https://www.cim.edu/aboutcim/news/cim-catches-12-rising-stars-2023-future-music-faculty-fellowship>