

John D. Sullivan

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- OVERVIEW** Ph.D. candidate and sessional lecturer in music technology with a research focus on the design of new instruments and interfaces for music performance. Areas include: HCI, UX/UI design, user-driven research methods, embedded systems, motion capture analysis, haptics, music performance, interactive media production.
- EDUCATION**
- Doctor of Philosophy*, McGill University, Montréal, QC 2015 - present
Department of Music Research, Music Technology area
Design and evaluation of new instruments and interfaces for music performance
Marcelo M. Wanderley & Catherine Guastavino, co-supervisors
- Master of Fine Arts*, University of Maine, Orono, ME 2012 - 2015
Intermedia, musical interface and interactive media design
Thesis: “Interaction and Art of User-Centered Digital Musical Instrument Design”
N. B. Aldrich, supervisor
- Bachelor of Fine Arts*, College of Santa Fe, Santa Fe, NM 2000 - 2003
Contemporary Music Performance and Composition, guitar
Stephen Miller, supervisor
- APPOINTMENTS**
- Executive Board, Student Representative* 2018 - 2019
Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT)
- Digital Tools Committee and Design Consultation Team* 2018 - present
International Institute for Critical Studies in Improvisation (IICSI)
- Board of Directors, Founding Member* 2016 - 2019
New Music World, New York (Joel Chadabe, director)
- AWARDS**
- CIRMMT Student Award* 2016/17, 2018/19, 2019/20
“The Bionic Harp” (2019/20)
“Building performance practice around new instruments: A longitudinal study of the Noisebox” (2018/19)
“Harp Gesture Acquisition for the Control of Audiovisual Synthesis” (2016/17)
- CIRMMT Travel Award* 2018, 2019
“Gestural Control of Augmented Instrumental Performance: A Case Study of the Concert Harp” MOCO, Genoa. (2018)
“Surveying Digital Musical Instrument Use Across Diverse Communities of Practice” CMMR, Marseille. (2019)
- Foreign Language and Area Studies (FLAS) Summer Fellowship* 2015
Fellowship for language and international studies in Montréal and Québec City, Québec, funded by the United States Department of Education.

Chase Distinguished Research Assistantship, University of Maine 2015
Awarded funding to pursue MFA thesis research at McGill University for 1 year.

MFA Research Grant, University of Maine 2013, 2014, 2015
Provided funding for three individual projects in interactive media production and design.

Graduate Student Government Research Grant, University of Maine 2013, 2014
Provide funding for two year-long research projects in interactive media design and multimedia documentary work.

**TEACHING
EXPERIENCE**

Course Lecturer 2016, 2017, 2018, 2019, 2020
MUMT 302: New Media Production I
McGill University, Montréal, QC.

Guest Lecturer 2019
Interfaces Digitales para Actos en Vivo: Principios y Personalización (Digital Interfaces for Live Events: Principles and Personalization)
Pontificia Universidad Javeriana, Bogotá, Colombia.

**RESEARCH
POSITIONS**

Input Devices and Music Interaction Laboratory 2014 - present
Research Assistant, McGill University
Research and support for general lab activities, website design

Center for Interdisciplinary Research in Music Media and Technology 2017
Research Assistant, Montréal, Canada
Advanced motion capture research for industrial-academic collaboration

Augmented Instruments Laboratory, C4DM, Queen Mary University 2018
CIRMMT Inter-Centre Research Exchange, London, UK
Collaborative research with Drs. A. McPherson and F. Morreale

ASAP Media Services, New Media Lab 2012 - 2014
Research assistant, University of Maine
Research, web/interactive media design and development services for academic and industry clients

**RESEARCH
PROJECTS**

Design for Performance 2019 - present
Co-design workshops and longitudinal study on musical instrument for professional music performance
Marcelo Wanderley & Catherine Guastavino, co-supervisors

Electronic Musical Instrument Survey 2018 - 2019
Online questionnaire-based user study on the use of technology and new musical instruments in live performance
Marcelo Wanderley, supervisor

The Noiseboxes 2014 - present
Ongoing research project involving the design and evaluation of novel instruments
Marcelo Wanderley, supervisor

Adaptive Use Musical Instrument 2016 - present
Software design and development of new musical instrument for persons with move-

ment and cognitive impairment
Eric Lewis, supervisor

Harp Gesture Acquisition for the Control of Audiovisual Synthesis 2016 - 2017
Motion capture study, hardware and software design of gestural control system for extending instrumental performance
Marcelo Wanderley, supervisor

Musicking the Body Electric 2015 - 2017
Research, technical support and design of haptic wearable garments for use as a “wearable score” during mobile music performances
Sandeep Baghwati, supervisor

PUBLICATIONS

Book Chapters

Marcello Giordano, John Sullivan, Marcelo M. Wanderley. “Design of Vibrotactile Feedback and Stimulation for Music Performance.” In S. Papetti and C. Saitis, eds. *Musical Haptics*, Springer International Publishing AG. 2018.

Conference Papers

John Sullivan, Marcelo M. Wanderley. “Surveying Digital Musical Instrument Use Across Diverse Communities of Practice” *International Symposium on Computer Music Multidisciplinary Research*, 2019. Marseille, France.

John Sullivan, Marcelo M. Wanderley. “Stability, Reliability, Compatibility: Reviewing 40 Years of DMI Design” *International Sound & Music Computing Conference*, 2018. Limassol, Cyprus.

John Sullivan, Alexandra Tibbitts, Brice Gatinet, Marcelo M. Wanderley. “Gestural Control for Augmented Instrumental Performance: A Case Study of the Concert Harp.” *International Conference on Movement and Computing*. 2018. Genoa, Italy.

Sandeep Bhagwati, Isabelle Cossette, Joanna Berzowska, Marcelo M. Wanderley, John Sullivan, et al. “Musicking the Body Electric: The ‘Body:Suit:Score’ as a polyvalent score interface for situational scores.” *TENOR Conference*. 2016. Cambridge, UK.

John Sullivan. “Noisebox: Design and Prototype of a New Digital Musical Instrument.” *International Computer Music Conference*. 2015. Denton, TX, USA.

Other Activities

John Sullivan. “Designing movement-based digital musical instruments.” Presentation at the *RITMO International Motion Capture Workshop*. 2018. Oslo. Norway.

John Sullivan, Sherrie Tucker. “Improvising Across Abilities: Pauline Oliveros and

the Adaptive Use Musical Instrument.” Presentation at *The OHMI Conference and Awards*. 2018. Birmingham, U.K.

Alexandra Tibbitts, John Sullivan, Ólafur Bogason, Brice Gatinet. “A Method for Gestural Control of Harp Performance.” Performance at the *International Conference on Live Interfaces*. 2018. Porto, Portugal.

John Sullivan, Aditya Tirumala Bukkapatnam, Marcelo M. Wanderley. “Mid-Air Haptics for Digital Musical Instruments.” Workshop at the *Conference on Human Factors in Computing Systems (CHI)*. 2018. Montréal, QC, Canada.

John Sullivan. “Hands on with AUMI v.4.” Workshop at the *International Symposium on Adaptive Technology in Music and Art*. 2017. Troy, NY, USA.

John Sullivan, Marcello Giordano, Deborah Egloff, Marcelo M. Wanderley. “Tactile Augmented Wearables for Delivery of Complex Musical Score Information.” Musical Haptics workshop at *EuroHaptics Conference*. 2016. London, UK.

John Sullivan, Marcello Giordano, Marcelo M. Wanderley, et al. “Tactile Recognition for Musical Score Delivery” Demonstration at *EuroHaptics Conference*. 2016. London, UK.

CREATIVE WORKS

Music Releases

<i>Tin</i> , Megan Jo Wilson	2016
<i>self titled</i> , Jenny Lou Drew and the Damage Done	2015
<i>Ancient Open Allegory Oratorio</i> , Post Provost	2012
<i>Be Prepared!</i> , Town Founder	2012
<i>Waking Life EP</i> , Sea Level	2012
<i>Experiments, demos & b-sides</i> , Johnny Venom	2012
<i>Anjuli EP</i> , Sea Level	2011
<i>Soulful Noise EP</i> , EastWave Radio	2010
<i>A Moving Train</i> , Jaye Drew	2009

Installation and Interactive Media

<i>Inside Out</i> , interactive installation. With M. Schumacher and G. Boyes. Nuit Blanche Festival, Montréal, QC, Canada.	2015
<i>High Striker!</i> , site-specific multimedia installation. With J. Carney. IMRC Center, Orono, ME, USA.	2014
<i>From Pythagoras to LaMonte Young</i> , sound installation. IMRC Center, Orono, ME, USA	2013
<i>Play at Your Own Risk</i> , interactive installation. With S. Levi. IMRC Center, Orono, ME, USA	2013
<i>Strangers</i> , web-based multimedia documentary. Media collected in the Republic of Ireland.	2013

**LANGUAGES,
SOFTWARE &
PROTOTYPING**

Computer Programming:

Matlab, Python, C++, Processing, JavaScript, L^AT_EX, shell

Audio Languages and Software:

Max, SuperCollider, Pure Data, Ableton Live, Max for Live, Pro Tools, Logic

Visual/Design/Web:

Adobe Creative Cloud (Photoshop, Illustrator, Premiere Pro, Audition, Lightroom, InDesign), AutoDesk Fusion 360, HTML, CSS, WordPress, Squarespace, Drupal, Joomla

Electronics and Digital Manufacturing:

Arduino, Embedded Systems, 3D Printing, Lasercutting