

John D. Sullivan

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OVERVIEW Designer and postdoctoral researcher with a focus on human-computer interaction, music technology and interactive media. Research areas include: participatory and user-centered design, digital lutherie, motion capture analysis, haptics, music performance, assistive technology design, interactive media production.

EDUCATION

<i>Ph.D.</i> , McGill University, Montreal, QC Department of Music Research, Music Technology area Thesis: “Built for Performance: Designing Digital Musical Instruments for Professional Use” Marcelo M. Wanderley & Catherine Guastavino, co-supervisors	2015 - 2021
<i>M.F.A.</i> University of Maine, Orono, ME Department of Intermedia	2012 - 2015
<i>B.F.A.</i> College of Santa Fe, Santa Fe, NM Department of Contemporary Music Performance	2000 - 2003

PUBLICATIONS

Book Chapters

John Sullivan, Ivan Franco, Ian Hattwick, Thomas Ciufu, Eric Lewis. “An Historical Account of the AUMI Desktop Application.” In S. Tucker et al., eds. *Improvising Across Abilities: Pauline Oliveros and the Adaptive Use Musical Instrument*. 2022. (forthcoming)

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. [\[link\]](#)

Journal Articles

John Sullivan, Catherine Guastavino, Marcelo Wanderley. “Surveying Digital Musical Instrument Use in Active Practice.” *Journal of New Music Research*. 2021. Vol. 50, No. 5. (forthcoming)

Conference Papers

Raul Masu, Adam Pultz Melbye, John Sullivan, Alexander Refsum Jensenius. “NIME and the Environment: Toward a More Sustainable NIME Practice.” *International Conference on New Interfaces for Musical Expression*, 2021. [link]

John Sullivan, Julian Vanasse, Catherine Guastavino, Marcelo M. Wanderley. “Reinventing the Noisebox: Designing Embedded Instruments for Active Musicians” *International Conference on New Interfaces for Musical Expression*, 2020. [link]

Filipe Calegario, Marcelo M. Wanderley, João Tragtenberg, Johnnty Wang, John Sullivan, Eduardo Meneses, and 4 others. “Probatio 1.0: collaborative development for a toolkit for functional DMI prototypes” *International Conference on New Interfaces for Musical Expression*, 2020. [link]

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

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

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. [link]

Sandeep Bhagwati, Isabelle Cossette, Joanna Berzowska, Marcelo M. Wanderley, John Sullivan, and 9 others. “Musicking the Body Electric: The ‘Body:Suit:Score’ as a polyvalent score interface for situational scores.” *TENOR Conference*. 2016. [link]

John Sullivan. “Noisebox: Design and Prototype of a New Digital Musical Instrument.” *International Computer Music Conference*. 2015. [link]

Under Review

John Sullivan, Marcelo Wanderley, Catherine Guastavino. “From Fiction to Function: Imagining New Instruments Through Design Workshops.”

AWARDS AND HONORS

CIRMMT Student Award 2016/17, 2018/19, 2019/20

Funding for independent and collaborative research:

“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

Travel funding to present at the following conferences:

“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 Québec, funded by the United States Department of Education.

Chase Distinguished Research Assistantship, University of Maine 2015
Funding for 1 year Graduate Research Traineeship at McGill University.

MFA Research Grant, University of Maine 2013, 2014, 2105
Funding for three individual projects in interactive media production and design.

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

INVITED TALKS

Engineered Expression: Digital Instruments in Performance. (workshop) 2021
Massachusetts Institute of Technology, Cambridge, MA.
Title: “Design for Performance: Researching User-Driven Approaches to DMI Design for Professionals.”

RPI Arts Graduate Colloquium, Rensselaer Polytechnic Institute, Troy, NY. 2020
Title: “Designing Purpose Built Musical Instruments.”

Colloquium d’études supérieures en composition et création sonore. 2020
University of Montreal, Canada.
Title: “Augmenting Harp Performance.” with Alexandra Tibbitts.

Visiting Artist Lecture Series. University of Maine, Orono, ME 2017
Title: “Music Interaction Research and Digital Musical Instrument Design.”

CONFERENCE ACTIVITIES

John Sullivan, Adam Pultz Melbye, Raul Masu. “NIME Eco Wiki Workshop.” Workshop at the *International Conference on New Interfaces for Musical Expression*. 2021. Shanghai, China. (upcoming)

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*. 2016. London, UK.

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

**TEACHING
EXPERIENCE**

Course Lecturer 2016, 2017, 2018, 2019, 2020
New Media Production I
McGill University, Montreal, Canada.

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

Teaching Assistant 2013
An International Perspective on New Media, Media Art and Digital Culture
University of Maine, Orono, ME.

**RESEARCH
POSITIONS**

Shared Reality Laboratory 2021 - present
Postdoctoral researcher, McGill University
Audio-haptic design lead, IMAGE (Internet Multimodal Access to Graphical Exploration) project [link]

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 design and software development for academic and industry clients

SERVICE

Poster and Demo Co-Chair 2022
International Conference on New Interfaces for Musical Expression (NIME)

Environmental Officer 2020 - present
International Conference on New Interfaces for Musical Expression (NIME)

<i>Digital Tools Committee and Design Consultation Team</i> International Institute for Critical Studies in Improvisation (IICSI)	2018 - present
<i>Executive Board, Student Representative</i> Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT)	2018 - 2019
<i>Board of Directors, Founding Member</i> New Music World, New York (Joel Chadabe, chair)	2016 - 2019

Peer reviewer

International Conf. on New Interfaces for Musical Expression (meta-reviewer)	2022
International Conf. on New Interfaces for Musical Expression	2021
EAI Endorsed Transactions on Creative Technologies (journal)	2021
Human Technology (journal)	2020
International Computer Music Conference	2016, 2017, 2018

SELECTED CREATIVE WORKS

Music Releases

<i>Tin</i> , Megan Jo Wilson [link]	2016
<i>Ancient Open Allegory Oratorio</i> , Post Provost [link]	2012
<i>Be Prepared!</i> , Town Founder [link]	2012
<i>Experiments, demos & b-sides</i> , Johnny Venom [link]	2012
<i>Anjuli EP</i> , Sea Level [link]	2011
<i>Soulful Noise EP</i> , EastWave Radio [link]	2010
<i>A Moving Train</i> , Jaye Drew [link]	2009

Installation and Interactive Media

<i>Inside Out</i> , interactive installation. With M. Schumacher and G. Boyes. Nuit Blanche Festival, Montréal, QC, Canada. link	2015
<i>High Striker!</i> , site-specific multimedia installation. With J. Carney. IMRC Center, Orono, ME, USA. link	2014
<i>fourSQUARE: Death by Pop Song</i> , interactive installation. With S. Levi. IMRC Center, Orono, ME, USA link	2013

LANGUAGES, SOFTWARE & PROTOTYPING **Design**
AutoDesk Fusion 360 & Inventor, Adobe Creative Cloud, HTML, CSS, Hugo, Jekyll, WordPress

Audio Languages and Software

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

Electronics and Digital Manufacturing

Arduino, Bela, embedded systems, MCAD/ECAD, 3D printing, laser cutting

General Computing:

Python, MATLAB, Processing, JavaScript, L^AT_EX, Git, shell